Status and Future Prospects for the Darkblotched Rockfish Resource in Waters off Washington, Oregon, and California as Updated in 2009

by

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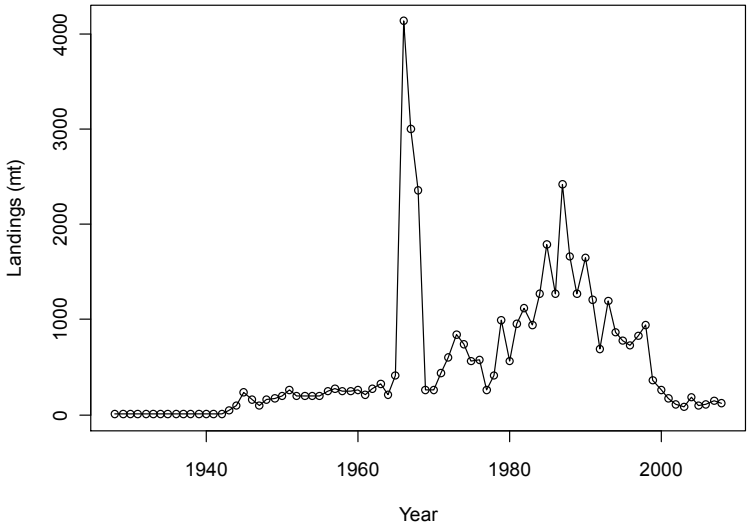
This assessment applies to the darkblotched rockfish (*Sebastes crameri*) resource in the combined US Vancouver, Columbia, Eureka and Monterey INPFC areas. The largest landings (removals between 2,300 and 4,200 metric tons (mt)) of darkblotched were taken from 1966-1968, primarily by foreign vessels. From 1969 to 1981, the fishery proceeded with more moderate landings of between 200 and 1000 mt per year, with the foreign fishery ending in 1977. A second peak in landings occurred between 1982 and 1993, with landings exceeding 1,100 mt in 10 of 12 years, reaching over 2,400 mt in 1987. Management measures reduced landings to below 950 mt since 1994, below 400 mt since 1999, and below 200 mt in recent years.

Landings history from 1928-2006



Landings estimates for the past 10 years

Year	*Landings(mt)*
1999	*362*
2000	*262*
2001	*173*
2002	*113*
2003	*80*
2004	*189*
2005	*98*
2006	*109*
2007	*145*
2008	*117*

This assessment used the SS model, version 3.03a. New data and updates to the data used in the previous assessment were used in this new assessment. They are as follows:

Reconstructed California historical landings were updated for 1928-68. Landings data for 1983-2006 were checked, and new landings data were added for 2007 and 2008. Fishery length compositions for 1983-2006 were updated, with new 2007 and 2008 length compositions added. New pairs of discard estimates and discard length compositions for 2006 and 2007 were both added. The 1999-2008 NWFSC Slope and the 2003-2008 NWFSC Survey GLMM-based biomass indices and CV's were recalculated and used. All the length compositions for the NWFSC Slope and NWFSC Survey were updated and used. The "super years" from the AFSC Slope Survey continue to be excluded, as is the 1977 Triennial Shelf Survey. The fishery conditional age-at-length data were updated, using otoliths from 1991, 1998, and 2003-2008. The NWFSC slope and shelf conditional age-at-length from 2003-2008 were updated. Lastly, the AFSC Slope Survey conditional age-at-length from 2001 and the fishery discard otoliths from 2004 and 2005 remain unchanged.

A number of sources of uncertainty were explicitly included in this assessment. For example, allowance was made for uncertainty in natural mortality and the parameters of the stock-recruitment relationship. There were also other sources of uncertainty that were not included in the current model, including the degree of connection between the stocks of darkblotched rockfish off British Columbia and those in PFMC waters; the effect of the PDO, ENSO and other climatic variables on recruitment, growth and survival of darkblotched rockfish; and gender-based differences in survival.

The reference case, on which this update is based, was selected by extensive model testing with an attempt to balance the sources of uncertainty.

Summary of past 10 years

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
ABC	256	256	302-349	187	205	240	269	294	456	487	437
OY			130	168	172	240	269	200	290	330	285
Landings(mt)	362	262	173	113	80	189	98	109	145	117	
*Discards(mt)**	10	152	101	66	47	63	31	91	119	96	
*Catch (mt)**	372	414	274	179	127	252	129	200	264	213	
F	0.092	0.097	0.060	0.035	0.022	0.038	0.016	0.022	0.027	0.021	
Expl. Rate	0.067	0.071	0.043	0.025	0.015	0.027	0.013	0.018	0.022	0.017	
1+ Biomass	5,537	5,862	6,382	7,231	8,266	9,326	10,204	11,142	11,899	12,423	12,836
Sp. Output	3,322	3,177	3,099	3,252	3,572	3,999	4,466	5,230	6,166	7,090	7,940
Sp. Out. sd	328	338	356	389	435	491	562	660	786	917	1037
Sp. Out. cv	0.10	0.11	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13
Recruits(10^3)	5,860	6,640	986	968	2,346	2,817	2,478	545	46	2,002	
Rec. sd	754	846	181	158	335	424	416	137	23	1,608	
Rec. cv	0.13	0.13	0.18	0.16	0.14	0.15	0.17	0.25	0.51	0.80	
Depletion	0.115	0.110	0.107	0.113	0.124	0.139	0.155	0.181	0.214	0.246	0.275
Depl. sd	0.010	0.010	0.011	0.012	0.014	0.015	0.018	0.021	0.025	0.029	0.032
Depl. cv	0.087	0.094	0.103	0.107	0.109	0.110	0.113	0.114	0.115	0.117	0.118

* Discard is a model estimate, and catch is landings plus the model based discard.

The point estimate for the depletion of the spawning output at the start of 2009 is 27.5%. The ABC (using the F50% MSY proxy) and OY (from the rebuilding plan) for 2009 in the above table reflect current management based on the 2007 assessment. Under the current model the OFL (Over Fishing Limit or ABC) for 2009 is higher at 584 mt. For West Coast rockfish, a stock is considered overfished when it is below 25% of virgin spawning biomass, and recovered when it reaches 40% of virgin spawning biomass. Overfishing is considered to be occurring when catch exceeds the ABC specified for a particular year. Based on this assessment, darkblotched rockfish on the West Coast remain below the overfished threshold, but the spawning output appears to have increased steadily over the past 7 or 8 years (which is essentially the same period in which a formal rebuilding plan has been in place). Since 2003, overfishing is estimated to have occurred

once, with estimated catch exceeding the ABC by 12 mt (5%) in 2004. However, due to the uncertainty in actual discard, overfishing may or may not have occurred in that year.

With the stock extending northwards into Canadian waters, management and assessment of stock status might be improved through greater cooperation with British Columbia.

Major quantities from assessment

	Value	*sd*	*cv*
$SpOut_0$ (10^8 eggs)	28,828	626	0.022
B_0 (mt)(1+ Biomass)	32,783	728	0.022
R_0 (10^3 fish)	3,026	73	0.024
$SpOut_{msy}$ (10^8 eggs)	11,531	250	0.022
F_{msy}	0.037	1.6e-4	0.004
Basis for above	$F_{50\%SPR}$		
Exploitation rate at MSY	0.037		
MSY	584		

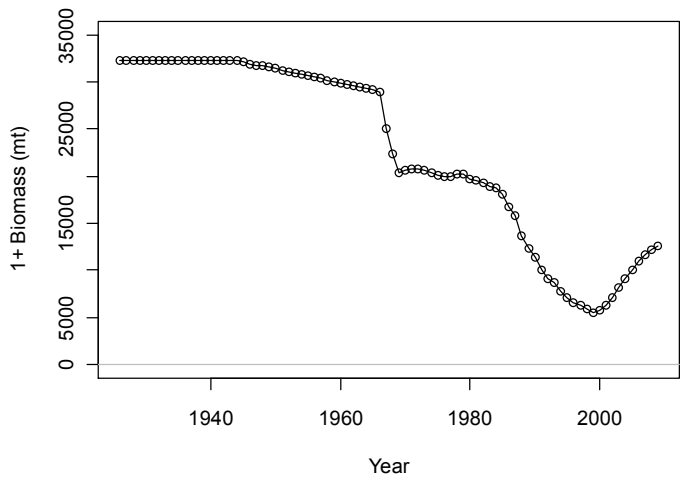
Reference points

	F_{msy}=F_{spr} (0.5)	**F_{msy} = F_{Btarg}(B_{40})**	**Calculated F_{msy}**
SPR	**0.5**	**0.5**	**0.421**
F	**0.037**	**0.037**	**0.048**
Exploitation Rate	**0.037**	**0.037**	**0.025**
MSY (mt)	**584**	**584**	**606**
Sp. Out. $_{msy}$	**11,531**	**11,531**	**8,796**
B/B_0 (Sp. Out.)	**0.40**	**0.40**	**0.305**
Age 1+ Biomass	**15,763**	**15,763**	**23,763**

*Note that when steepness (h) = 0.6, the reference F_{spr} = 0.5 will result in an equilibrium biomass of B_{40}; therefore, the first two columns in the above table are identical (since when h = 0.6 and biomass = B_{40}, expected recruitment = $0.8R_0$)

The point estimates of summary (age 1+) biomass show an upward trend over the past ten years, nearly doubling during that time.

1+ Biomass Levels from 1928 to 2009

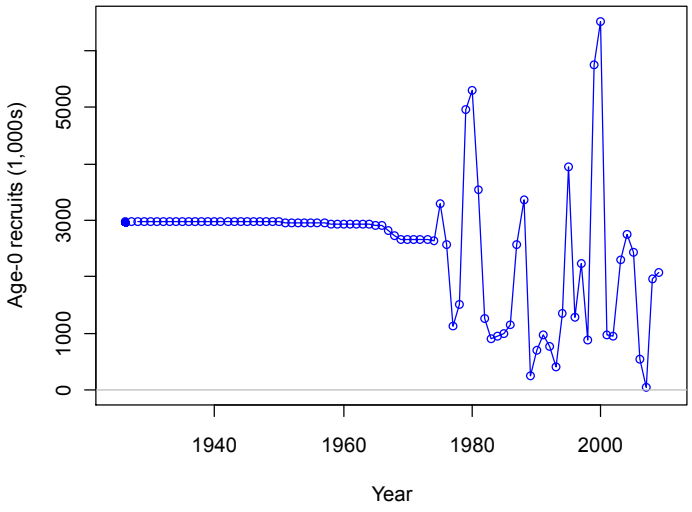


Biomass estimates for the past 10 years

Year	*Total 1+ biomass(mt)*
2000	*5,862*
2001	*6,382*
2002	*7,231*
2003	*8,266*
2004	*9,326*
2005	*10,204*
2006	*11,142*
2007	*11,899*
2008	*12,423*
2009	*12,836*

The first year for which recruitment appears to be reliably estimated is 1975. The recruitment pattern for darkblotched rockfish is similar to that of many rockfish species, with highly variable recruitment from year to year. With a few exceptions, the 1980's and 1990's provided rather poor year-classes compared with average historical recruitment levels, although the 1999 and 2000 year-classes appear to be two of the four largest year-classes since 1975. The most recent year of 2008 shows recruitment closer to those seen in 2003-2005 after very low recruitment in 2006 and 2007. These low estimates appear to reflect the low 2008 shelf survey index.

Recruitment estimates (1928-2008)

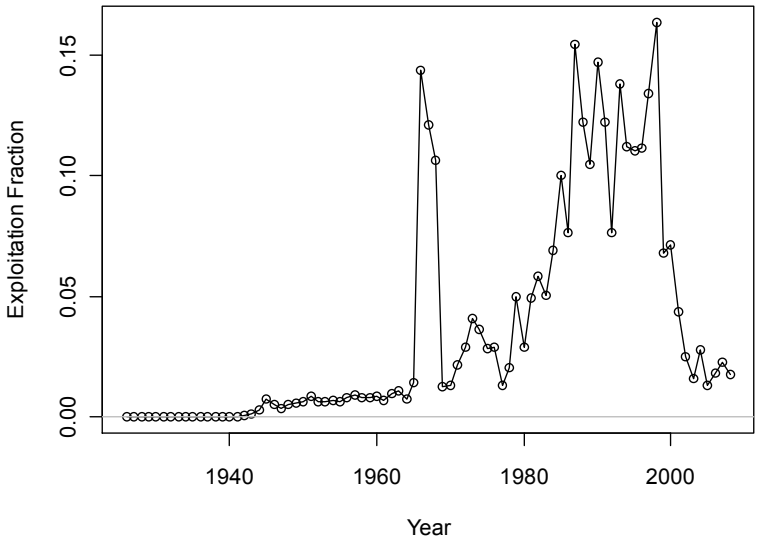


Recruitment estimates for the past 10 years (Thousands of age-0 recruits)

Year	*Recruitment*
1999	*5,860*
2000	*6,640*
2001	*986*
2002	*968*
2003	*2,346*
2004	*2,817*
2005	*2,478*
2006	*545*
2007	*46*
2008	*2,002*

The exploitation rate (percent of biomass taken) on fully-selected animals peaked near 15% in the mid-1960's when foreign fishing was intensive. The exploitation rate dropped by the late 1960's, but increased slowly and steadily from the late 1970's to 1987 at 15% and stayed high until 1998 with the continuing decline in exploitable biomass. Over the past 10 years the exploitation rate has fallen from over 6% (with a peak of 7% in 2000) to 2%.

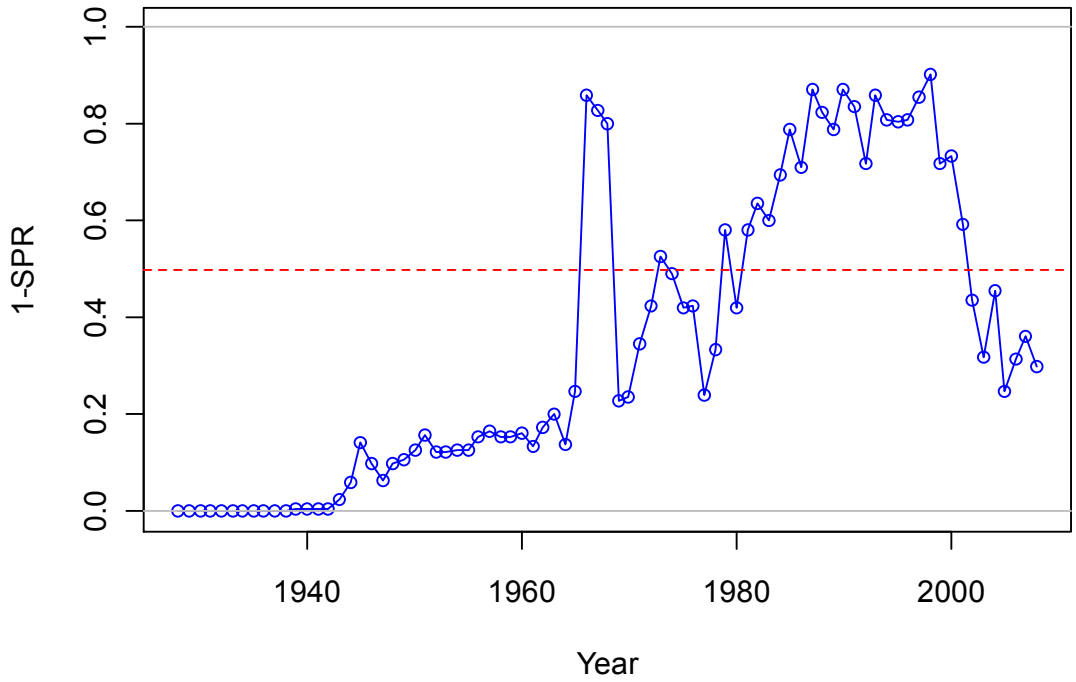
Explotation Fraction (1928-2008)



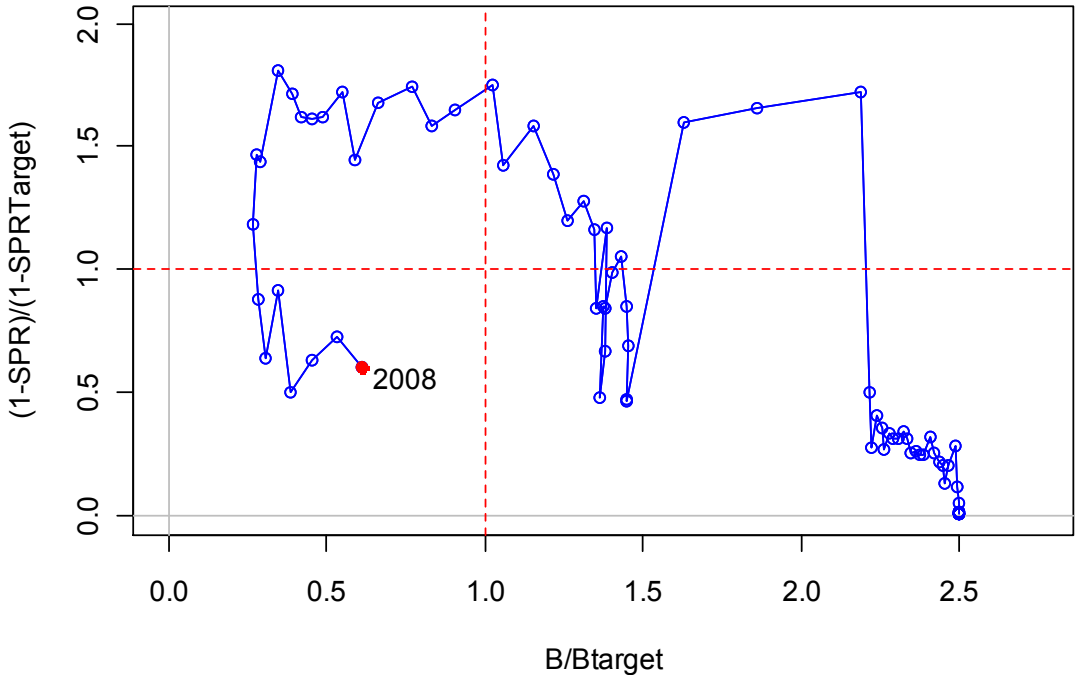
Explotation Fraction the past 10 years

Year	*Exploitation rate*
1999	*0.0671*
2000	*0.0705*
2001	*0.0430*
2002	*0.0247*
2003	*0.0154*
2004	*0.0270*
2005	*0.0127*
2006	*0.0180*
2007	*0.0222*
2008	*0.0172*

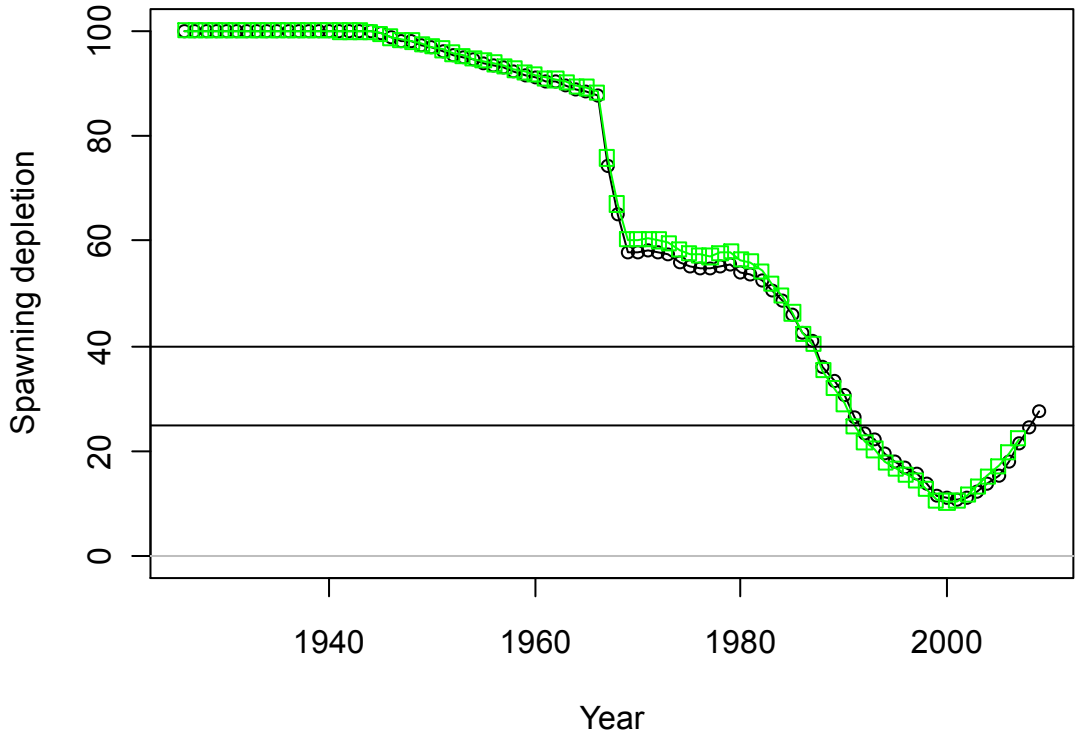
One minus SPR for 1928-2008



Relative Fishing Intensity versus B/Btarget for 1928-2008



Percent of B_0 for 1928 to 2009 for the new model (circles) and 1928 to 2007 for the 2007 model (squares).



The major axes of uncertainty are steepness and natural mortality. The decision table below uses natural mortality (M) as the major axis of uncertainty. The three landings series are based upon 2008 fishing mortality rate (F_{2008}; "Low Landings"), 40:10 rule catches (with 2009 and 2010 landings to meet catch OYs; "Medium Landings"), and 2005 rebuilding plan SPR (0.50) = ABC, with 2009-10 OYs; "High Landings"). Discard, and thus total catch, is estimated within the model.

			LOW STATE M = 0.05			MEDIUM STATE M = 0.07			HIGH STATE M = 0.09		
	Year	Landings	Catch	Sp. Out.	Depl.	Catch	Sp. Out.	Depl.	Catch	Sp. Out.	Depl.
Low Landings	2009	105	192	2,763	9.5%	191	7,941	27.5%	190	16,769	55.1%
	2010	115	210	2,982	10.3%	209	8,701	30.2%	208	18,221	59.9%
	2011	122	222	3,154	10.9%	221	9,374	32.5%	220	19,484	64.0%
	2012	125	228	3,275	11.3%	227	9,945	34.5%	226	20,531	67.5%
	2013	127	232	3,330	11.5%	230	10,356	35.9%	229	21240	69.8%
	2014	129	235	3,327	11.5%	233	10,602	36.8%	232	21,588	71.0%
	2015	131	240	3,296	11.3%	237	10,749	37.3%	236	21,702	71.3%
	2016	133	245	3,266	11.2%	242	10,871	37.7%	241	21,725	71.4%
	2017	137	251	3,247	11.2%	248	11,005	38.2%	247	21,737	71.5%
	2018	140	257	3,245	11.2%	255	11,164	38.7%	254	21,767	71.6%
Medium Landings	2009	157	287	2,763	9.5%	285	7,941	27.5%	284	16,769	55.1%
	2010	161	293	2,911	10.0%	291	8,630	29.9%	290	18,151	59.7%
	2011	258	470	3,013	10.4%	466	9,235	32.0%	465	19,348	63.6%
	2012	257	470	2,925	10.1%	466	9,601	33.3%	464	20,195	66.4%
	2013	254	465	2,758	9.5%	460	9,797	34.0%	458	20,696	68.0%
	2014	251	461	2,534	8.7%	455	9,829	34.1%	453	20,842	68.5%
	2015	249	460	2,295	7.9%	453	9,775	33.9%	451	20,767	68.3%
	2016	249	461	2,069	7.1%	454	9,708	33.7%	451	20,618	67.8%
	2017	251	463	1,865	6.4%	456	9,667	33.5%	454	20,474	67.3%
	2018	253	468	1,683	5.8%	460	9,660	33.5%	458	20,361	66.9%
High Landings	2009	157	287	2,763	9.5%	285	7,941	27.5%	284	16,769	55.1%
	2010	161	293	2,911	10.0%	291	8,630	29.9%	290	18,151	59.7%
	2011	281	512	3,013	10.4%	508	9,235	32.0%	507	19,348	63.6%
	2012	275	502	2,891	10.0%	497	9,567	33.2%	496	20162	66.3%
	2013	268	491	2,695	9.3%	486	9,735	33.8%	484	20,636	67.8%
	2014	264	486	2,447	8.4%	480	9,743	33.8%	477	20,758	68.2%
	2015	263	485	2,185	7.5%	478	9,667	33.5%	475	20,663	67.9%
	2016	263	486	1,938	6.7%	478	9,579	33.2%	476	20,495	67.4%
	2017	264	489	1,715	5.9%	481	9,517	33.0%	479	20,332	66.8%
	2018	266	493	1,512	5.2%	485	9,491	32.9%	482	20,201	66.4%

Future research needs include:

- Inclusion of the recently revised historical rockfish landings.
- Investigation into the best available methods and data for constructing and using conditional age at length compositions from data taken across space and time within years.
- A thorough investigation of historical darkblotched rockfish mortality in the shrimp fishery.
- Mapping of "trawlable" and "untrawlable" habitat and construction of a prior on survey q.

1. Introduction

This assessment utilized combined data from the International North Pacific Fisheries Commission (INPFC) U.S. Vancouver, Columbia, Eureka and Monterey areas. The darkblotched rockfish (*Sebastes crameri*) population in these areas was modeled as a single stock.

Darkblotched rockfish (*Sebastes crameri*) are found from the Bering Sea to near Santa Catalina I., California at depths of 29-549 m (16-300 fm; Eschmeyer et al.1983). Commercially important concentrations are found from Northern CA through the Canadian border, on or near the bottom, in depths of approximately 183-366 m (100-200 fm) (Figure 1). This species co-occurs with an assemblage of slope rockfish, including Pacific ocean perch (*Sebastes alutus*), splitnose rockfish (*Sebastes diploproa*), yellowmouth rockfish (*Sebastes reedi*), and sharpchin rockfish (*Sebastes zacentrus)*. Pacific ocean perch and darkblotched rockfish are the most abundant members of that assemblage off the coasts of Oregon and Washington, but splitnose rockfish and darkblotched rockfish dominate off the northern coast of California. In the early years of the fishery, darkblotched rockfish were designated as part of the "Pacific ocean perch" market category for red-colored northern slope rockfish.

There are no clear stock delineations for darkblotched rockfish in U.S. waters. No distinct breaks are seen in the fishery landings and catch distributions (Figure 1). Survey catches imply a continuous distribution over most of the range, with the largest catches occurring over a swath of latitude and depth. For the purpose of this assessment, the species is treated as a unit stock from the Mexican border to the U.S.-Canadian border. However, management actions on a coast-wide stock should account for problems in effort concentration because areas of high concentration do exist.

Additional information on stock gentics, sexually dimorphic growth, migration to deeper waters, and historical fishing practices can be found in the last full assessment (Hamel, 2007).

2. Data

2.1. Fishery removals and regulations

Darkblotched landings information was obtained for the fishery off the West Coast of the continental United States from 1928 through 2008 (Figure 2; Tables 4-5). Reconstructed California historical landings were updated for 1928-68 (Ralston, Steve: personal communication, 2009). For Oregon and Washington, during the period 1928-1962, darkblotched landings were estimated by apportioning combined rockfish landings using the earliest available species proportions in a given area. Since the fleet fished shallower than 100 fm in years before 1945-1948, the available darkblotched proportions were reduced for those years. Landings from 1963-1977 were mainly available in the literature, but some estimation was required. The 1978-1980 landings were taken from CalCom and Tagart (1985). Landings from 1983-2008 were extracted from PacFIN on May 13, 2009 and darkblotched bycatch information from the At-Sea-Hake Observer Program was taken from the Northwest Regional office website (NWR, 2009) for 2005-2008.

Discards

The new discard rates for 2006 and 2007 (Table 3) were obtained form the WCGOP's (West Coast Groundfish Observer Program) Total Mortality Reports (WCGOP, 2009). Additional information of past discards can be found in Hamel (2007).

Fishery Length compositions

Fishery length compositions (Figures 3-6) were estimated from PacFIN for the years 1977-1978 and 1981-2008. Fishery length compositions were constructed using BDS data retrieved from PacFIN on May 8, 2009. Length, age and sex data were acquired at the trip level, and then aggregated to the state level as was done in the 2007 assessment. For each trip, the length composition of the sampled individuals was scaled up to represent the length composition of the trip landings through use of an expansion factor. In this assessment, the expansion factor was calculated as:

$$\text{Expansion Factor} = (WT_{total}/WT_{sampled})^{0.9}$$

with total weight divided by sample weight being the equivalent of total estimated number over sampled number. The exponent 0.9 was used in acknowledgment of the reduced information that occurs with any expansion to the trip level. The initial effective N value (input N) for each state was calculated via Stewart's Method (Ian Stewart, pers. Comm.), which for fisheries is:

$$\begin{aligned} N_{effective} &= N_{trips} + 0.138N_{fish} \quad \text{if } N_{fish}/N_{trips} < 44 \\ N_{effective} &= 7.06N_{trips} \quad \text{if } N_{fish}/N_{trips} \geq 44 \end{aligned}$$

The geometric mean adjustment to account for the lack of proportional sampling in each state was done as given in Hamel (2007). The input $N_{effective}$ was capped at 500 in this assessment

The length composition of discarded darkblotched rockfish in 1986 was estimated using data from observed groundfish trawls in that year (Rogers, 2005). The length compositions of discards in more recent years (2002-2008) were calculated with observer data from boats using bottom trawl gear. Individual lengths were scaled up by a straight expansion factor to the total discard for each observed tow. Due to significant missing sex data across the full range of length bins, all discard length-, age- and conditional age-at-length compositions were developed as combined-sex length compositions (Figures 7-8). Input N values for discard length compositions were calculated via Stewart's Method (Table 6B).

Fishery conditional age-at-length compositions

Conditional age-at-length compositions were constructed from age and length data available from PacFIN for the years 2003-2008. These years were used because all of the ages in PacFIN for those years were from otoliths aged between 2004 and 2008, a period in which ageing methods have been invariant, with three agers doing all of the ageing. Double read analysis indicates minimal or no bias between agers and relatively good precision. In constructing conditional age-at-length compositions, instead of expanding samples up to trips, as with the length data, each age-at-length data point was considered independent for the purposes of creating each composition, although total input N (across all length bins) was still based on Stewart's method as described above. This total input N was spread among the length bins according to the number of fish contributing to data in that bin. For the later years, in keeping with the 2007 assessment (Hamel, 2007), this update only uses data from the years 1991 and 1998 (Table 7).

Since rockfish grow significantly in a single year and fishing occurs throughout the year, length bins were pooled according to estimated growth for each age. The bins were 0-10 cm, 11-15 cm, 16-20 cm, 21-24 cm, 25-27 cm, and 28-30 cm, with two centimeter bins for length from 31 cm to 50 cm, and a plus group at 51 cm and above. The compositions (e.g. Figures 9-10 (2008)) and

input sample sizes (Table 7) were developed by the same method as described above for the PacFIN data.

2.2. Surveys

NMFS Cruises

The results from four fishery-independent surveys are used in this assessment:

1. The NWFS Triennial Shelf Survey that was conducted every third year from 1980-2004
2. The AFSC Slope Survey for the years 1997 and 1999-2001.
3. The NWFSC Slope Survey for the years 1999-2008.
4. The shelf portion of the NWFSC survey for the years 2003-2008.

Neither the 1977 Triennial Shelf Survey, due to concerns about the first year of the survey's implementation, nor the AFSC Slope Survey "super years", consisting of combined data from multiple years of partial coastal coverage, were used in this assessment. The "POP" survey from 1979 and 1985 was not used as selectivity likely changed between the two years which used separate methods, and the previous solution of mirroring the AFSC Slope Survey was unlikely to produce realistic selectivities for the POP survey. The two years of data were also relatively insignificant given all the other data available.

Indices

Indices of abundance were derived for each of the above surveys and years using a generalized linear mixed model (GLMM) for each survey following the methods of Helser et al. (2004, Table 8). The GLMM models occurrence of darkblotched rockfish in a survey haul as a binomial process and the size of the non-zero catches with a lognormal model. Coefficients of variation (CVs) about the indices were produced using MCMC technique. In this assessment, the GLMM approach was used for all four surveys, utilizing two latitudinal strata, the combined U.S. Vancouver and Columbia INPFC areas, and the combined Eureka and Monterey INPFC areas. While darkblotched rockfish are occasionally seen in the Conception INPFC area, the numbers there are negligible compared to those further north. Depth ranges were limited to those which were covered in all years of each survey. For three of the four surveys two depth strata were used. For both slope surveys, depth strata of 100-164 fm (183-300 m) and 164-310 fm (300-567 m) were used. For the Triennial Survey, depth strata of 30-100 fm (55-183 m) and 100-200 fm (183-366 m) were used. Since the shelf portion of the NWFSC Survey covers only depths from 30-100 fm (55-183 m), this survey was modeled using only a single depth stratum.

Length compositions

Length compositions were derived for each survey, except for the 1999 NWFSC Slope Survey, for which length data were not available and the 2004 Triennial Survey where age compositions, instead of length compositions, were used (Figures 11-26).

Length, age, and sex data were acquired at the tow level, and then aggregated within INPFC areas and depth strata. For each trip, the length composition of the sampled individuals was scaled up to represent the length composition of the trip landings through use of an expansion factor. In this assessment, the expansion factor was calculated as:

$$\text{Expansion Factor} = (WT_{total}/WT_{sampled})$$

with total weight divided by sample weight being the equivalent of total estimated number over sampled number. No down weighting exponent was used, as the survey data are taken at the tow level rather than the trip level. The initial effective N (input N) were calculated via Stewart's Method (Ian Stewart, pers. Comm.), which for surveys is

$$N_{effective} = N_{trips} + 0.0707 N_{fish} \quad \text{if } N_{fish}/N_{trips} < 55$$
$$N_{effective} = 4.89 N_{trips} \quad \text{if } N_{fish}/N_{trips} \geq 55$$

where N_{fish} is the total number of fish sampled across all trips (Table 6C).

Age compositions

The 2004 Triennial Survey age composition is included in this assessment as derived in the 2005 assessment (figures 27-28).

Conditional-age-at length compositions

Conditional age-at-length compositions were constructed from age and length data using the same methods as for survey length compositions. These compositions were constructed for the 2001 AFSC Slope Survey and the 2003-2008 NWFSC Slope and Shelf Surveys (e.g. Figures 29-32, for ending year: 2008). These years and surveys were used because all of the ages in PacFIN for those years were from otoliths aged between 2004 and 2008, a period in which ageing methods have been invariant, with three agers doing all of the ageing. Total input N for each year was based on Stewart's method as described above (Table 7). This total input N was spread among the length bins according to the number of fish contributing to data in that bin.

A summary of data sources and years included in the base model is given in Table 9.

2.3. Biology and life history

Natural mortality

In the 2000 and 2003 assessments, M = 0.05 was selected based on fit to the data (Rogers et al. 2000). Lenarz (1993) suggested a range of natural morality estimates (0.025-0.05) based on a maximum age range of 60-105 years, using Hoenig's method. In 2005, indirect estimates of M for darkblotched rockfish from Gunderson et al. (2003) were considered in selecting a value for M. Gunderson estimated M based on a meta-analysis of the relationship of the Gonadosomatic Index or GSI (ovary weight/somatic body weight). This method produced a value of M = 0.107 for darkblotched rockfish with a 95% confidence interval of 0.07-0.14. The 2005 and 2007 assessments used 0.07 based on balancing the estimates using GSI and Hoenig's method.

However, the correct interval to use when conducting meta-analyses and predicting an unobserved point is a prediction interval, not a confidence interval. The prediction interval for both Hoenig's method and the GSI method are quite large ((0.005 - 0.375) for Hoenig's (using log-log regression), and either (-0.186 - 0.323) (untransformed) or (0.062-0.205) (log-log) for Gunderson's method). In addition, the values of both maximum age and GSI for darkblotched are towards the edge of the data used in constructing the meta-analyses, so assuming a linear relationship in either space is somewhat suspect. Therefore it is hard to define what the correct prediction interval is for either method. However, observation error in the data used in the meta-analysis can cause prediction intervals to be too wide, and therefore the situation may not be quite as dire. In any case, M continues to be a very difficult parameter to pin down. In this assessment,

M was not changed from the value used in the last assessment. In so far as this value does balance the point estimates well, there is support for using this value.

Sex ratio, maturation and fecundity

In this assessment, the sex ratio at birth is assumed to be 1:1. Maturity-at-length for females was based on the work of Nichol (1990) with 50% maturity occurring at 34.5 cm (Figure 33):

$$P_{Mat} = \frac{1}{-e^{(-0.6449L+22.2)}}$$

Fecundity-at-weight was derived by converting Nichol's (1990) fecundity-at-length equation (Figure 34) using his length-weight relationship:

$$Eggs = 14{,}580W + 132{,}500W^2,$$

where W = weight is in kg.

Length-weight relationship

The length-weight relationship was estimated by Rogers (2005) using available survey data. Sexes were combined because means did not differ substantially. The equation was fit to mean weight at length from 6374 fish measured in West Coast surveys:

$$W = 0.000021L^{2.96142}$$

where W is weight (kg) and L is fork length (cm). This equation differs slightly from Nichol's (1990) equation, but this difference in the weight-length relationship results in quite minimal changes to the resultant weight and fecundity-at-age estimates.

Length at age

Length at age was estimated within the assessment model. No latitudinal or temporal changes in length at age were assumed, although male and female growth rate and L_∞ were estimated separately. The CV of length at age was also estimated and allowed to change linearly with mean length at age (Figure 35).

2.4 Changes in data from the 2007 assessment

Changes in data for this assessment included updated landings data for 2005-2006 (minor changes) and new 2007 and 2008 landings data; new 2006 and 2007 discard rate estimates; new 2007 and 2008 NWFSC Slope Survey and Shelf Survey data; and new GLMM estimates for the NWFSC Slope Survey and Shelf Survey. Updated or new conditional age-at-length data includes: updated fishery data for 1991, 1998, and 2003-2006 with 2007 and 2008 being new; and the shelf and slope portions of the NWFSC Survey updated from 2003-2006 and new for 2007-2008.

3. Assessment model

3.1 History of Modeling approaches

There have been seven previous assessments of darkblotched rockfish off of the U. S. West Coast (Lenarz 1993, Rogers et al. 1996, Rogers et al. 2000, Methot and Rogers 2001, Rogers 2003, Rogers 2005, and Hamel 2007). These assessments began with life-history based analyses of sustainable catch rates and have progressed to statistical age-based modeling. The first full assessment of the darkblotched rockfish stock was conducted in 2000. That assessment was updated twice in 2001 and 2003. The 2005 and 2007 assessments were the second and third full assessments for this species. Hamel (2007) gives a detailed history on each of the previous assessments.

3.2 Current Model

Model

This assessment uses SS version 3.03a, released by Dr. Richard Methot on May 11, 2009. The base model's parameters, both those that were estimated and those that were fixed, are given in Table 10.

Length and age bins

The length frequency bins were the same as in the 2007 assessment. The first bin contained all fish less than 7 cm, followed 1 cm length bins up to 32 cm, and then 2 cm bins from 33-34 cm to 49-50 cm, and a maximum bin of all fish ≥ 51cm in length.

As there are relatively few old fish in recent survey and fishery data, the number of age bins was reduced in this assessment, with single year bins from 0 to 29 and a plus group at 30 years of age and older. This is a reduction from the previous plus group at 44 years of age. However, given the uncertainty in the ageing seen both in double reads and in bomb-radiocarbon validation work using darkblotched rockfish with estimated ages in the 30s and 40s (Figure 36), it is unlikely that substantial information has been lost.

Growth

Growth parameters were estimated within the model, including the size at age 1.7, the size at age 29, the von Bertalanffy growth rate parameter (K) and the CV of length at age 1.7. Exponential offsets were also estimated for the CV at age 29, for male size at age 29 and for von Bertalanffy K. Table 11 gives the estimates of these values for the current model and those arrived at in the previous assessment.

Recruitment, stock-recruitment steepness and natural mortality

R_0 is estimated in the model, along with recruitment deviations from 1975 through 2007, with σ_r = 0.8. Stock-recruitment steepness is fixed at 0.6 as in the last assessment, and natural mortality is set at 0.07 which is the value used in the 2005 and 2007 assessments. This value balances the estimates from various meta-analyses. See Hamel (2007) for more details.

Selectivity and Retention

In initial runs, all 6 parameters of the double normal selectivity function were estimated for the fishery and each survey, along with the inflection point and slope of the logistic retention function. Various blocking schemes on fishery selectivity were tested in an effort to account for changes in depth of fishing and codend mesh size. However, these blocks resulted either in unrealistic selectivity patterns, due to the sparseness or vagaries of the data, or almost no change at all. Therefore a single selectivity pattern was assumed for all years of the fishery. Retention was blocked to reflect changes in recent years. The length at the inflection point was allowed to change in 2000 and the asymptotic retention was allowed to change at 2000, 2004, and 2006.

Similar to all the final runs for the 2007 assessment, all the runs in this update have both the fishery and the NWFSC Slope Survey selectivities forced to be asymptotic, while the others are allowed to be domed shaped (Figures 38-41). The pattern of retention has changed in recent years due to regulations (Table 1 & 3; Figure 36). Modeled and observed discards are shown in Figures 42-44.

Weighting

Iterative re-weighting was applied to the 2007 base model and the details can be found there (Hamel, 2007). That re-weighting was found to be sufficient for this update and no additional re-weighting was performed.

4. Results

4.1. Reference model results

Figures 45-48 show the time trajectories of the estimates of summary biomass, fishery exploitation rate, recruitment, and depletion in spawning output. The fit to the stock-recruitment relationship (Figure 47) indicates a substantial amount of variability. The exploitation rate first peaked at 11-14% in 1966-1968 due to fishing by foreign fleets. The two higheset exploitation rates were attained in 1987 (15%) and 1998 (16%), averaging 11-12% in the intervening years. The fishing mortality rate has been less than 4% over the past 7 years, and less than 2% in 4 of the past 5 years. Figures 49 and 50 provide a comparison of the time trajectories of spawning output, depletion, and summary (1+) biomass for the current and the 2007 assessments.

The fits of the base model to the various indices are summarized in Figures 51-52 (survey biomass indices), and Figures 3-8 and 11-28 (composition data). The estimated growth parameters are given in Table 11.

4.2. Retrospective analysis

Retrospective analyses were conducted as if the assessment were carried out in the years from 2004 to 2008 (without the last 1-5 years of data). No consistent retrospective pattern was seen (Figure 53).

5. Future research

Future research needs include:

- Inclusion of the recently revised historical rockfish landings.
- Investigation into the best available methods and data for constructing and using conditional age at length compositions from data taken across space and time within years.
- A thorough investigation of historical darkblotched rockfish mortality in the shrimp fishery.
- Mapping of "trawlable" and "untrawlable" habitat and construction of a prior on survey q.

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Table 1. Recent management regulations affecting darkblotched rockfish landings.

Area	Year	Period	Bimonthly Landings (lbs)	RCA Depth (fm)		Small footrope required
				min	max	
N of 40° 10'	2003	Jan-Dec	1,800	0-100	200-250	shoreward of RCA
	2004	Jan-Apr	4,000	60-75	200	shoreward of RCA
		May-Sep	8,000	60-75	150	shoreward of RCA
		Oct	8,000	0	250	shoreward of RCA
		Nov-Dec	1,800	0	250	shoreward of RCA
	2005	Jan-Feb	4,000	75	200	*shoreward of RCA
		Mar-Oct	4,000	100	200	*shoreward of RCA
		Nov-Dec	4,000	75	200	*shoreward of RCA
	2006	Jan-Feb	4,000	75	200	*shoreward of RCA
		Mar-Oct	4,000	100	200	*shoreward of RCA
		Nov-Dec	4,000	75	200	*shoreward of RCA
	2007	Jan-Apr	4,000	75 (Jan-Mar)	250 (Jan-Mar)	*shoreward of RCA
		Mar-Dec	1,500	60-75 by month & lat. (includes Apr)	150-200 by month & lat. (includes Apr)	*shoreward of RCA
	2008	Jan-Apr	4,000	75 (Jan-Mar)	250 (Jan-Mar)	*shoreward of RCA
		May-Dec	1,500	60-75 by month & lat. (includes Apr)	150-200 by month & lat. (includes Apr)	*shoreward of RCA
40 °10' to 38°	2003	Jan-Dec	1,800	0-60	200-250	shoreward of RCA
	2004	Jan-Apr	7,000	75	150	shoreward of RCA
		May-Sep	50,000	75-100	150	shoreward of RCA
		Oct	50,000	75	150	shoreward of RCA
		Nov-Dec	10,000	0	200	shoreward of RCA
	2005	Jan-Feb	4000	75	200	shoreward of RCA
		Mar-Oct	4,000	100	200	shoreward of RCA
		Nov-Dec	4,000	75	200	shoreward of RCA
	2006	Jan-Feb	4,000	75	200	shoreward of RCA
		Mar-Oct	4,000	100	200	shoreward of RCA
		Nov-Dec	4,000	75	200	shoreward of RCA
	2007	Jan-Apr	15,000	100	200	shoreward of RCA
		May-Jun	15,000	100	150	shoreward of RCA
		Jul-Oct	10,000	100	150	shoreward of RCA
		Nov-Dec	15,000	100	200	shoreward of RCA
	2008	Jan-Apr	15,000	100	200	shoreward of RCA
		May-Jun	15,000	100	150	shoreward of RCA
		Jul-Oct	10,000	100	150	shoreward of RCA
		Nov-Dec	15,000	100	200	shoreward of RCA

* Use of selective flatfish gear (which includes small footropes) required.

Table 2. Management performance (Bold indicates overfishing).

Year	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*
ABC	256	256	302-349	187	205	240	269	294	456	487
OY			130	168	172	240	269	200	290	330
Landings (mt)	362	262	173	113	80	189	98	109	145	117
Modeled Discards (mt)	10	152	101	66	47	63	31	91	119	96
Estimated Catch (mt)	**372**	**414**	274	179	127	**252**	129	200	264	213

Table 3. Input discard rates used in the assessment.

Year	Discard %	CV
1986	5	0.3
2000	32	0.2
2001	41	0.2
2002	47	0.1
2003	33	0.1
2004	21	0.1
2005	24	0.1
2006	49	0.1
2007	49	0.1

Table 4. Estimates of darkblotched rockfish landings from 1928-1977 for Oregon, Washington, and foreign fleets from Rogers (2005). California reconstructed estimates from 1928-68 are from Ralston, Steve (personal communication, 2009).

Year	California	Oregon	Washington	Foreign	Total
1928	18	0			18
1929	19	0			20
1930	21	0	0		22
1931	26	0	0		26
1932	16	0	0		16
1933	16	0	0		16
1934	15	0	0		16
1935	17	0	0		17
1936	11	0	0		11
1937	13	1	0		14
1938	16	1	0		16
1939	23	0	0		23
1940	20	2	0		23
1941	22	5	0		27
1942	12	7	0		20
1943	57	26	0		84
1944	177	43	0		220
1945	334	133	2		469
1946	189	83	1		273
1947	199	52	1		251
1948	99	35	3		137
1949	70	72	1		143
1950	73	80	2		155
1951	106	101	2		209
1952	78	107	2		187
1953	87	86	2		175
1954	79	100	2		181
1955	131	100	2		233
1956	149	136	7		291
1957	190	135	4		329
1958	180	114	6		300
1959	139	130	5		274
1960	151	151	7		309
1961	120	142	8		270
1962	107	213	7		328
1963	136	208	8		352
1964	85	150	8		243
1965	97	340	8		445
1966	84	259	8	3807	4158
1967	102	242	8	2706	3058
1968	110	7	8	2288	2413
1969	65	27	11	153	256
1970	77	33	6	149	265
1971	91	63	9	278	441
1972	111	107	3	374	595
1973	1	58	9	768	836
1974	253	110	24	346	733
1975	66	99	109	293	567
1976	136	248	72	118	574
1977	120	98	45		263

Table 5. Estimated landings for 1978-2006. State values from PacFIN (extracted June14, 2007) except for 1978-1980 California from CalCom, and 1978-1982 Oregon and 1978-1980 Washington from Tagart (1985 and pers. comm.). At-Sea Hake "landings" (including discards) from Vanessa Tuttle, At-Sea Hake Observer Program (pers. comm.) for 1991-2006, and extended back to 1981 using a ratio estimator from years with data.

Year	California	Oregon	Washington	Other	At Sea Hake	Total
1978	78	163	189	0	-	410
1979	159	752	81	0	-	992
1980	164	244	98	0	-	557
1981	522	352	37	0	46	957
1982	170	920	24	0	3	1116
1983	510	407	22	0	0	940
1984	596	585	82	0	11	1274
1985	802	838	111	0	36	1787
1986	417	623	215	0	10	1265
1987	1647	686	68	0	19	2420
1988	750	789	108	0	8	1655
1989	441	737	91	0	6	1275
1990	870	764	16	0	0	1651
1991	333	776	54	0	45	1208
1992	187	451	20	0	29	687
1993	285	892	9	0	8	1194
1994	292	549	9	0	15	864
1995	367	339	28	0	49	783
1996	408	296	19	0	6	730
1997	452	346	22	0	4	824
1998	498	413	20	0	14	944
1999	113	228	10	0	11	362
2000	114	132	9	0	8	262
2001	87	66	8	0	12	173
2002	51	52	7	0	3	113
2003	12	62	2	0	4	80
2004	39	136	7	0	7	189
2005	18	62	1	7	11	97
2006	23	72	2	2	11	109
2007	41	87.6	3	1	12	145
2008	33	74	3	1	6	117

Table 6A. Raw numbers of fish and trips sampled and input Ns used for fisheries length compositions. Any input 'N' that was greater than 500 was capped at 500.

Year	WA fish	OR fish	CA fish	Total Fish	WA trips	OR trips	CA trips	Total Trips	Input N	ReWt N
1977	0	304	0	0	5	0	304	5	22	16
1978	0	200	0	0	2	0	200	2	9	7
1981	0	0	199	0	0	31	199	31	44	34
1982	0	300	459	0	2	57	759	59	89	68
1983	0	0	792	792	0	0	115	115	165	12.16
1984	0	70	1925	1995	0	1	161	162	332	5.32
1985	0	201	2967	3168	0	2	207	209	485	25.84
1986	0	0	2437	2437	0	0	145	145	267	51.68
1987	0	0	2704	2704	0	0	124	124	410	125.4
1988	0	0	1343	1343	0	0	93	93	185	252.32
1989	0	0	1107	1107	0	0	92	92	135	368.6
1990	0	100	873	973	0	1	91	92	179	202.92
1991	0	200	764	964	0	2	75	77	143	311.6
1992	0	0	429	429	0	0	49	49	57	140.6
1993	0	0	566	566	0	0	56	56	66	102.6
1994	0	200	595	795	0	2	51	53	118	136.04
1995	0	188	793	981	0	7	55	62	182	108.68
1996	370	833	1044	2247	28	23	81	132	426	43.32
1997	586	802	947	2335	32	22	58	112	405	50.16
1998	456	541	1353	2350	28	13	80	121	413	89.68
1999	342	430	773	1545	26	9	41	76	250	138.32
2000	653	224	906	1783	20	7	53	80	275	323.76
2001	892	1005	897	2794	25	30	60	115	471	307.8
2002	1129	610	994	2733	48	20	48	116	440	313.88
2003	580	1447	590	2617	28	60	38	126	456	190
2004	616	1305	562	2483	20	58	33	111	430	209
2005	117	1275	571	1963	9	54	34	97	360	357.96
2006	505	1457	1309	3271	10	62	73	145	500	334.4
2007	579	2155	1840	4574	22	79	89	190	500	346.56
2008	350	2689	2188	5227	12	102	104	218	500	326.8

Table 6B. Raw numbers of fish and hauls sampled and input Ns used for discard length composition data.

Year	Fish	Hauls	Input N	ReWt N
1986			100	38
2002	674	70	34	49
2003	856	93	41	61
2004	783	123	69	68
2005	1529	255	108	122
2006	1159	296	116	105
2007	574	170	109	71
2008	263	73	40	29

Table 6C. Raw numbers of fish and hauls sampled and input Ns used for survey length composition data.

Survey	Year	Fish	Hauls	Input N	ReWt N
Triennial	1980	656	11	54	38
	1983	4438	43	210	149
	1986	1834	38	168	119
	1989	6054	85	416	295
	1992	1445	33	135	96
	1995	2389	106	275	195
	1998	2943	110	318	226
	2001	2980	184	395	280
	2004	3578	152	405	288
AFSC slope	1997	313	20	42	27
	1999	228	26	42	27
	2000	223	20	36	23
	2001	324	14	37	24
NW slope	2000	296	25	46	32
	2001	494	45	79	54
	2002	1027	54	123	85
	2003	1742	64	183	126
	2004	557	53	82	57
	2005	1023	49	117	81
	2006	1133	66	144	99
	2007	1074	65	137	95
	2008	1130	60	139	96
NW shelf	2003	633	36	80	80
	2004	505	37	71	71
	2005	960	61	129	129
	2006	792	64	120	120
	2007	1012	67	138	138
	2008	517	51	88	88

Table 7. Number of trips (fishery) or hauls, number of fish, and total input N's for conditional age-at-length and age compositions used in the assessment.

Fleet	Year	Trips/Hauls	Fish	Total input N	ReWT N
Fishery	1991	33	354	46	46
	1998	51	854	44	44
	2003	85	1900	633	633
	2004	38	1168	432	432
	2005	51	1121	416	416
	2006	61	1421	523	523
	2007	78	1991	817	817
	2008	69	1815	678	678
Discard					
	2004	47	246	81	81
	2005	80	504	150	150
Triennial	(Age composition)				
	2004	134	1121	213	151
AFSC slope					
	2001	18	191	32	32
NWFSC slope	2003	60	467	183	183
	2004	45	350	82	82
	2005	45	401	117	117
	2006	64	492	144	144
	2007	62	515	137	137
	2008	59	492	139	139
NWFSC shelf	2003	35	281	80	80
	2004	36	244	71	71
	2005	61	403	129	129
	2006	64	448	119	119
	2007	66	472	138	138
	2008	51	270	88	88

Table 8. GLMM-based biomass indices used in the assessment model.

A. Triennial Shelf Survey

	Vancouver-Columbia				Eureka-Monterey				Total	
	55-183 m		183-366 m		55-183 m		183-366 m		Biomass	
Year	Median	CV	Median	CV	Median	CV	Median	CV	Median	CV
1980	103.75	0.307	244.82	0.358	36.37	0.801	763.81	0.538	1189.48	0.377
1983	354.01	0.240	723.88	0.259	113.63	0.477	583.36	0.379	1824.50	0.206
1986	163.89	0.247	755.76	0.336	42.58	0.553	616.24	0.668	1640.63	0.325
1989	327.39	0.247	374.04	0.365	61.15	0.418	381.94	0.410	1178.75	0.234
1992	249.36	0.283	662.51	0.362	21.55	0.638	169.85	0.465	1128.75	0.265
1995	96.28	0.310	398.74	0.371	16.76	0.633	185.18	0.396	717.89	0.261
1998	236.01	0.321	447.25	0.328	13.43	0.624	104.67	0.381	818.37	0.236
2001	128.29	0.310	322.64	0.317	50.48	0.431	88.14	0.359	601.20	0.225
2004	125.65	0.318	721.36	0.352	78.09	0.581	447.48	0.376	1396.86	0.258

B. AFSC Slope Survey

	Vancouver-Columbia				Eureka-Monterey				Total	
	183-299 m		300-567 m		183-299 m		300-567 m		Biomass	
Year	Median	CV	Median	CV	Median	CV	Median	CV	Median	CV
1997	406.35	1.13	77.27	0.61	47.99	0.73	20.22	1.38	577.95	0.81
1999	148.17	0.85	135.19	0.53	44.83	0.85	44.93	0.95	407.40	0.41
2000	267.21	0.87	155.37	0.72	14.14	0.63	40.35	1.17	520.12	0.53
2001	534.69	1.00	46.49	1.45	60.59	0.81	36.07	1.09	723.91	0.76

Table 8 (cont.). GLMM-based biomass indices used in the assessment model.

C. NWFSC Slope Survey

	Vancouver-Columbia				Eureka-Monterey				Total	
	183-299 m		300-567 m		183-299 m		300-567 m		Biomass	
Year	Median	CV	Median	CV	Median	CV	Median	CV	Median	CV
1999	363.49	0.391	124.56	0.649	147.23	0.372	81.55	0.468	716.83	0.319
2000	759.14	0.375	263.55	0.744	89.97	0.399	49.63	0.599	1162.3	0.359
2001	254.13	0.425	159.47	0.464	64.36	0.369	36.05	0.570	514.01	0.341
2002	489.48	0.418	46.56	0.746	266.86	0.368	64.74	0.483	867.64	0.329
2003	1813.15	0.43	1195.27	0.461	246.72	0.37	114.77	0.462	3369.91	0.356
2004	335.68	0.364	233.92	0.527	344.45	0.463	339.05	0.719	1253.11	0.358
2005	673.91	0.424	263.10	0.473	417.5	0.399	204.58	0.632	1559.08	0.320
2006	582.87	0.323	657.31	0.414	93.86	0.499	251.64	0.409	1585.69	0.296
2007	673.64	0.361	266.84	0.412	473.17	0.432	185.45	0.511	1599.1	0.300
2008	650.87	0.412	491.14	0.469	147.23	0.372	166.35	0.472	1495.61	0.344

D. NWFSC Shelf Survey

	Vancouver-Columbia		Eureka-Monterey		Total	
	55-183 m		55-183 m		Biomass	
Year	Median	CV	Median	CV	Median	CV
2003	283.21	0.585	206.89	0.585	574.16	0.584
2004	213.33	0.596	51.43	0.638	311.60	0.692
2005	190.92	0.472	41.53	0.543	255.47	0.501
2006	193.58	0.438	66.56	0.639	290.73	0.517
2007	216.40	0.449	68.58	0.706	322.25	0.522
2008	99.44	0.490	22.47	0.651	137.07	0.541

Table 9. Data sources and years included in the Base Model.

Indices	Years
Triennial Shelf	1980 1983 1986 19891992 1995 1998 2001 2004
AFSC Slope	1997 1999-2001
NWFSC Slope	2000-2008
NWFSC Shelf	2003-2008
Discard	1986, 2000-2007
Length Comps	
Fishery landings	1977-1978, 1981-2008
Fishery discard	1986, 2002-2008
Triennial Shelf	1980 1983 1986 19891992 1995 1998 2001
AFSC Slope	1997 1999-2001
NWFSC Slope	2000-2008
NWFSC Shelf	2003-2008
Age Comps	
Triennial Shelf	2004
Age-at-length	
Fishery landings	1991, 1998, 2003-2008
Fishery discard	2004 2005
AFSC Slope	2001
NWFSC Slope	2003-2008
NWFSC Shelf	2003-2008

Table 10. Parameters in the base model.

Mortality and growth				
1	0.07	Fixed	Natural mortality (M)	
2	0	Fixed	Old offset	
3	14.7973	Estimated	Size at age 1.7 (in cm)	
4	42.7331	Estimated	Size at age 29 (females)	
5	0.196044	Estimated	Von-Bertalanffy K (females)	
6	0.0658996	Estimated	cv of size at age (young)	
7	-0.178898	Estimated	cv of size at age offset (old)	
8	0	Fixed	M offset Male	
9	0	Fixed	M offset old male	
10	0	Fixed	Male offset for size at age 1.7	
11	-0.0976751	Estimated	Male offset for size at age 29	At age 29: 38.75cm
12	0.187259	Estimated	Male offset for K	Male K = 0.238
13	0	Fixed	offsest for cv of young Male	
14	0	Fixed	offset for cv of old Male	
biology_parms				
15	0.0000210	Fixed	scalar for weight at length	
16	2.96142	Fixed	Exponent for weight at length	
17	34.59	Fixed	size at 50% maturity	
18	-0.6429	Fixed	logistic parameter for maturity ogive	
19	0.1458	Fixed	eggs/kg intercept	
20	1.325	Fixed	Fec.slope	
21	2.10E-05	Fixed	scalar for weight at length	
22	2.96142	Fixed	Exponent for weight at length	
#_size_sel:	Fishery		Fishery selectivity	
1	34.2481	Estimated	Peak	
2	-3.04467	Estimated	Width of peak	
3	3.35186	Estimated	VarAscend	
4	0.556208	Estimated	Var Descending	
5	-2.48388	Estimated	Initial	
6	9	Fixed	Final	
#_retention	Fishery			
7	24.8388	Estimated	size at 50% selectivity through 1999	
8	1.93634	Estimated	logarithmic slope	
9	1	Fixed	final	
10	0	Fixed	intial	
#_size_sel:	Triennial			
11	21.5524	Estimated	Peak	
12	-6	Estimated	Width of peak (Low Bound)	
13	3.28350	Estimated	VarAscend	
14	4.21919	Estimated	Var Descending	
15	-1.36788	Estimated	Initial	
16	-2.6467	Estimated	Final	
#_size_sel:	AFSC sl			
17	22.8898	Estimated	Peak	
18	-0.91179	Estimated	Width of peak	
19	2.20941	Estimated	VarAscend	
20	2.10732	Estimated	Var Descending	
21	-5	Fixed	Initial	
22	-3.98717	Estimated	Final	
#_size_sel:	NWFSC sl			
23	24.3850	Estimated	Peak	
24	-0.549025	Estimated	Width of peak	
25	3.02191	Estimated	VarAscend	
26	2.41873	Estimated	Var Descending	
27	-5	Fixed	Initial	
28	9	Fixed	Final	
#_size_sel:	NWFSC sh			
29	16.1487	Estimated	Peak	
30	-1.22348	Estimated	Width of peak	
31	0.10789	Estimated	VarAscend	
32	3.02912	Estimated	Var Descending	
33	-0.921984	Estimated	Initial	
34	-5	Fixed	Final	
sel_parm_blockparms				
35	25.7973	Estimated	size at 50% selectivity 2000 - 2003	
36	0.659363	Estimated	final retention 2000 - 2003	
37	0.783939	Estimated	final retention 2004 - 2005	
38	0.560175	Estimated	final retention 2006 - 2008	

Table 11. Growth parameters estimated in the model. All length units are in centimeters.

Assessment model year	2007	2009
Female length at age 1.7	14.89	14.80
Female length at age 29	42.17	42.73
Female VBK	0.21	0.20
Female CV of length at age, at age 1.7	0.062	0.066
Female CV of length at age, exponential offset (old)	0.024	-0.179
Male offset at age 1.7	0.0	0.0
Male offset at age 29	-0.126	-0.098
Male offset for K	0.262	0.187
Male offsest for CV at age 1.7	0.0	0.0
Male CV of length at age, exponential offset (old)	0.0	0.0

Table 12. Time series of total and summary biomass, spawning output, depletion, recruitment and F.

Year	Total Biom.	Sum. Biom.	Sp. Out.	Depletion	Recruit	F
1928	32800	32783	28828	1	3026	0.0006
1929	32782	32766	28811	0.999	3025	0.0006
1930	32763	32747	28793	0.999	3025	0.0007
1931	32743	32727	28772	0.998	3025	0.0008
1932	32720	32704	28749	0.997	3024	0.0005
1933	32707	32691	28735	0.997	3024	0.0005
1934	32696	32679	28722	0.996	3024	0.0005
1935	32684	32668	28709	0.996	3023	0.0005
1936	32673	32656	28696	0.995	3023	0.0003
1937	32667	32651	28689	0.995	3023	0.0004
1938	32660	32643	28681	0.995	3023	0.0005
1939	32650	32634	28670	0.995	3023	0.0007
1940	32634	32618	28654	0.994	3022	0.0007
1941	32619	32603	28638	0.993	3022	0.0008
1942	32601	32584	28619	0.993	3022	0.0006
1943	32590	32574	28607	0.992	3022	0.0026
1944	32518	32501	28536	0.990	3020	0.0068
1945	32313	32297	28335	0.983	3017	0.0146
1946	31871	31855	27901	0.968	3009	0.0086
1947	31638	31622	27658	0.959	3004	0.0080
1948	31437	31421	27442	0.952	3000	0.0044
1949	31359	31342	27342	0.948	2998	0.0046
1950	31279	31263	27244	0.945	2997	0.0050
1951	31192	31176	27143	0.942	2995	0.0068
1952	31057	31040	26997	0.936	2992	0.0061
1953	30949	30933	26878	0.932	2989	0.0057
1954	30858	30842	26777	0.929	2987	0.0059
1955	30766	30750	26676	0.925	2985	0.0076
1956	30627	30611	26531	0.920	2983	0.0096
1957	30437	30421	26336	0.914	2979	0.0109
1958	30216	30200	26110	0.906	2974	0.0100
1959	30034	30017	25917	0.899	2970	0.0092
1960	29884	29868	25756	0.893	2967	0.0104
1961	29707	29691	25568	0.887	2963	0.0092
1962	29577	29561	25424	0.882	2960	0.0112
1963	29395	29379	25232	0.875	2955	0.0121
1964	29197	29181	25025	0.868	2951	0.0084
1965	29115	29099	24928	0.865	2949	0.0154
1966	28838	28822	24648	0.855	2942	0.1455
1967	24906	24890	20901	0.725	2846	0.1240
1968	22183	22168	18224	0.632	2758	0.1100
1969	20195	20181	16201	0.562	2678	0.0128
1970	20418	20404	16202	0.562	2678	0.0131
1971	20646	20631	16256	0.564	2680	0.0216
1972	20700	20686	16209	0.562	2678	0.0291
1973	20601	20587	16072	0.558	2672	0.0410
1974	20263	20249	15752	0.546	2658	0.0366
1975	20035	20017	15536	0.539	3272	0.0286
1976	19984	19970	15472	0.537	2569	0.0291
1977	19934	19928	15405	0.534	1141	0.0133
1978	20177	20169	15613	0.542	1528	0.0205
1979	20222	20195	15698	0.545	4975	0.0496
1980	19663	19634	15275	0.530	5307	0.0287
1981	19617	19597	15238	0.529	3558	0.0493
1982	19306	19299	14861	0.516	1261	0.0586
1983	18928	18924	14305	0.496	895	0.0504
1984	18713	18708	13835	0.480	946	0.0691
1985	18061	18056	13082	0.454	991	0.1003
1986	16760	16754	12047	0.418	1156	0.0763
1987	15849	15835	11616	0.403	2578	0.1542
1988	13704	13685	10282	0.357	3387	0.1220
1989	12324	12323	9437	0.327	261	0.1044
1990	11374	11370	8738	0.303	710	0.1468
1991	10068	10063	7562	0.262	983	0.1216
1992	9189	9184	6693	0.232	784	0.0759
1993	8796	8794	6292	0.218	411	0.1374
1994	7855	7848	5564	0.193	1366	0.1113
1995	7219	7197	5172	0.179	4012	0.1099
1996	6691	6684	4824	0.167	1310	0.1105
1997	6318	6306	4460	0.155	2262	0.1328
1998	5957	5952	3962	0.137	894	0.1620
1999	5569	5537	3322	0.115	5860	0.0671
2000	5898	5862	3177	0.110	6640	0.0705
2001	6387	6382	3099	0.107	986	0.0430
2002	7236	7231	3252	0.113	968	0.0247
2003	8278	8266	3572	0.124	2346	0.0154
2004	9342	9326	3999	0.139	2817	0.0270
2005	10218	10204	4466	0.155	2478	0.0127
2006	11145	11142	5230	0.181	545	0.0180
2007	11899	11899	6166	0.214	46	0.0222
2008	12434	12423	7090	0.246	2002	0.0172
2009	12847	12836	7941	0.275	2104	

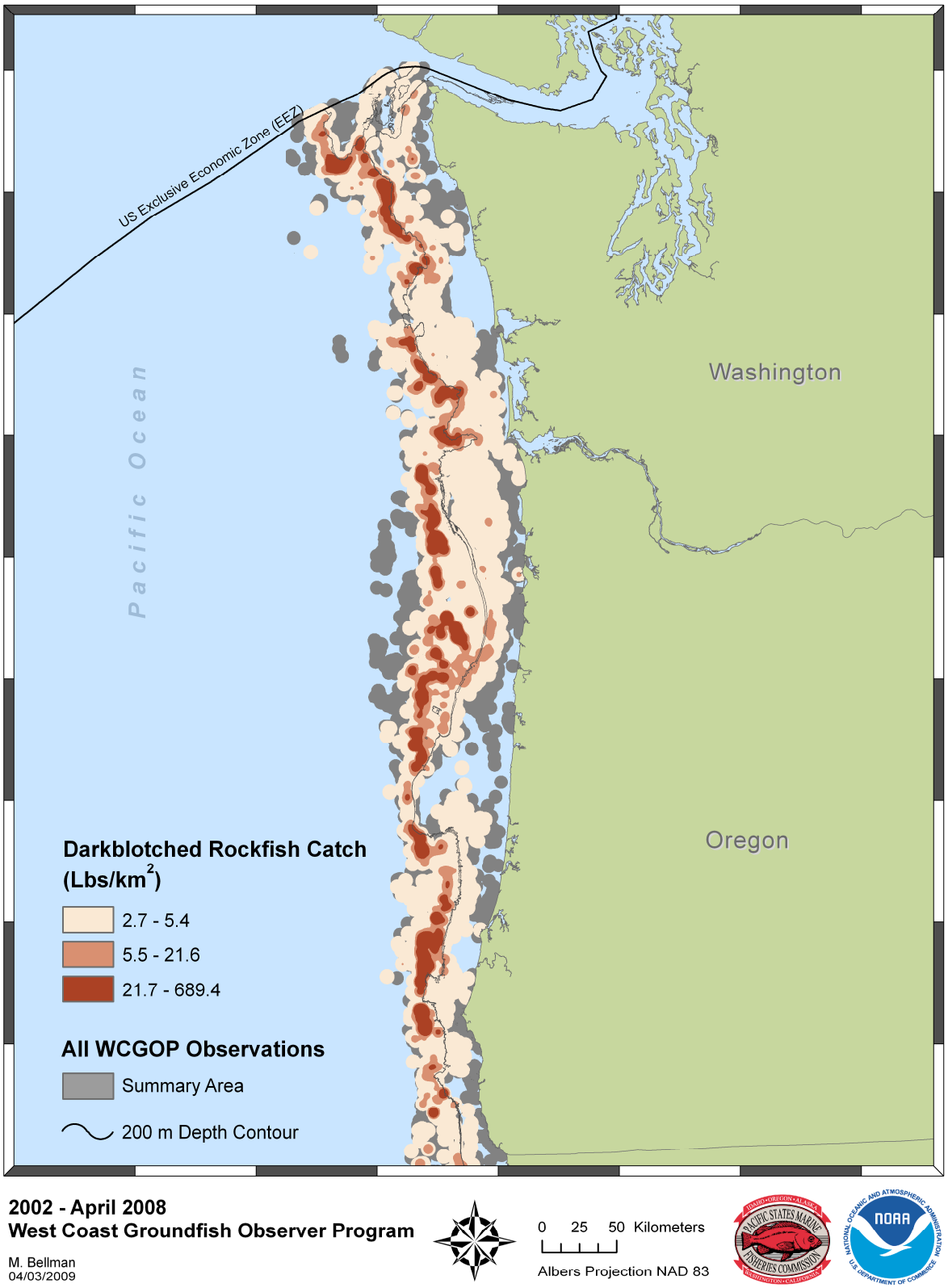


Figure 1. Map of density of occurrence of darkblotched rockfish off of (A) Washington and Oregon and (B) Northern and Central California (next page) from 2002 – April 2008.

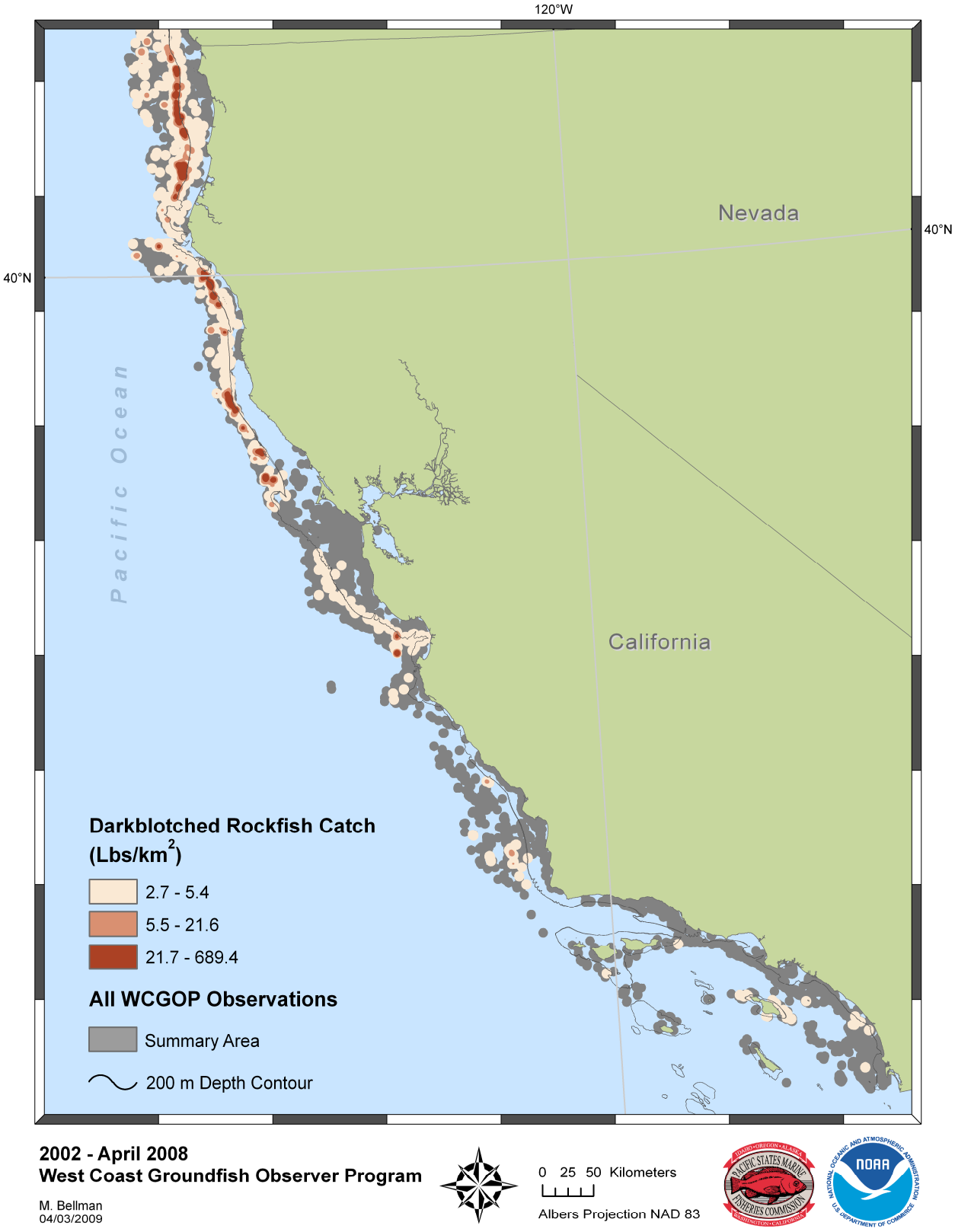


Figure 1 (cont.)

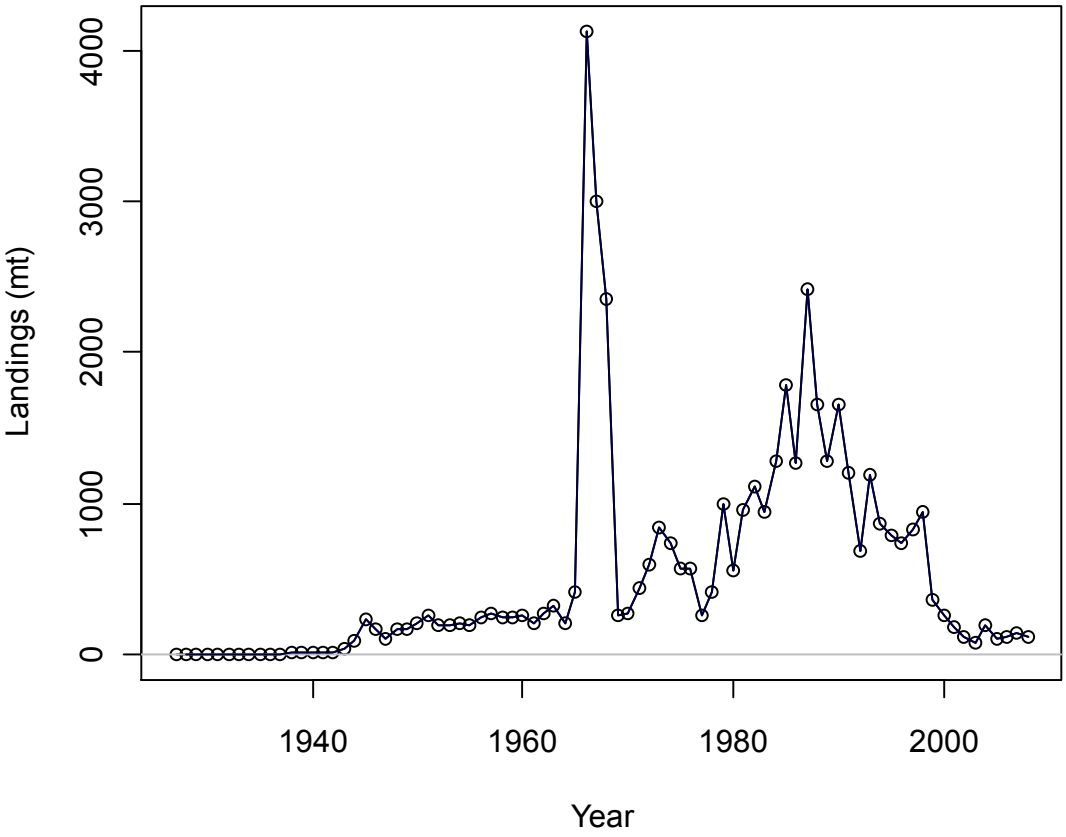


Figure 2. Time series of estimated fishery landings.

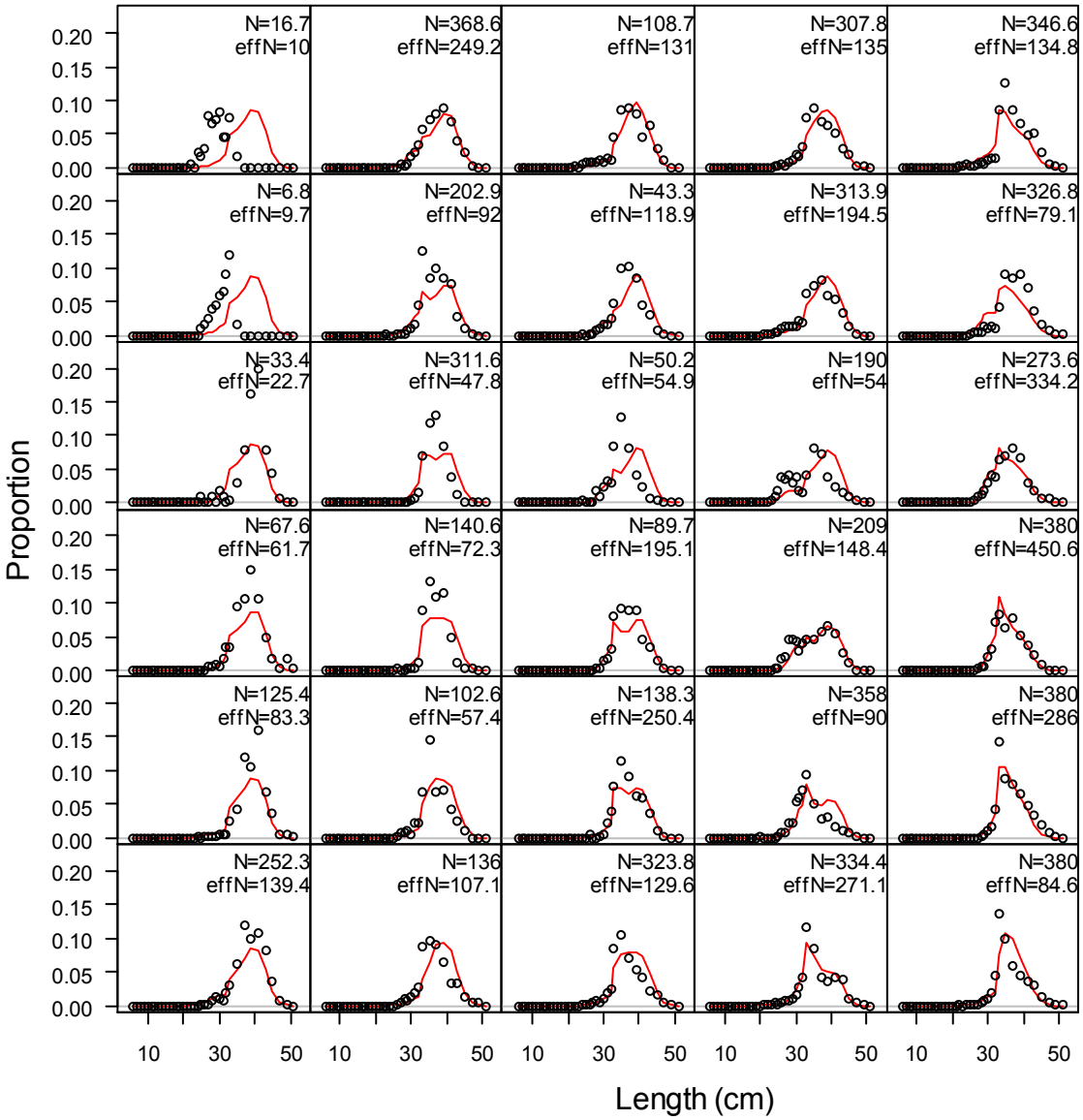


Figure 3. Female fishery length compositions and model fits.

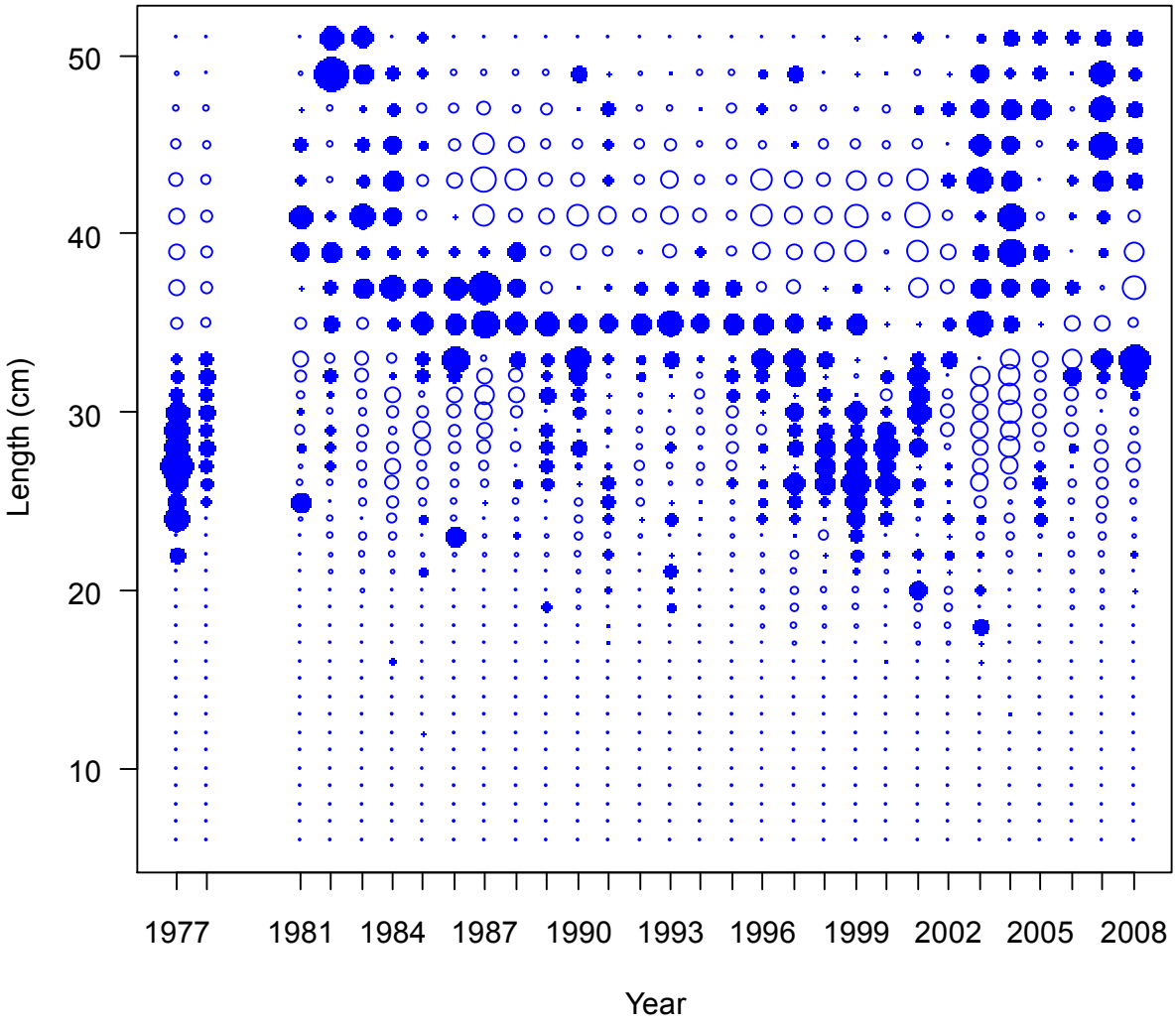


Figure 4. Pearson residuals for female length composition fits to fishery data.

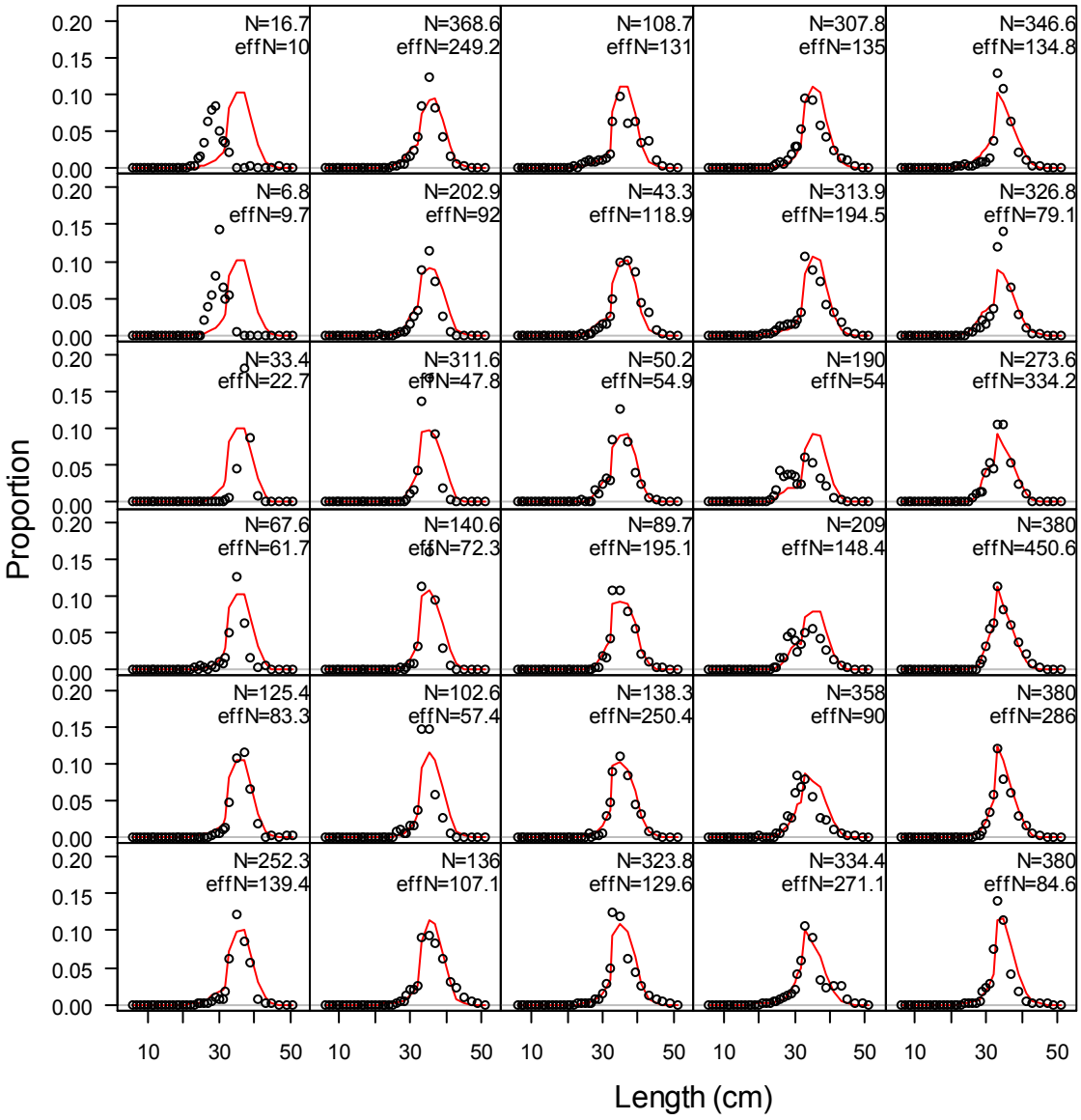


Figure 5. Male fishery lengths compositions and model fits

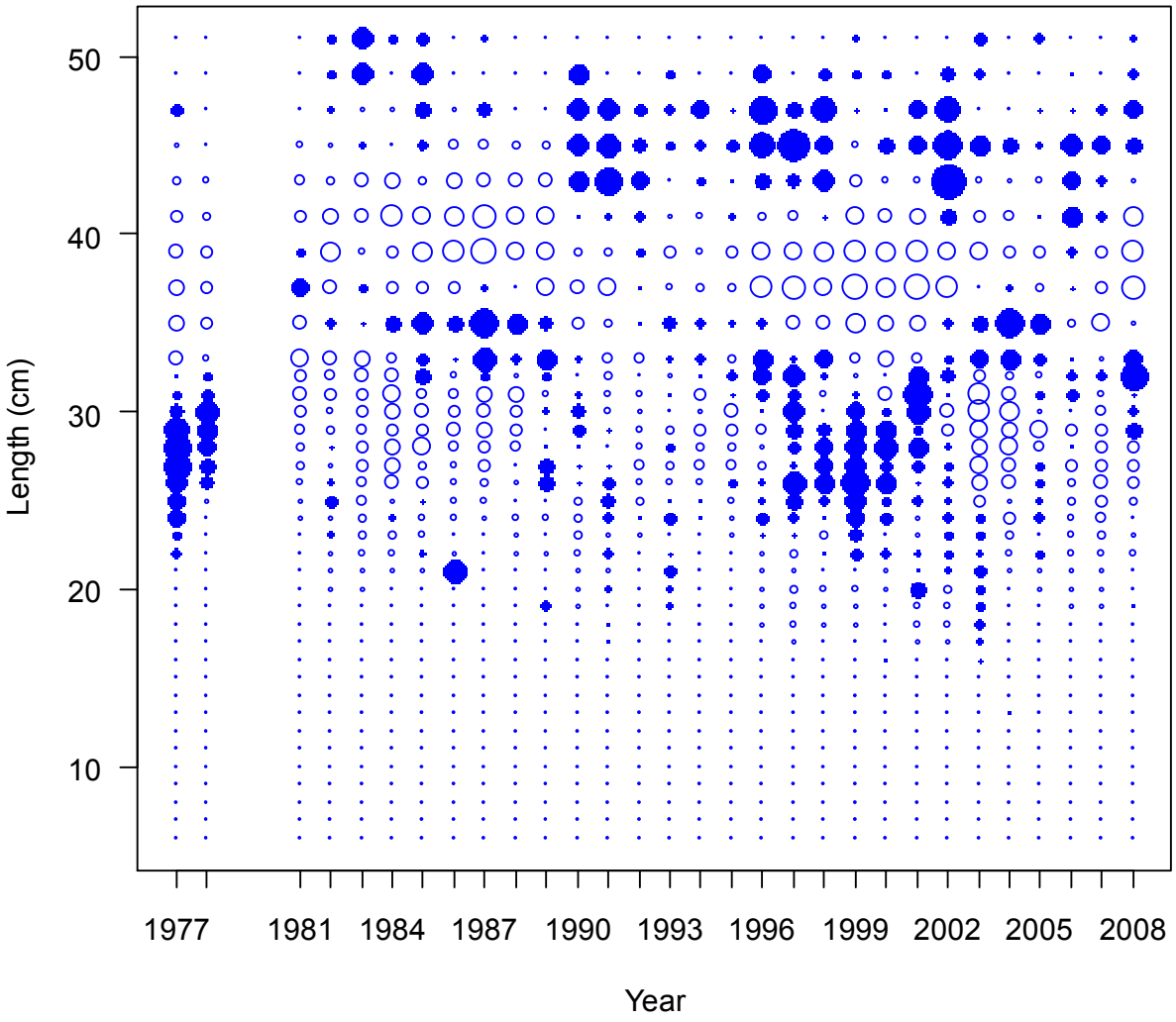


Figure 6. Pearson residuals for male length composition fits to fishery data.

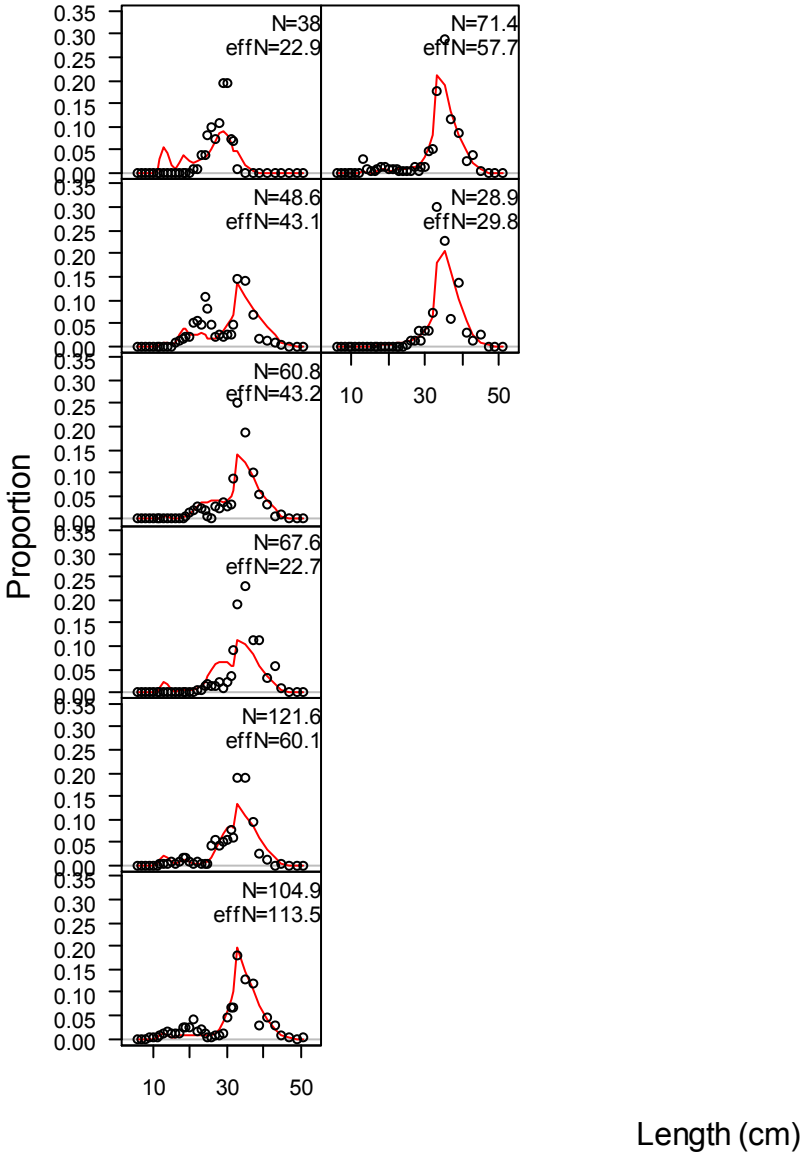


Figure 7. Combined sex fishery discard length compositions and model fits.

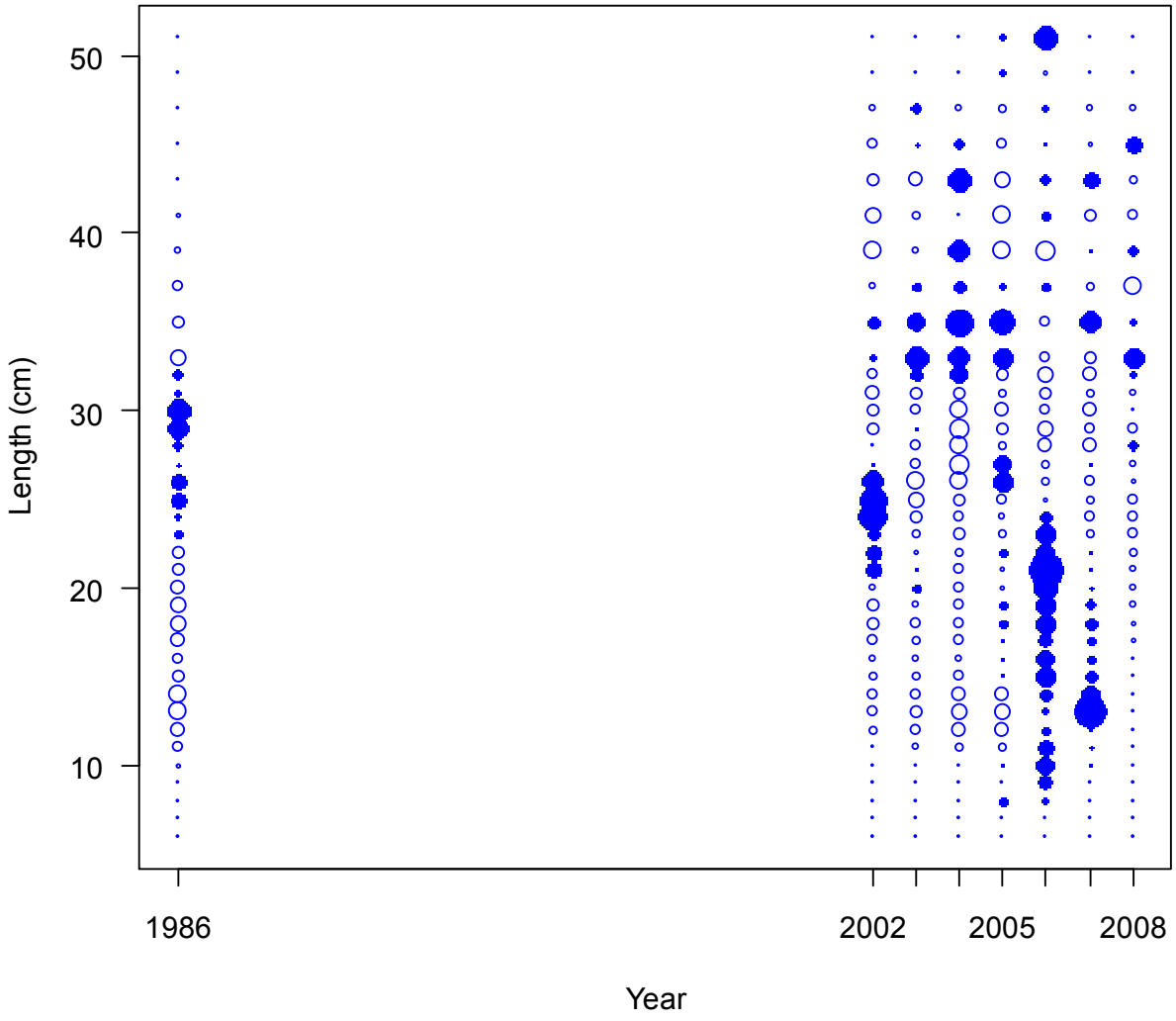


Figure 8. Pearson residuals for length composition fits to fishery discard data.

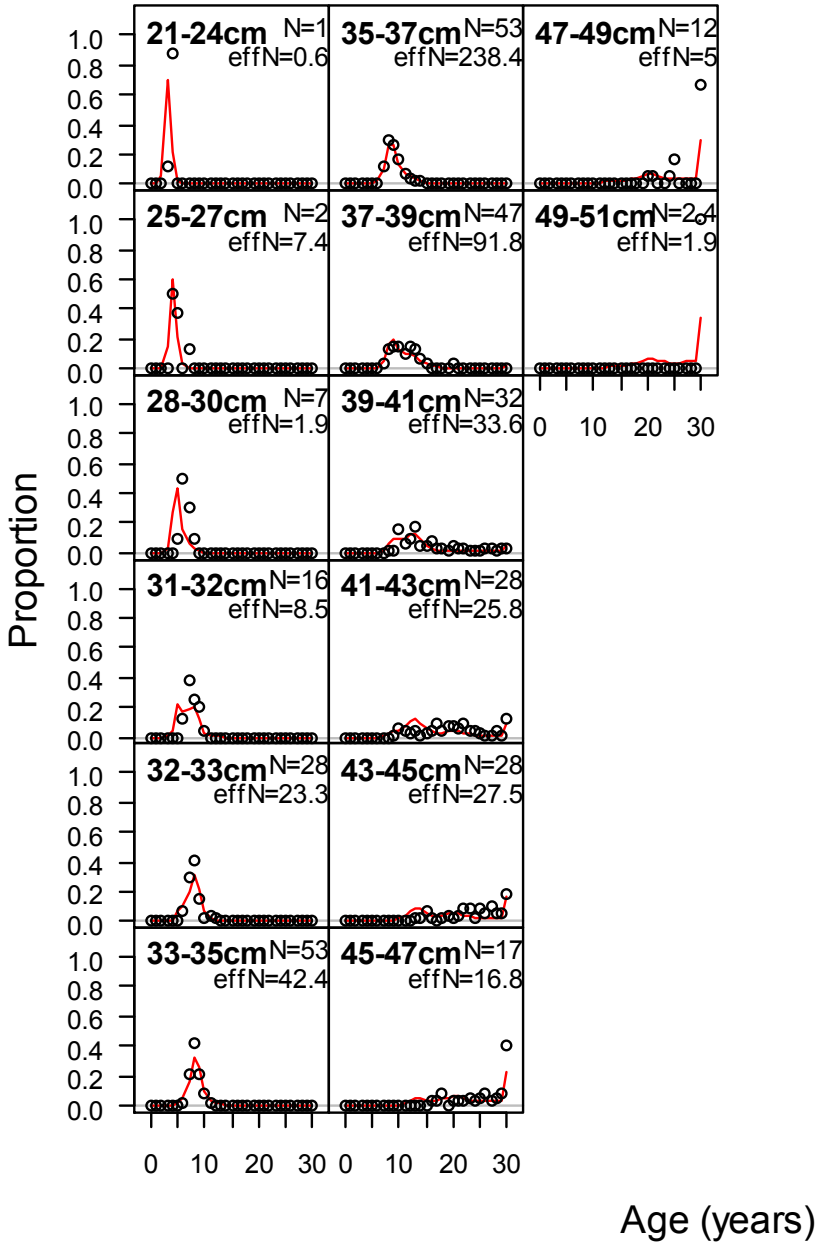


Figure 9. Fishery female 2008 conditional age-at-length data and model fits.

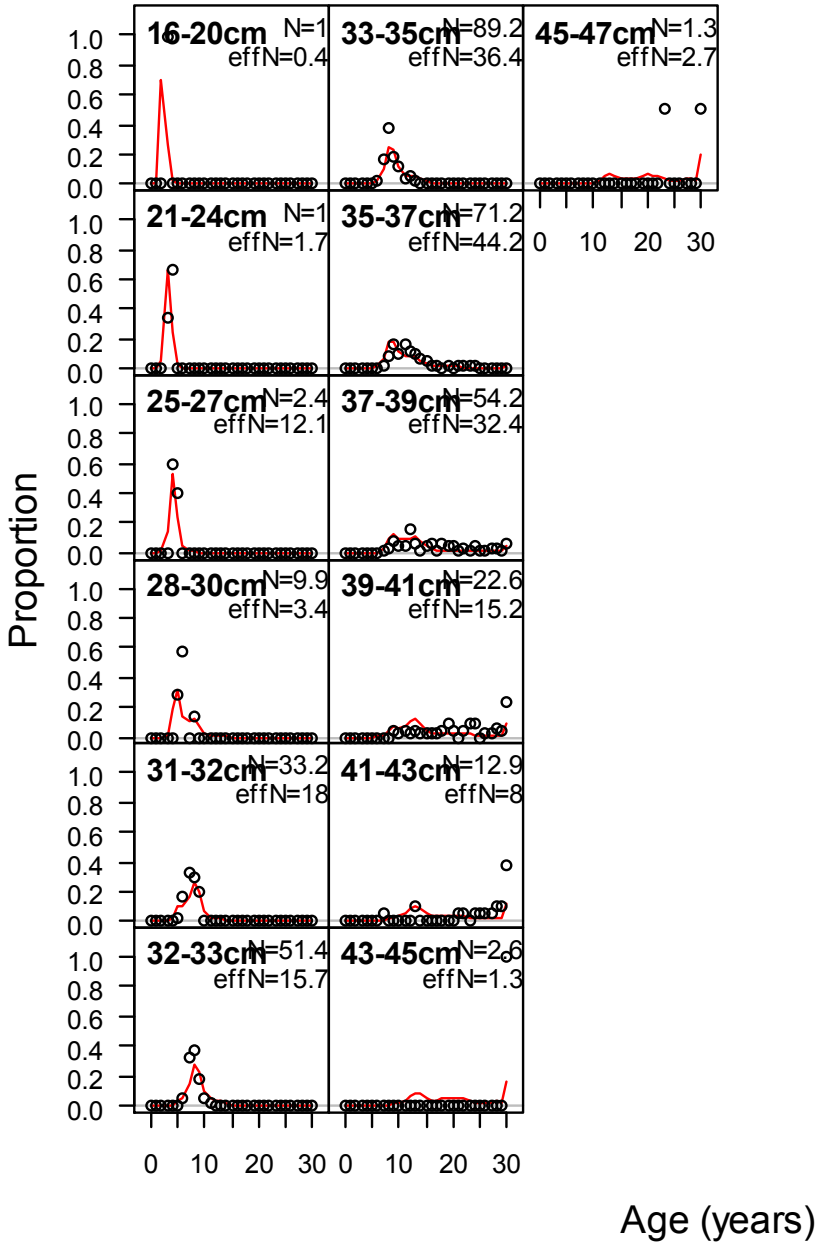


Figure 10. Fishery male 2008 conditional age-at-length data and model fits.

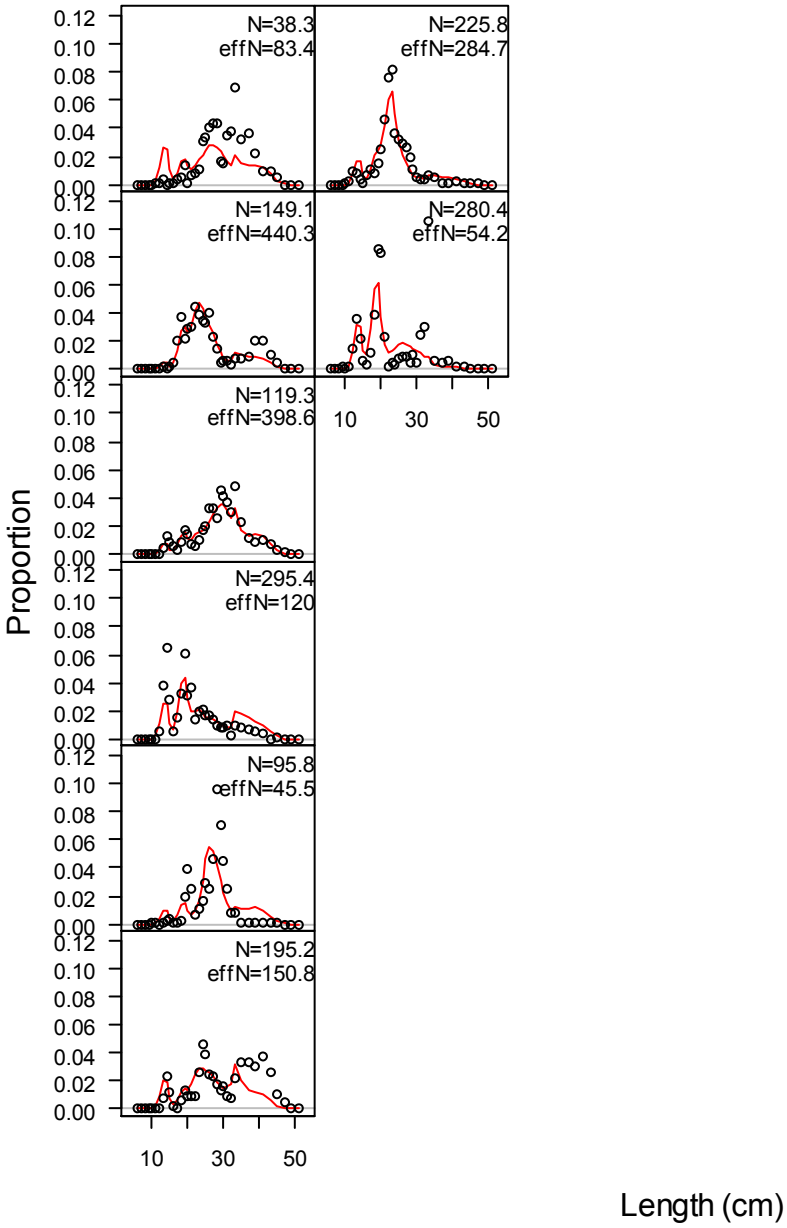


Figure 11. Triennial Shelf Survey female length compositions and model fits.

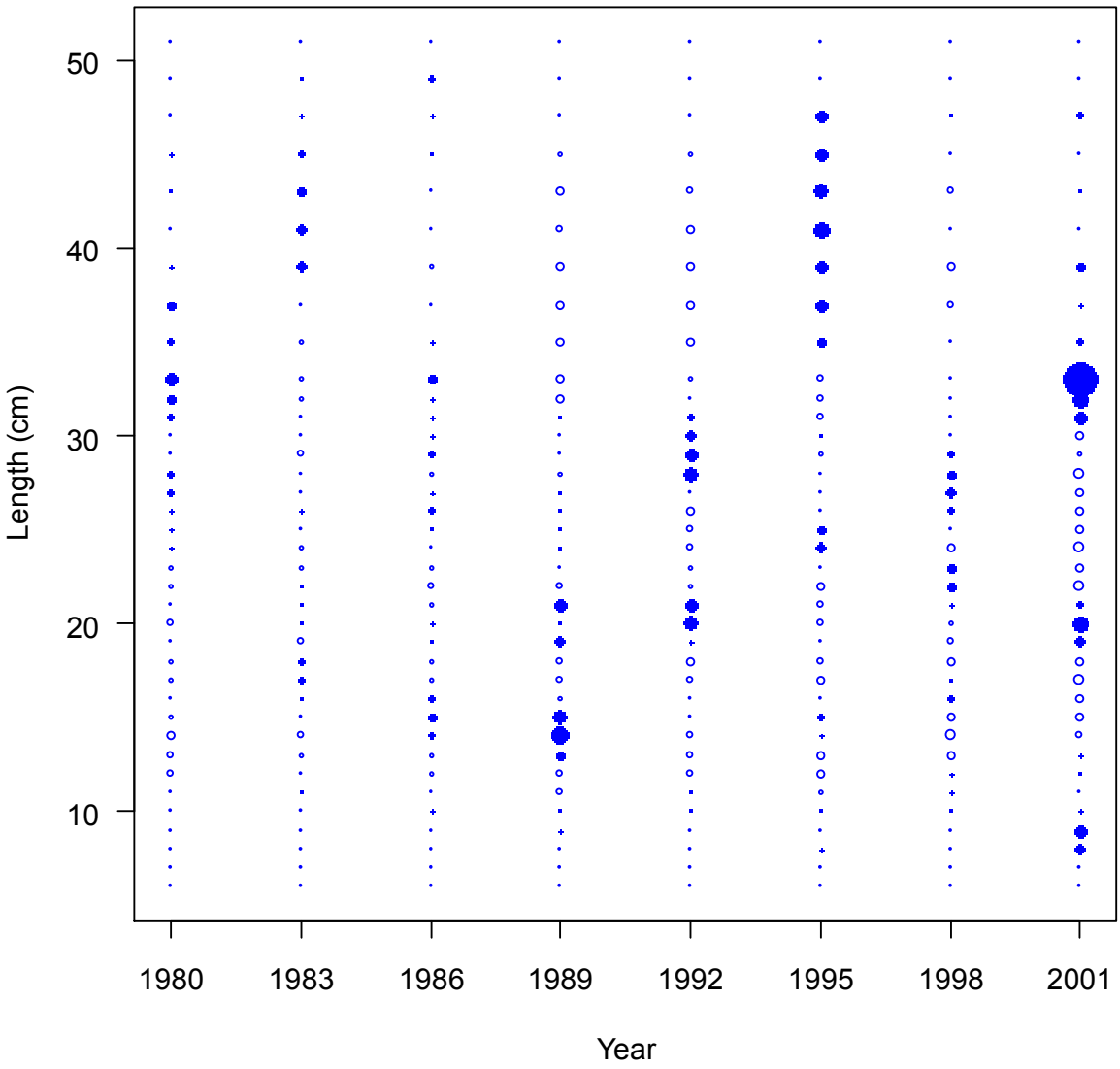


Figure 12. Pearson residuals for female length composition fits to Triennial Survey data.

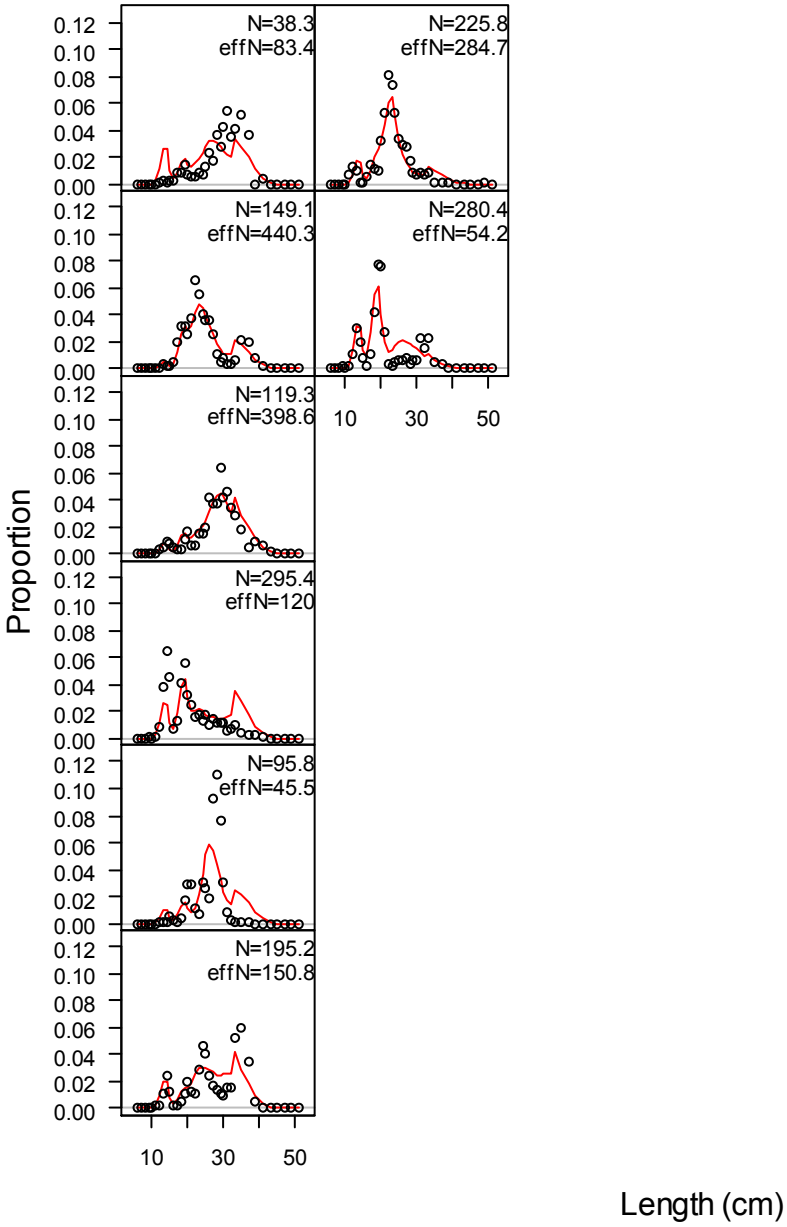


Figure 13. Triennial Shelf Survey male length compositions and model fits

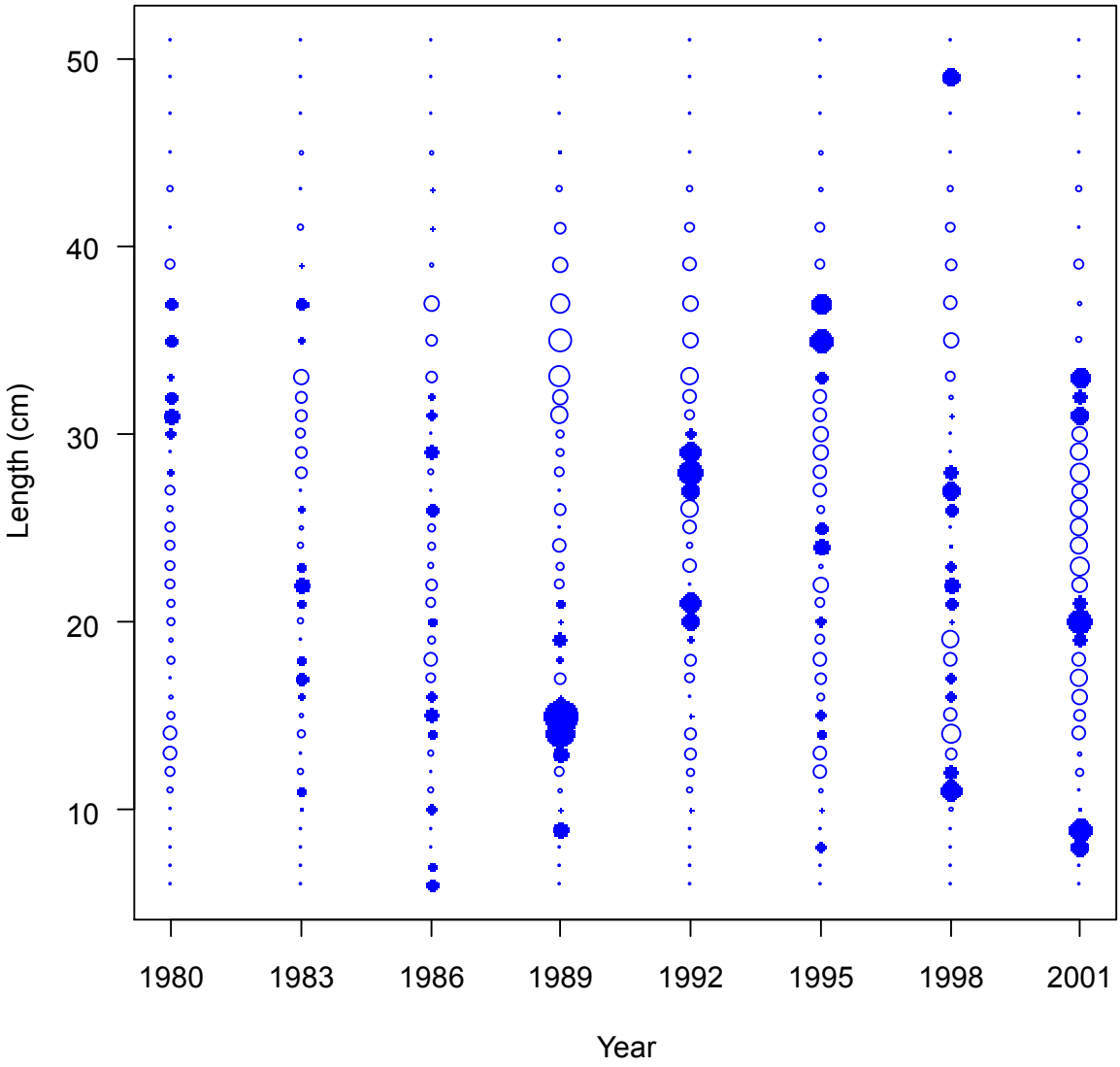


Figure 14. Pearson residuals for male length composition fits to Triennial Survey data.

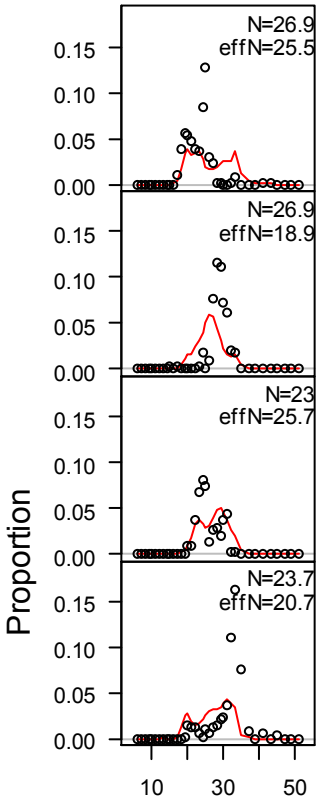


Figure 15. AFSC Slope Survey female length compositions and model fits

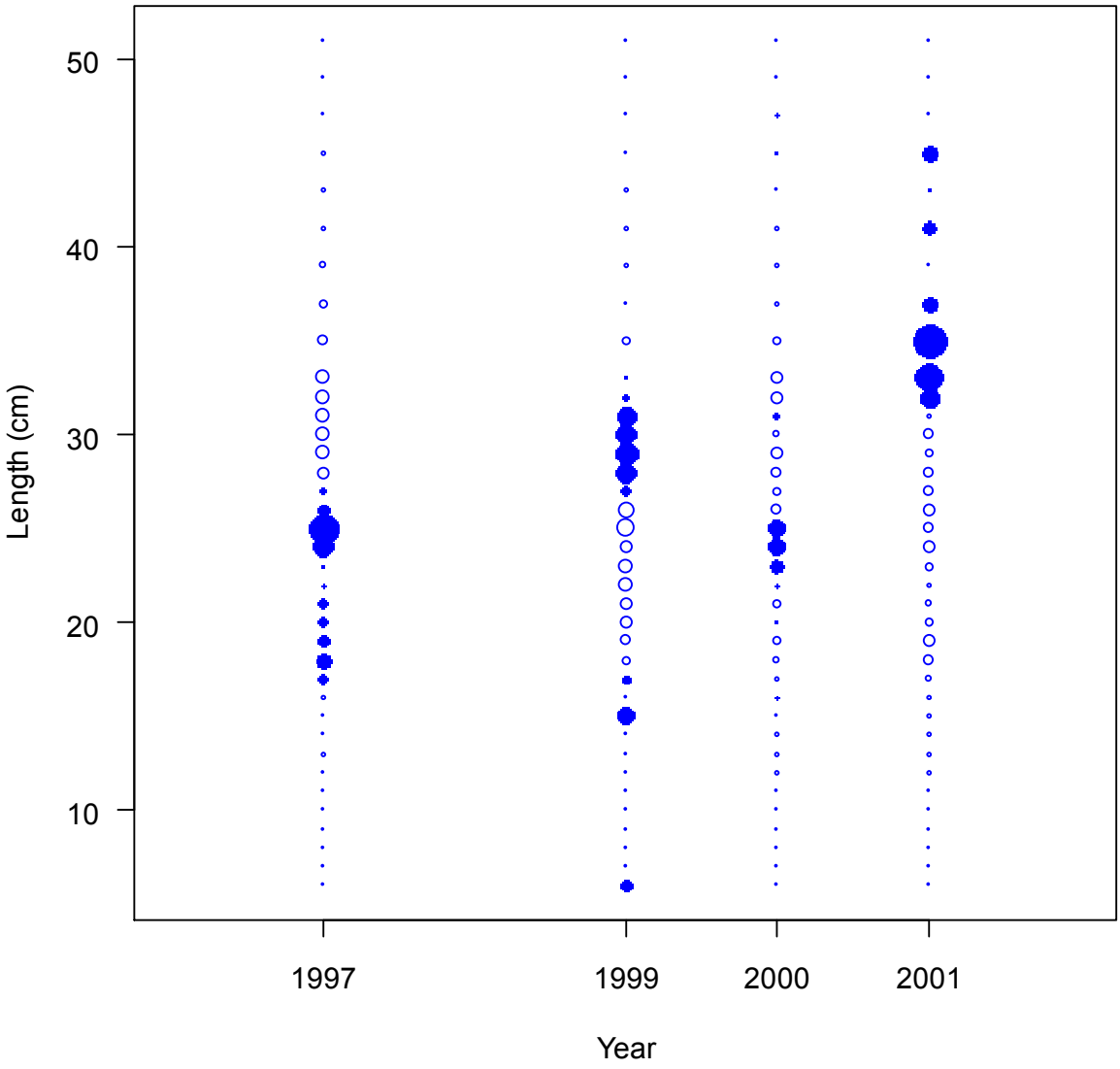


Figure 16. Pearson residuals for female length composition fits to AFSC Slope Survey data.

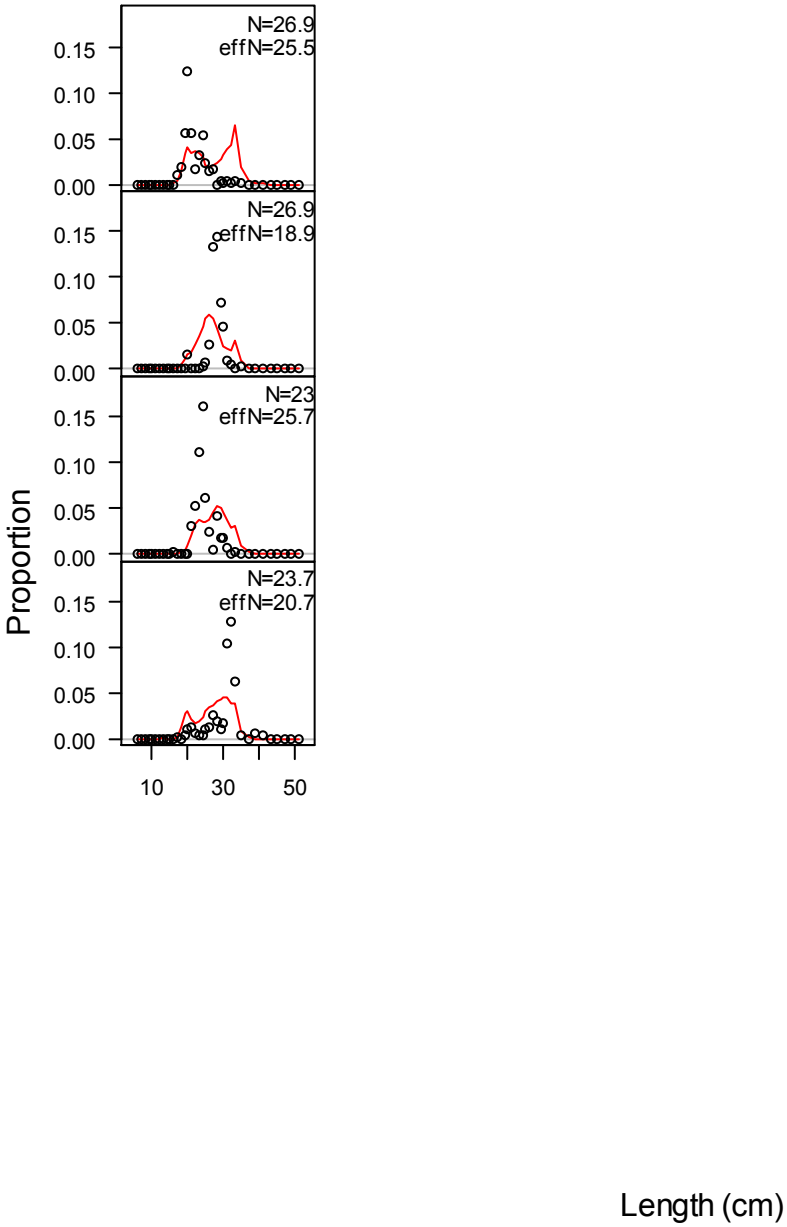


Figure 17. AFSC Slope Survey male length compositions and model fits

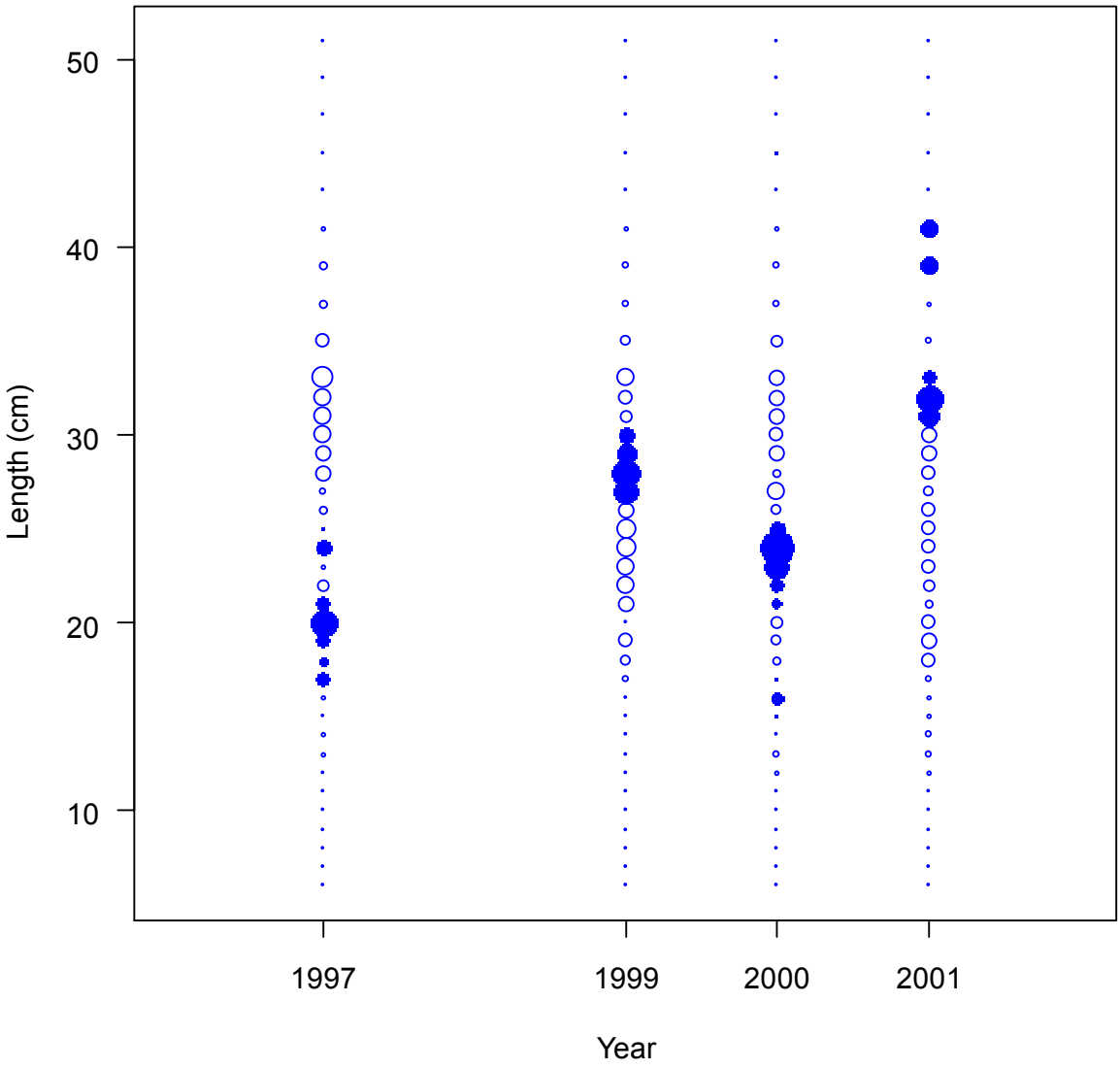


Figure 18. Pearson residuals for male length composition fits to AFSC Slope Survey data.

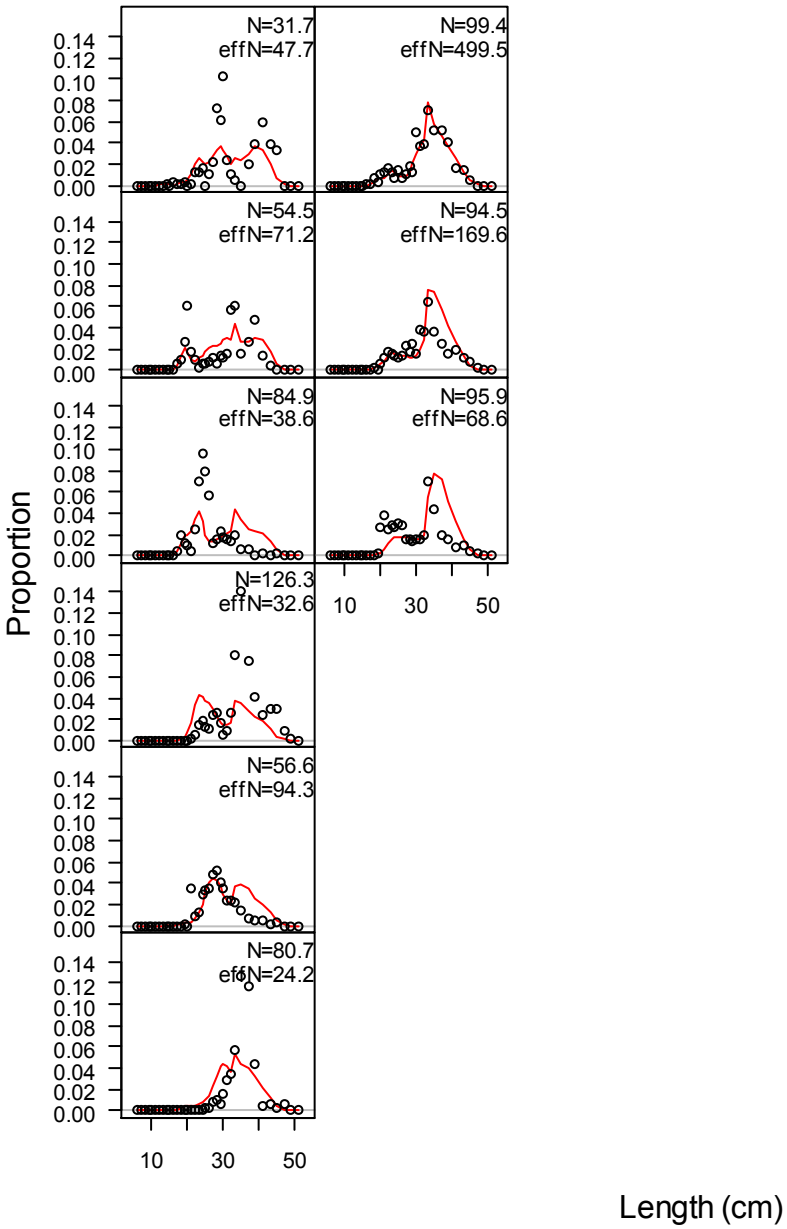


Figure 19. NWFSC Slope Survey female length compositions and model fits

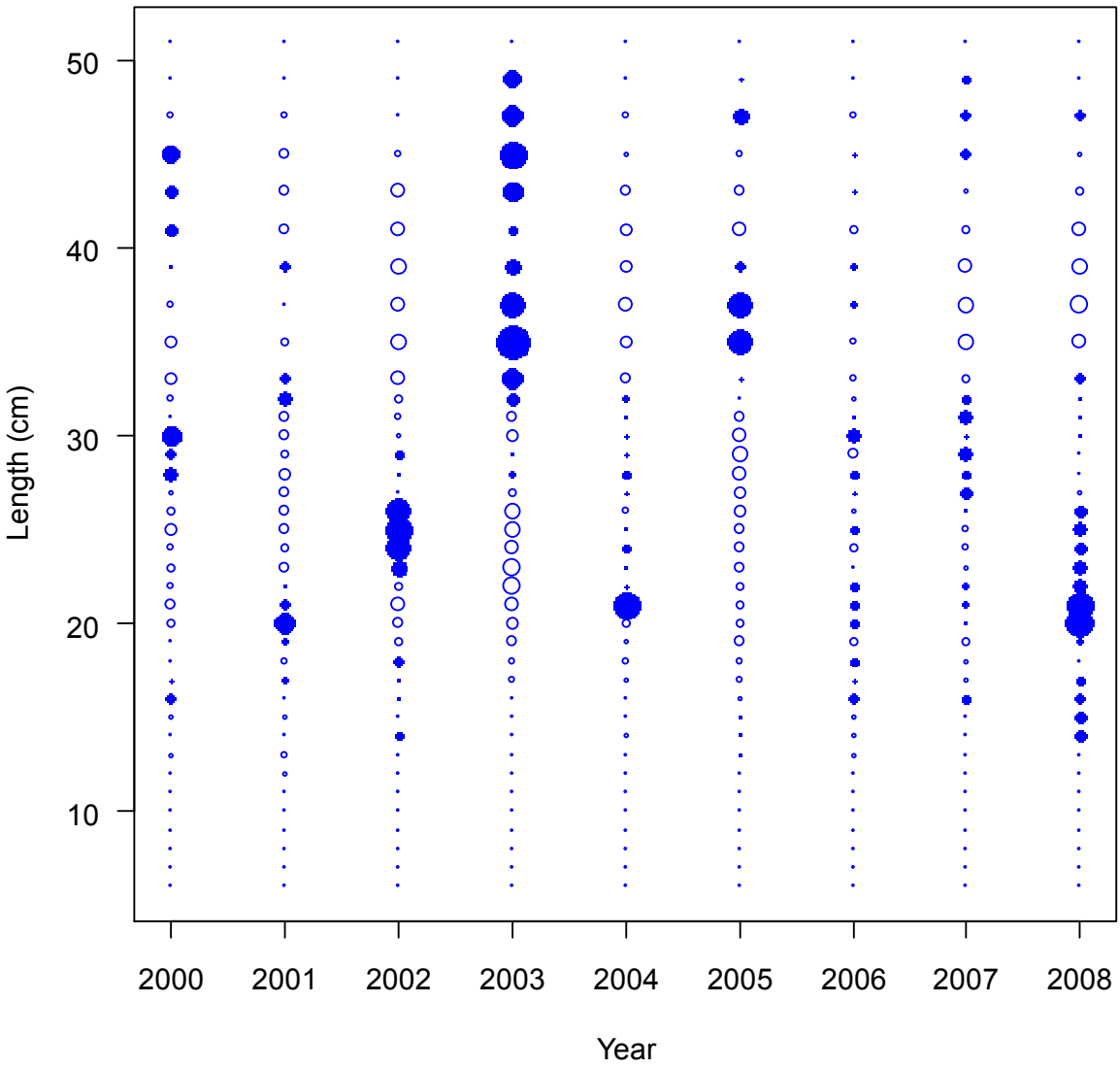


Figure 20. Pearson residuals for female length composition fits to NWFSC Slope Survey data.

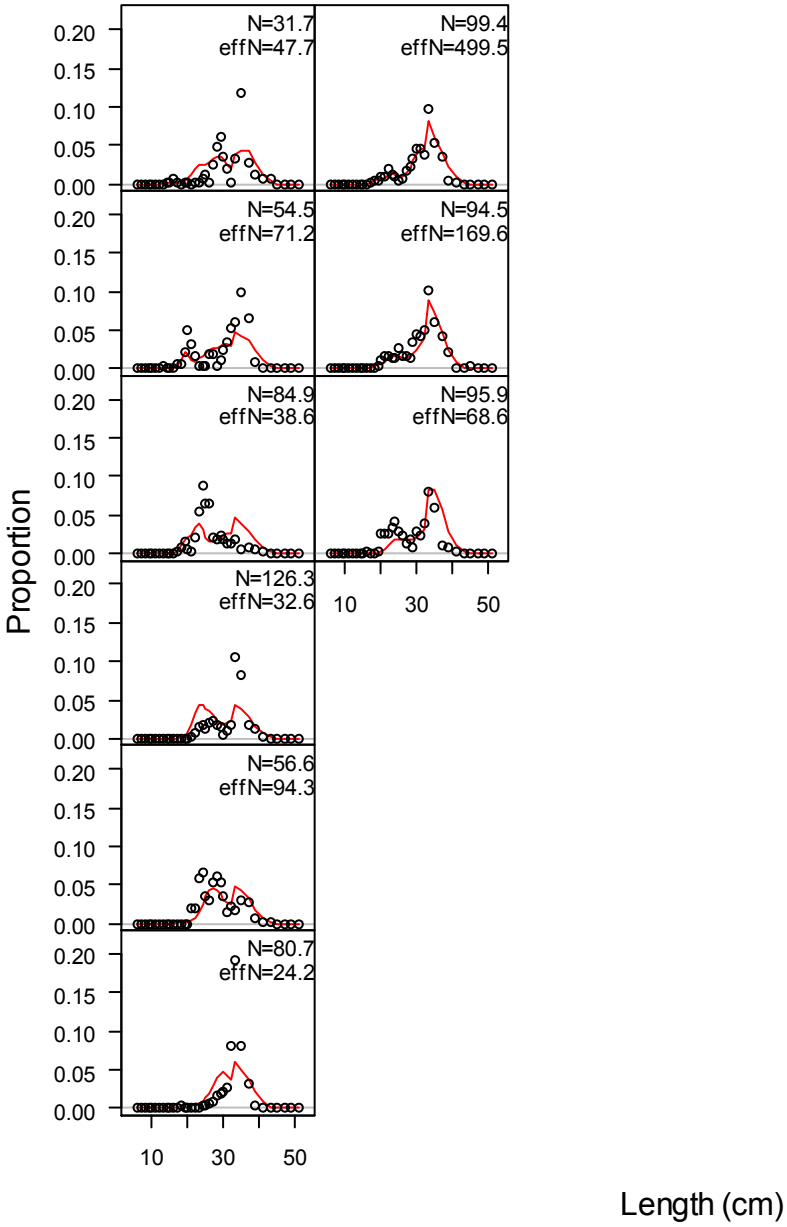


Figure 21. NWFSC Slope Survey male length compositions and model fits

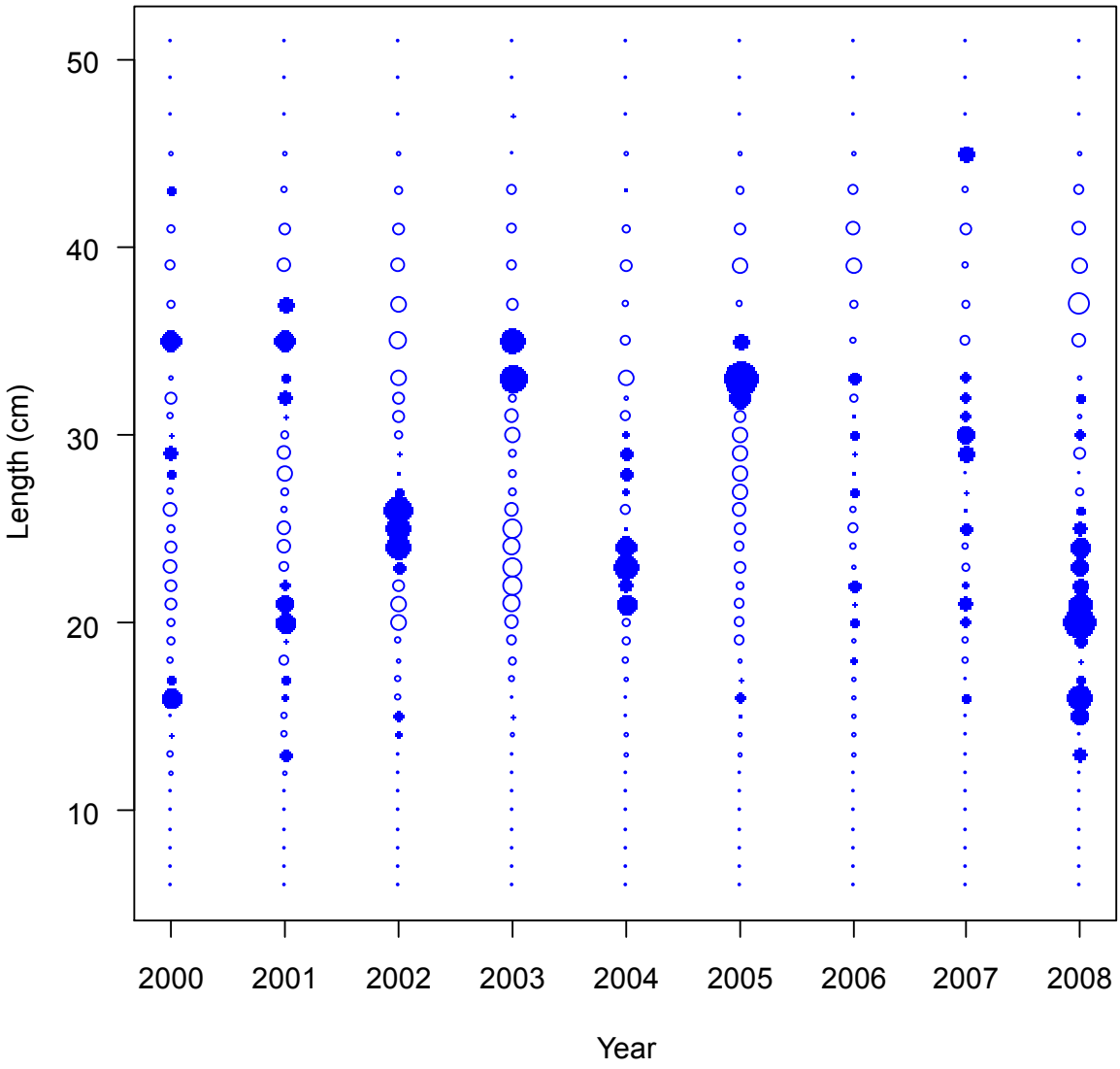


Figure 22. Pearson residuals for male length composition fits to NWFSC Slope Survey data.

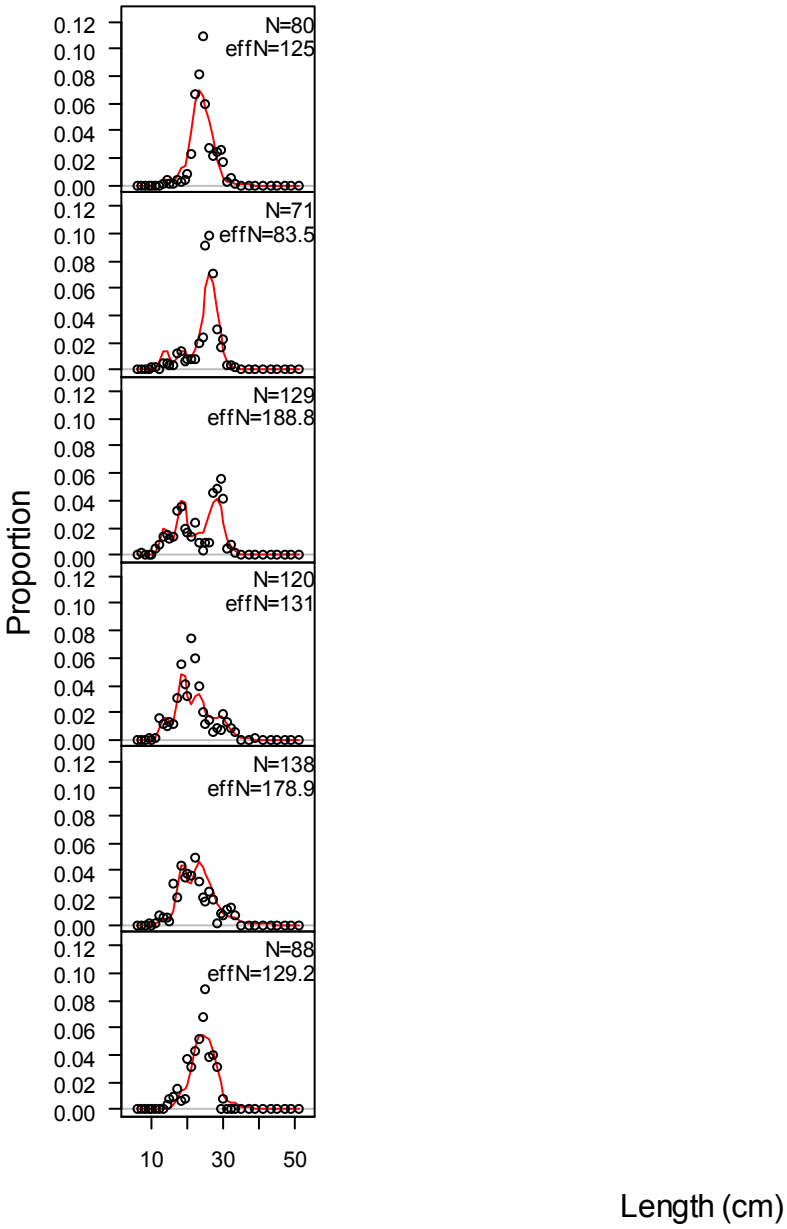


Figure 23. NWFSC Shelf Survey female length compositions and model fits

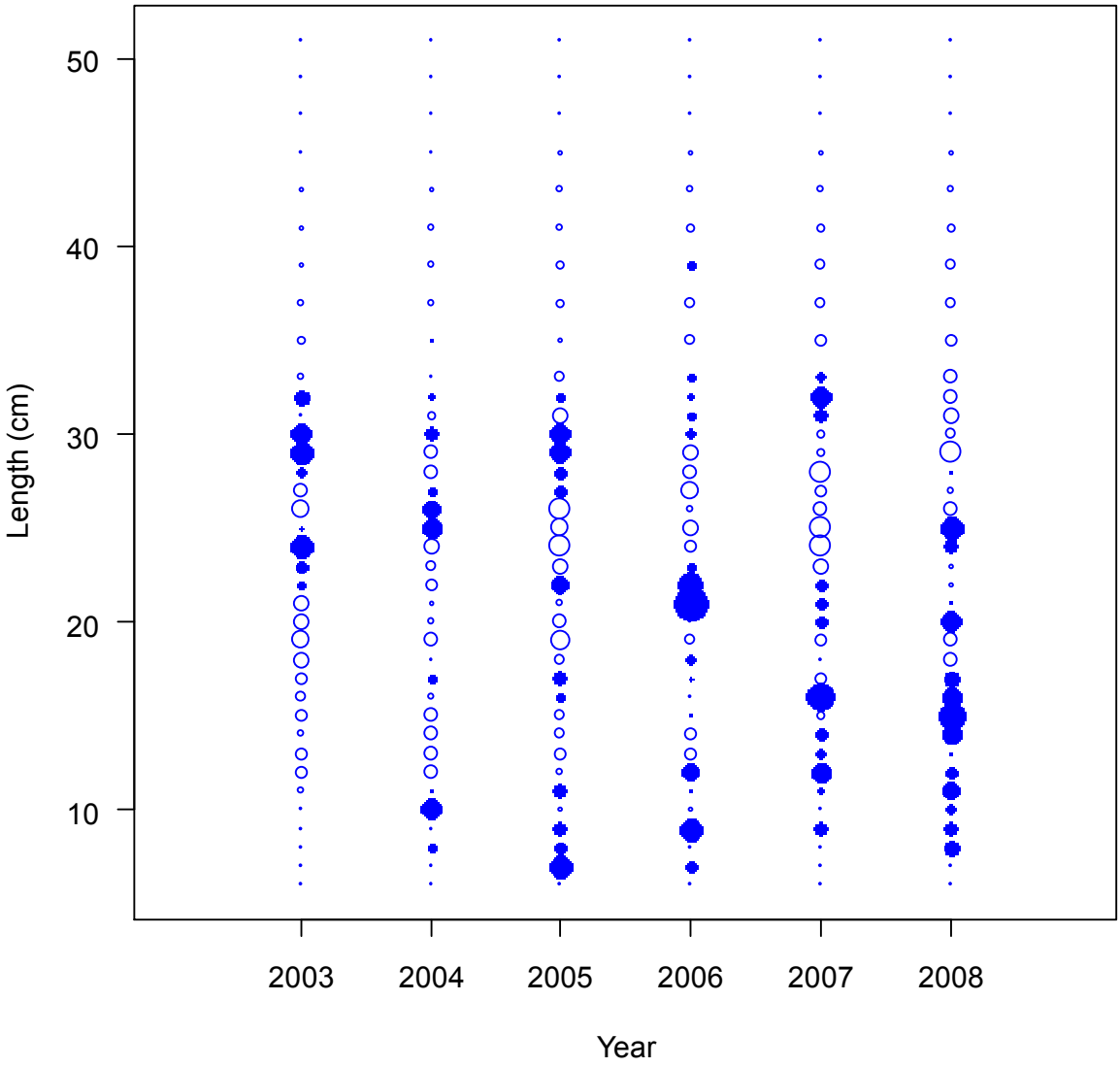


Figure 24. Pearson residuals for female length composition fits to NWFSC Shelf Survey data.

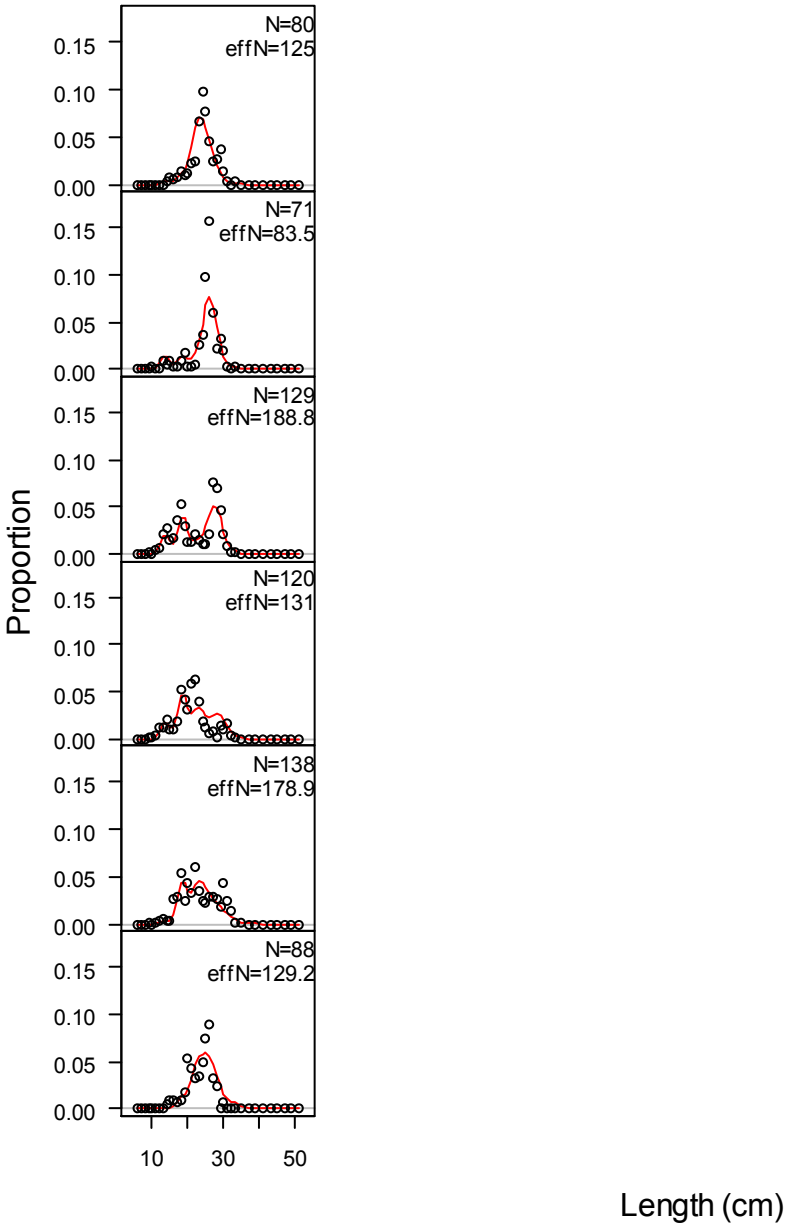


Figure 25. NWFSC Shelf Survey male length compositions and model fits

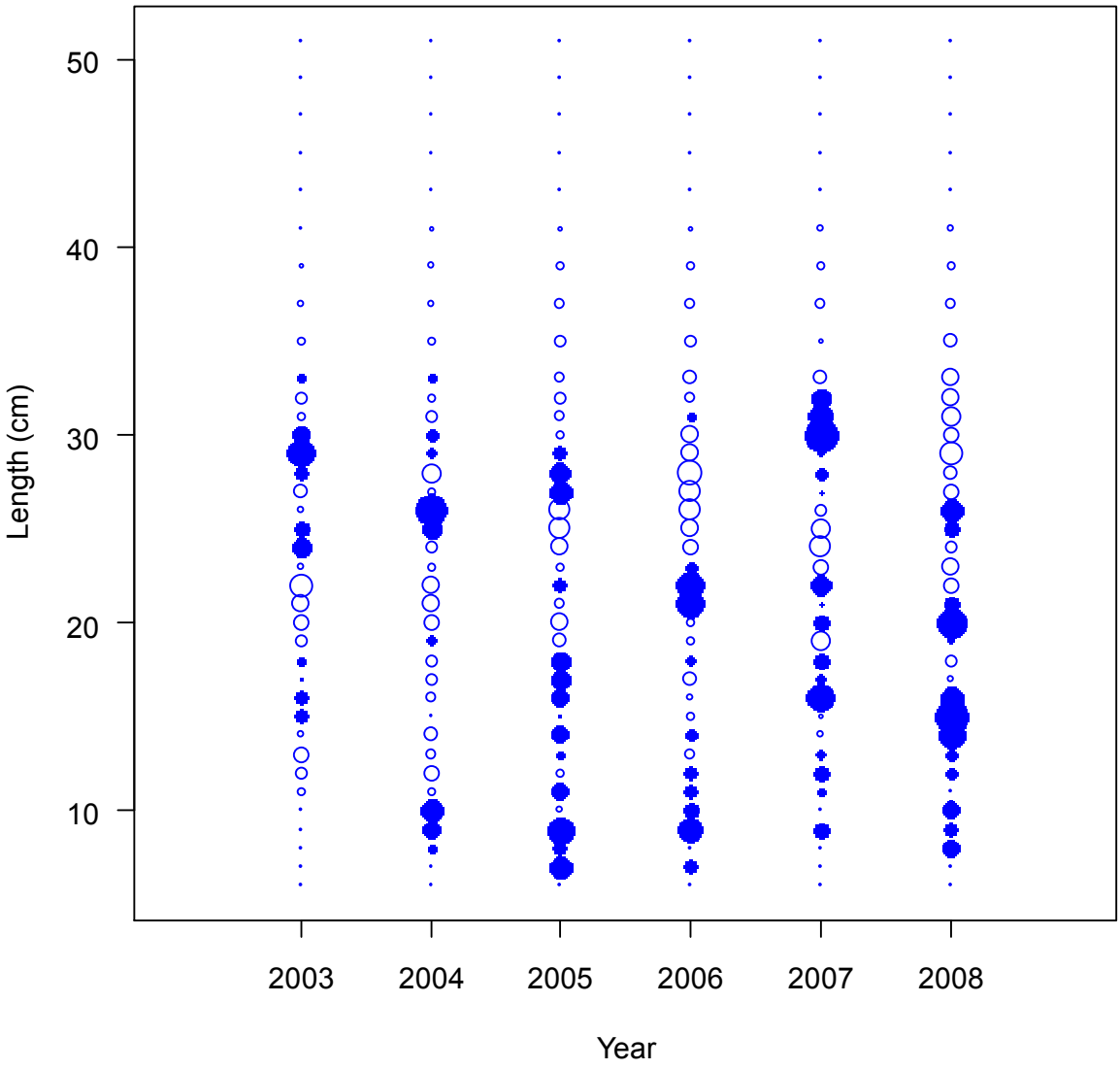
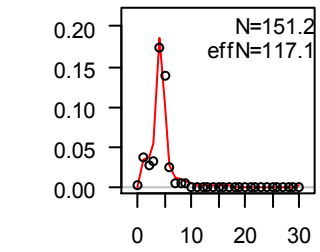


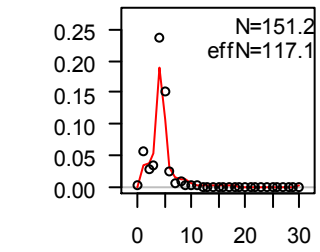
Figure 26. Pearson residuals for male length composition fits to NWFSC Shelf Survey data.



Proportion

Age (years)

Figure 27. Triennial female 2004 age composition and model fit.



Proportion

Age (years)

Figure 28. Male Triennial 2004 age composition and model fit.

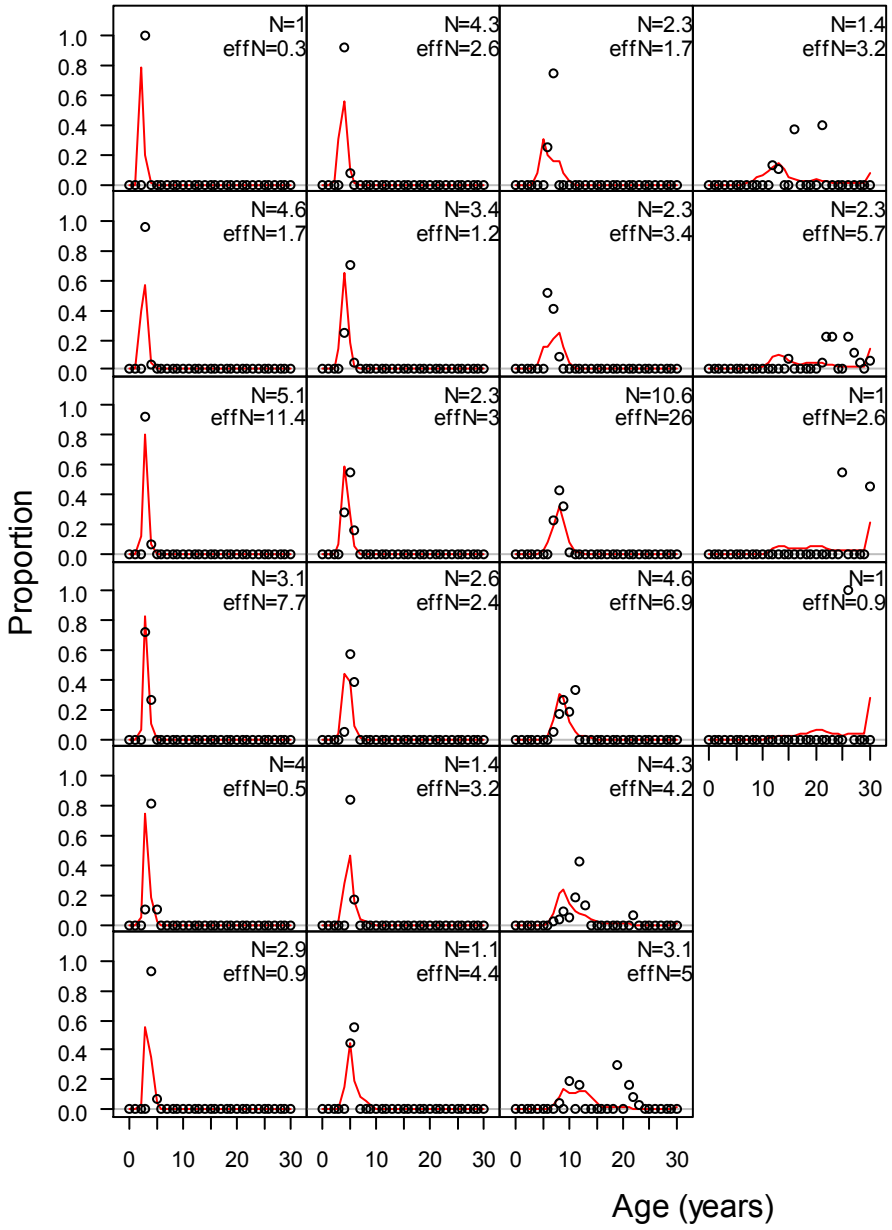


Figure 29. NWFSC Slope Survey female 2008 conditional age-at-length data and model fits.

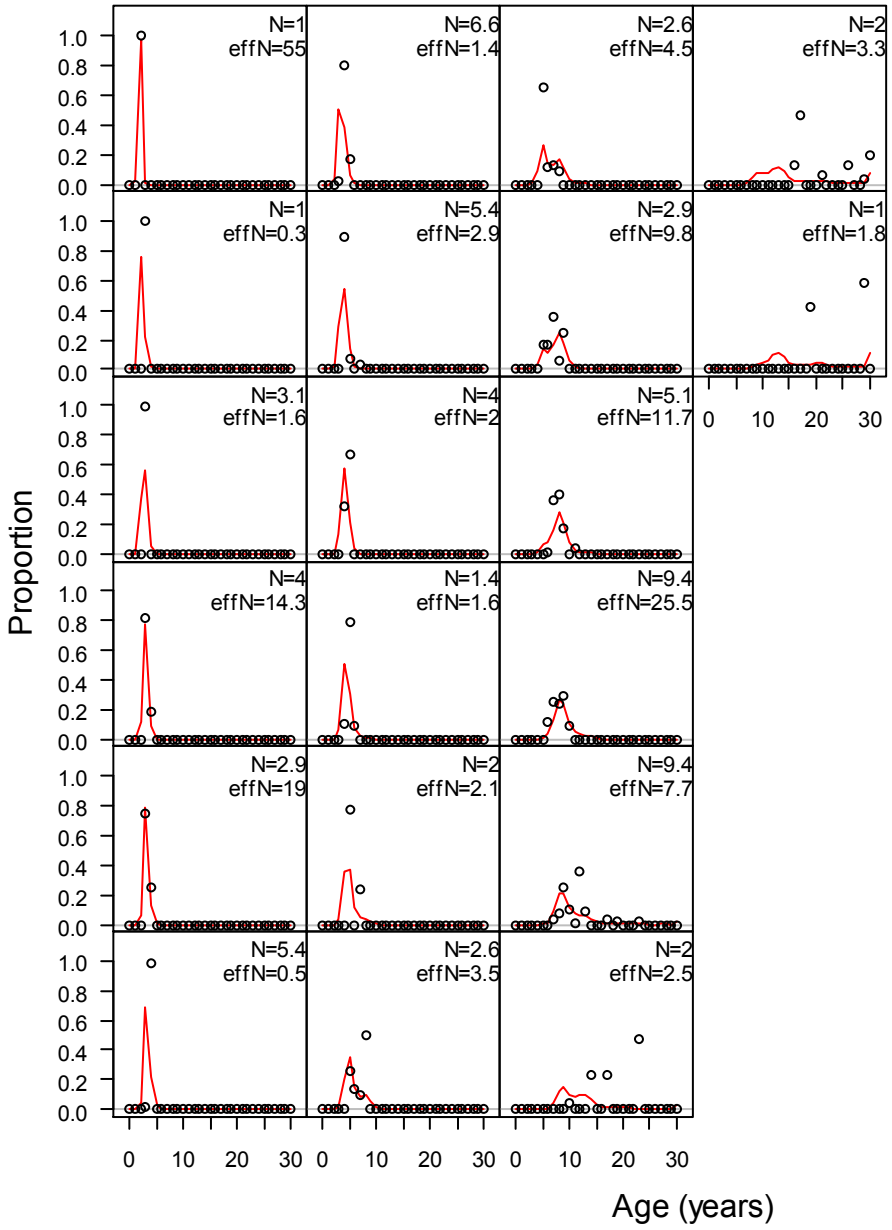


Figure 30. NWFSC Slope Survey male 2008 conditional age-at-length data and model fits.

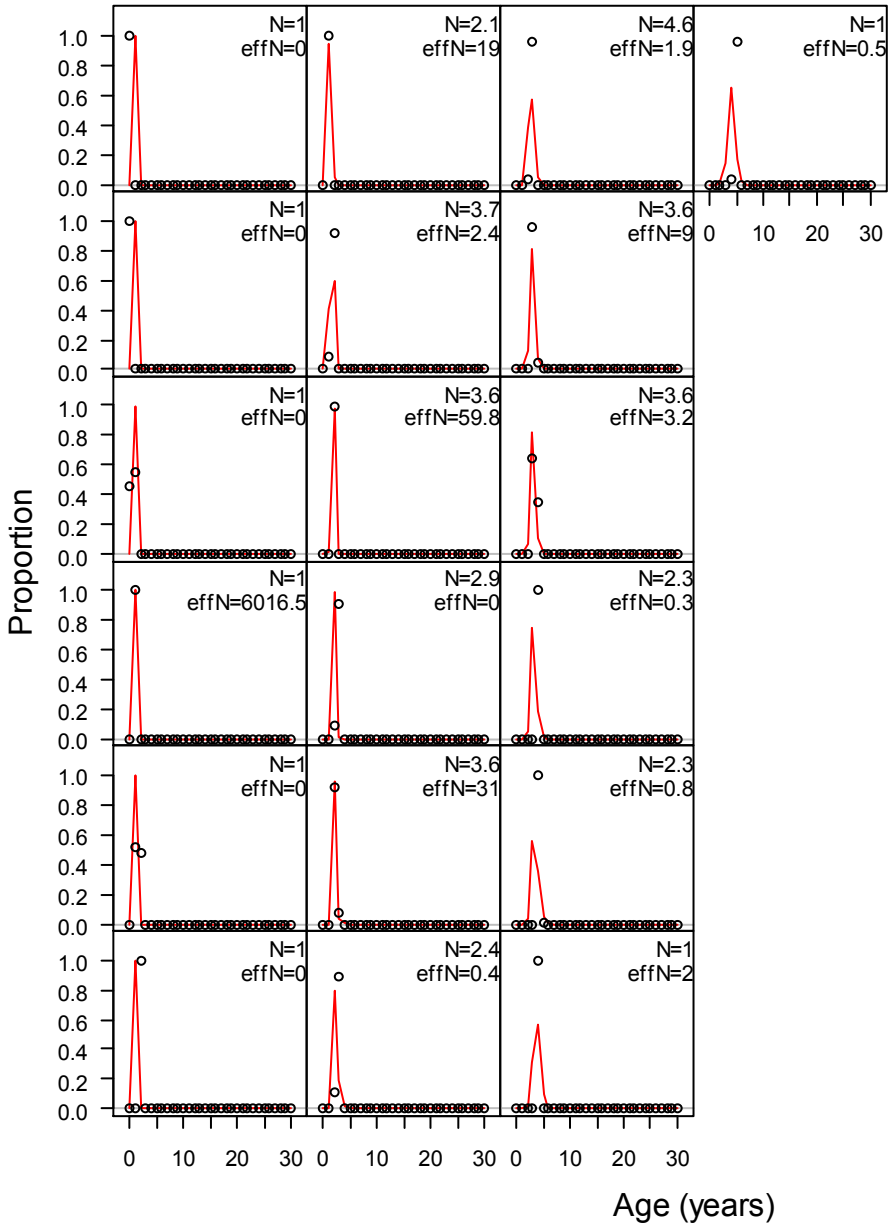


Figure 31. NWFSC Shelf Survey female 2008 conditional age-at-length data and model fits.

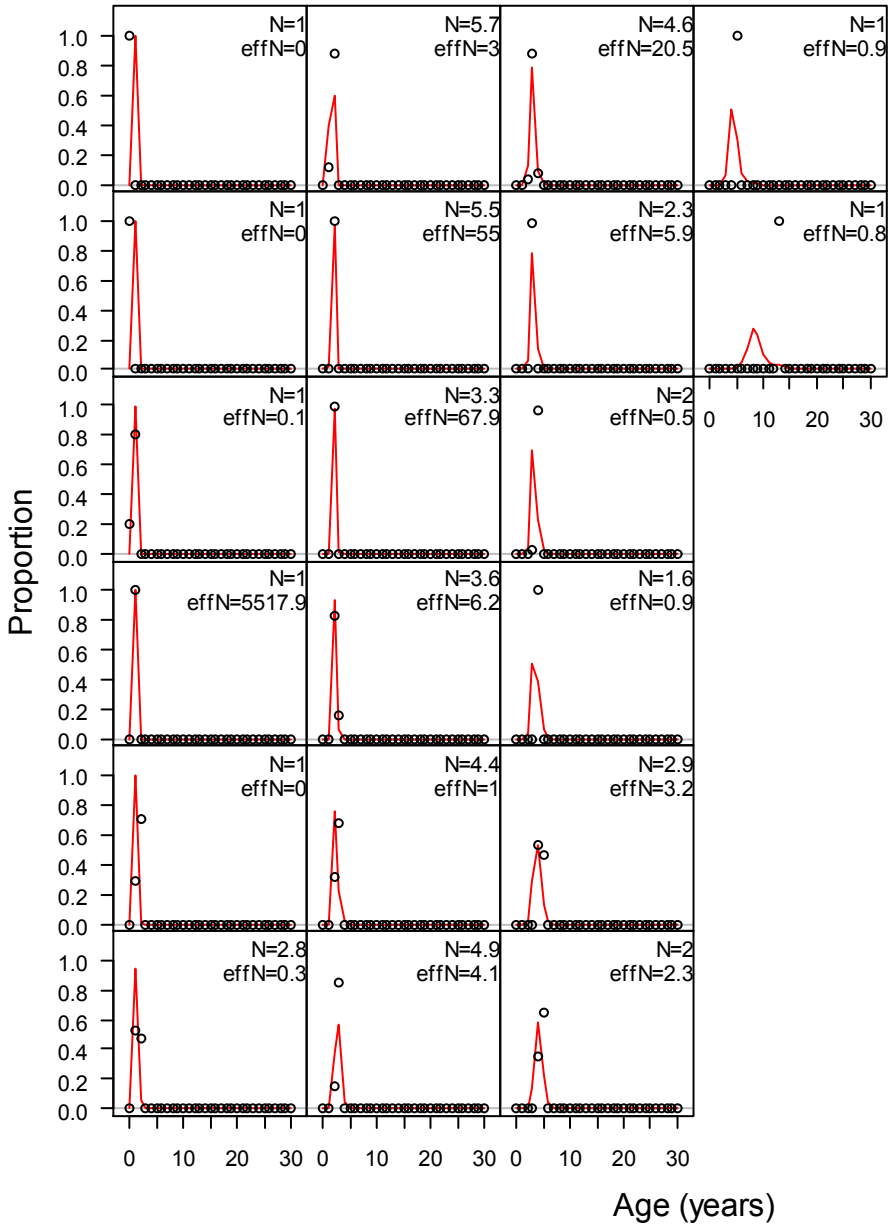


Figure 32. NWFSC Shelf Survey male 2008 conditional age-at-length data and model fits.

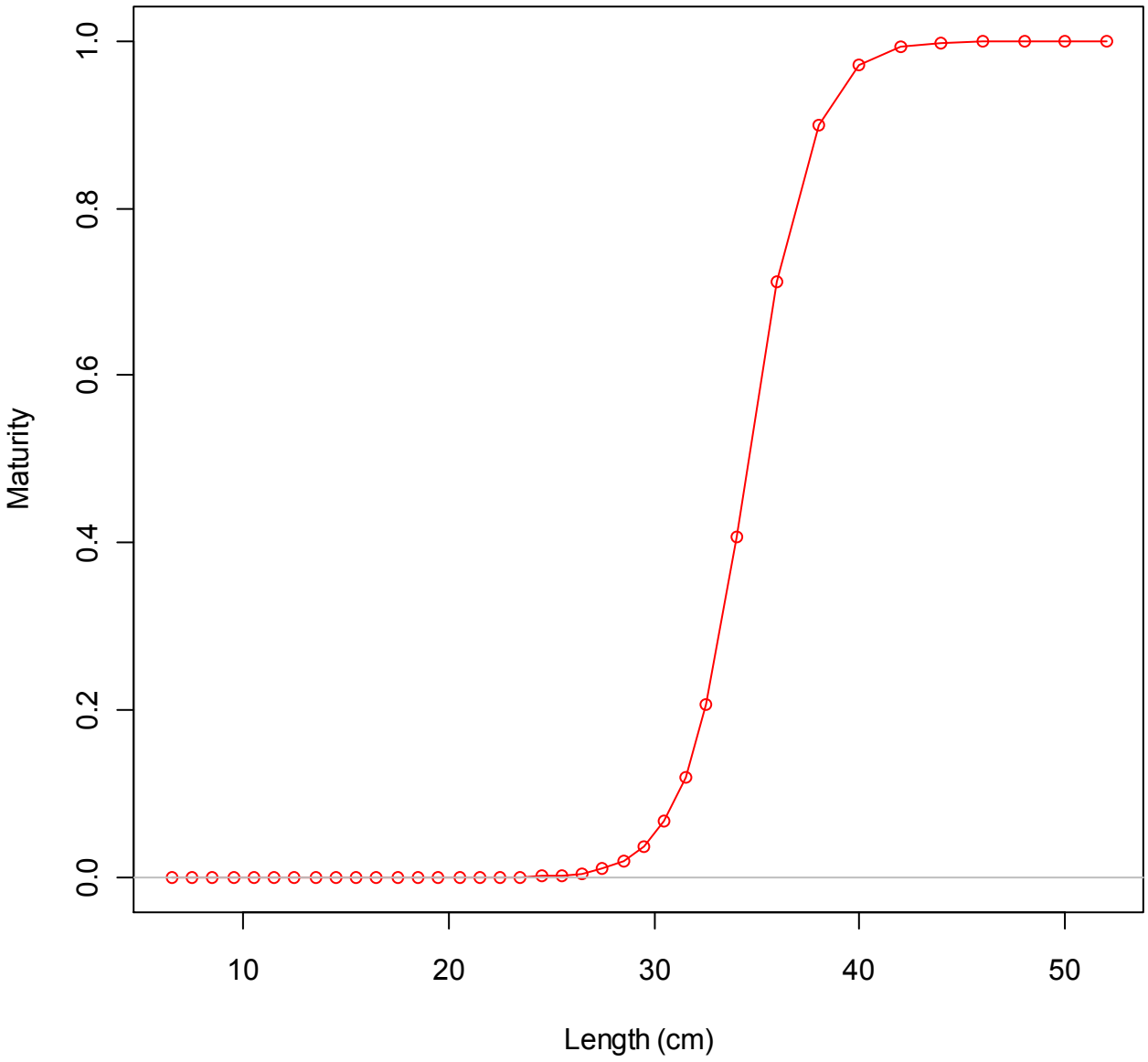


Figure 33. Maturity ogive for female darkblotched rockfish.

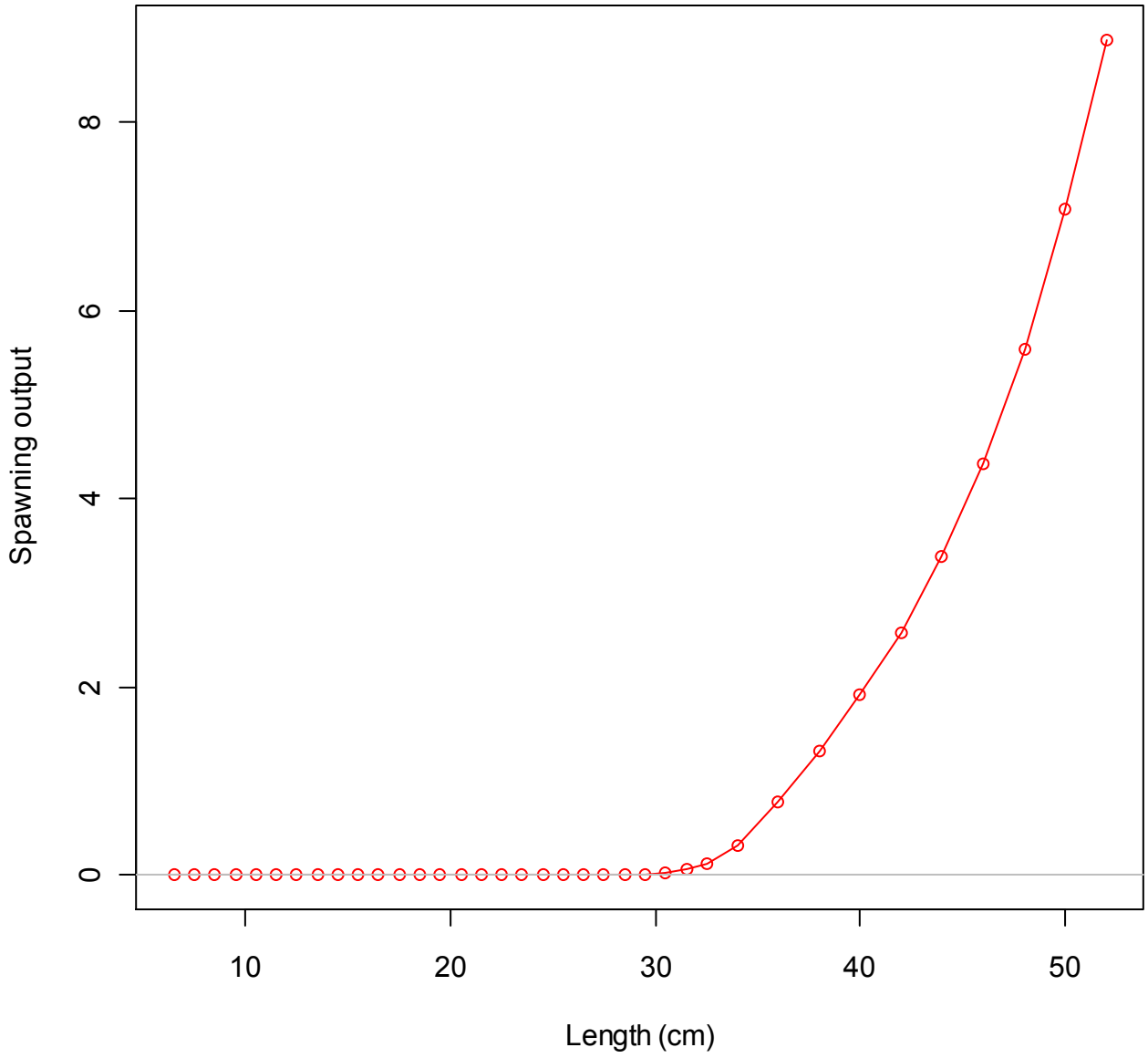


Figure 34. Length to spawning output relationship.

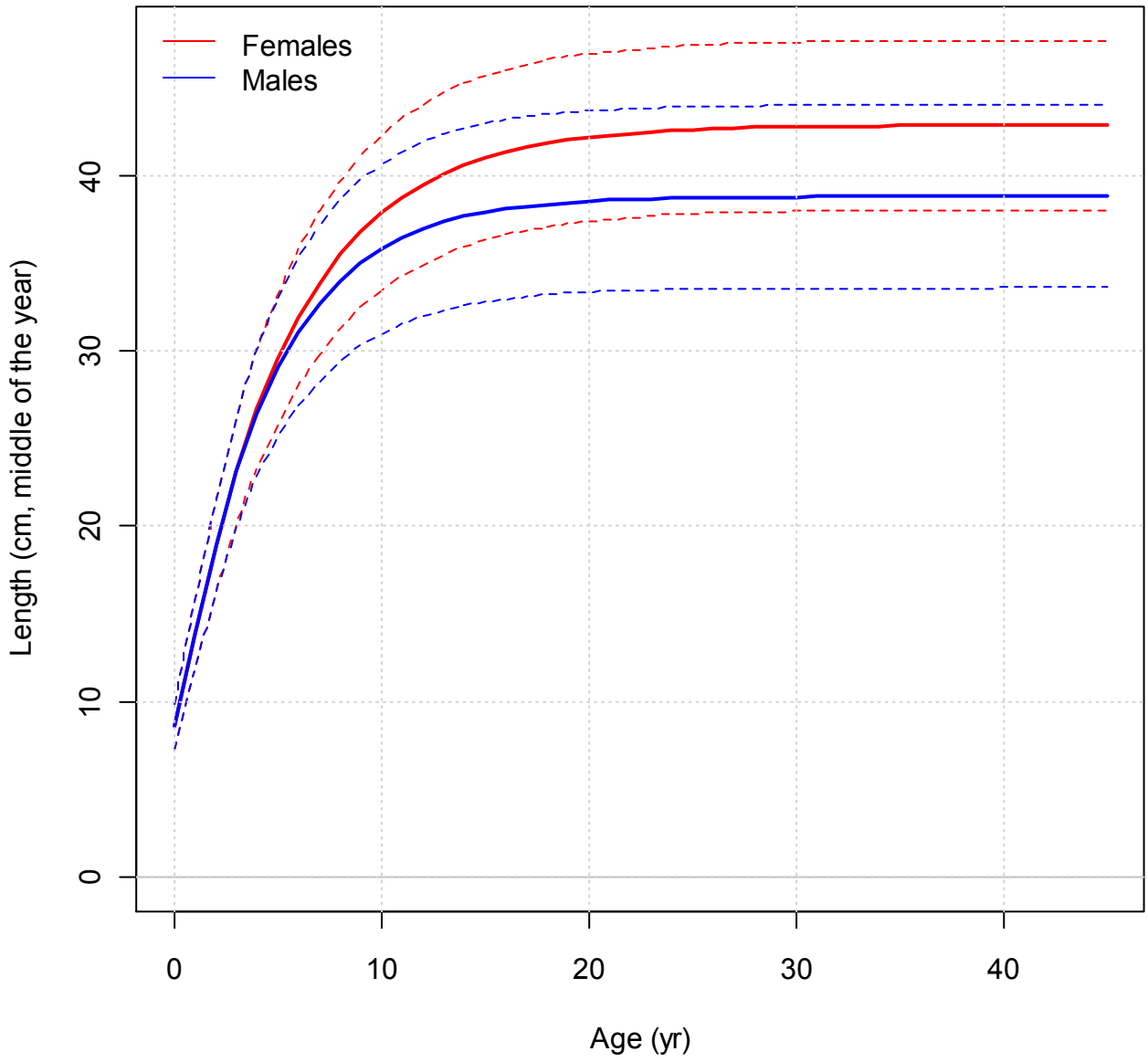


Figure 35. Growth curve for female (upper) and male darkblotched rockfish estimated in the model.

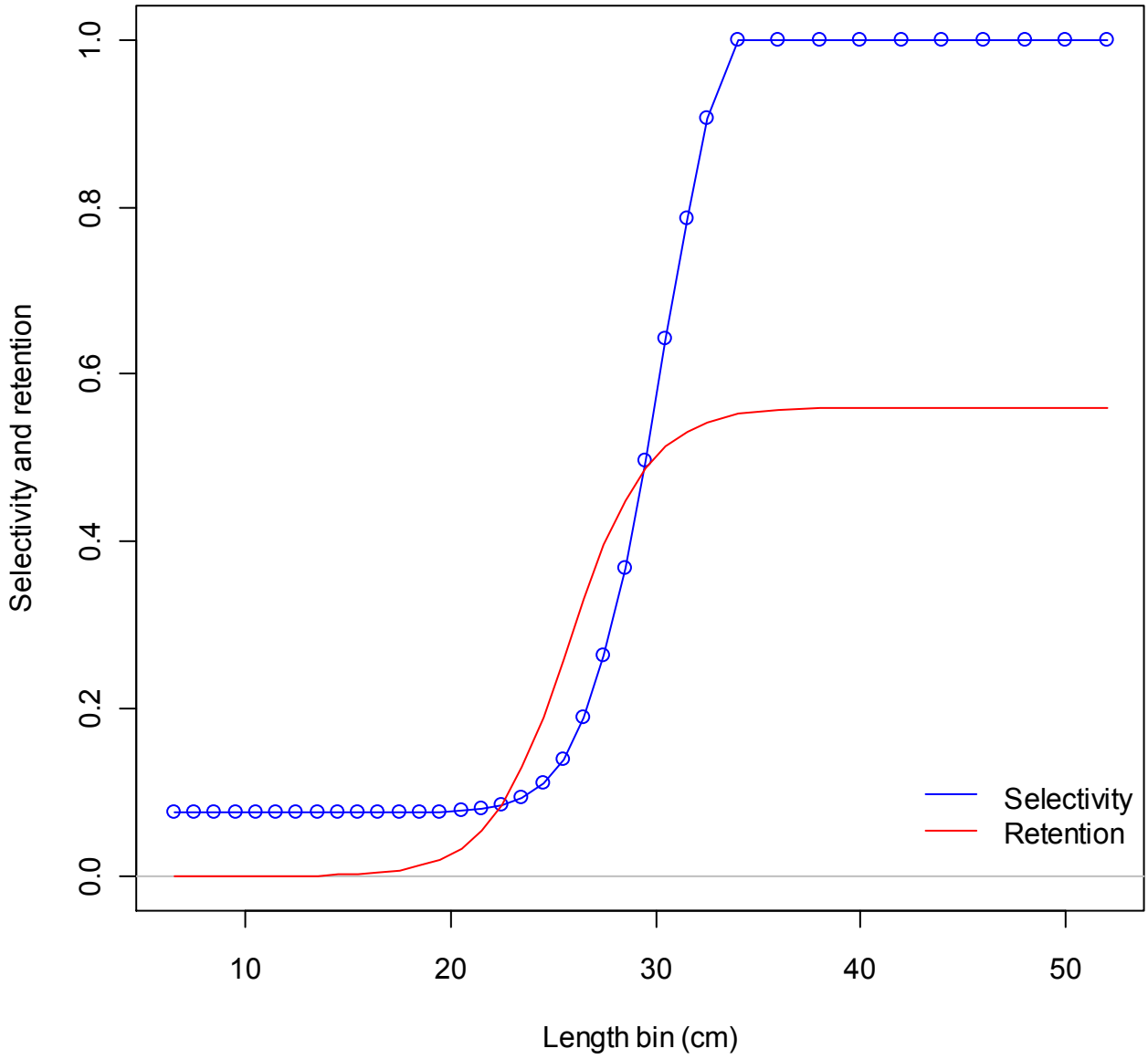


Figure 36. Female ending year fishery selectivity and 2003-2008 retention (as the proportion retained at length).

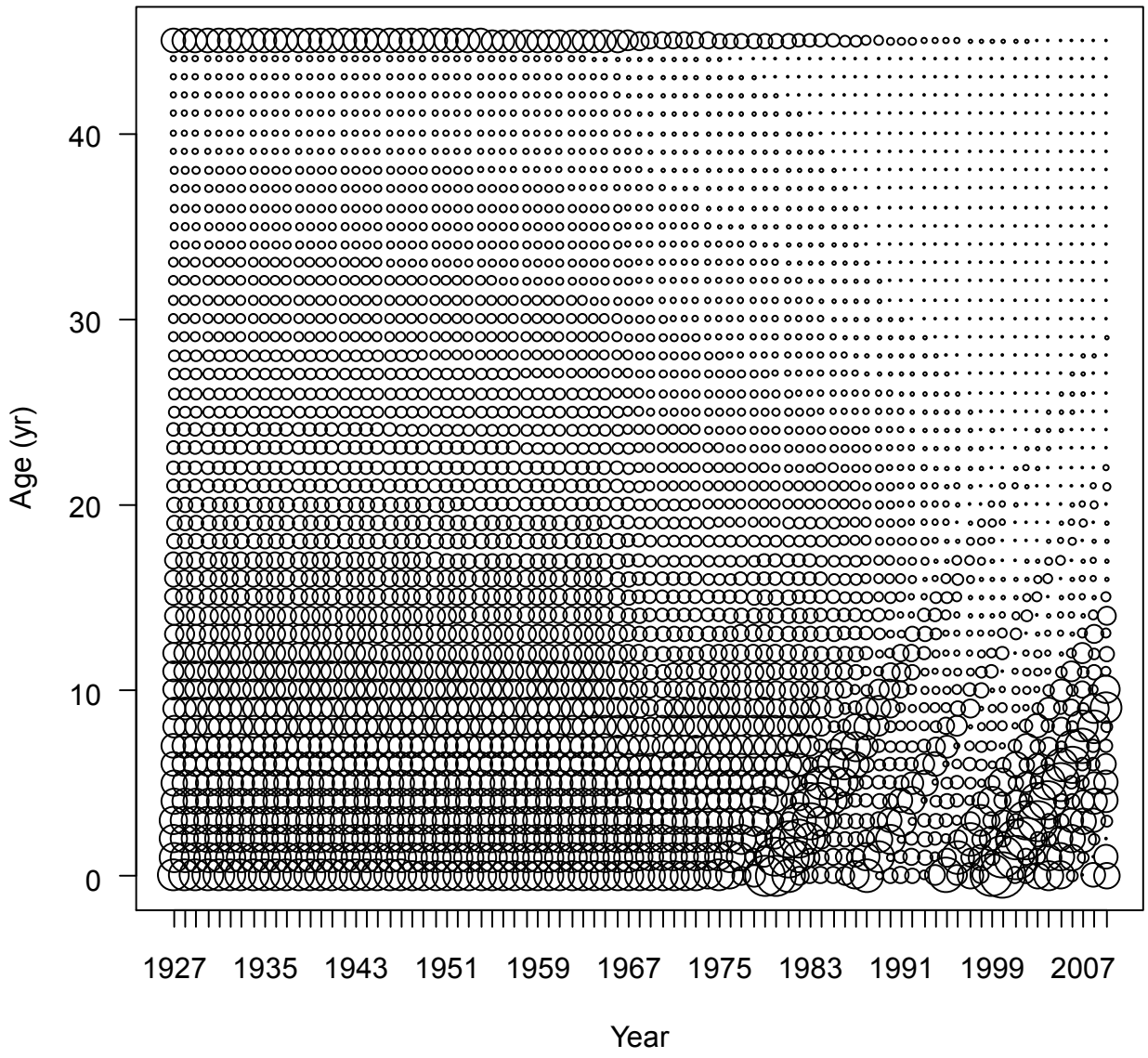


Figure 37. Proportion at age, by year, using the mean age of females in the population.

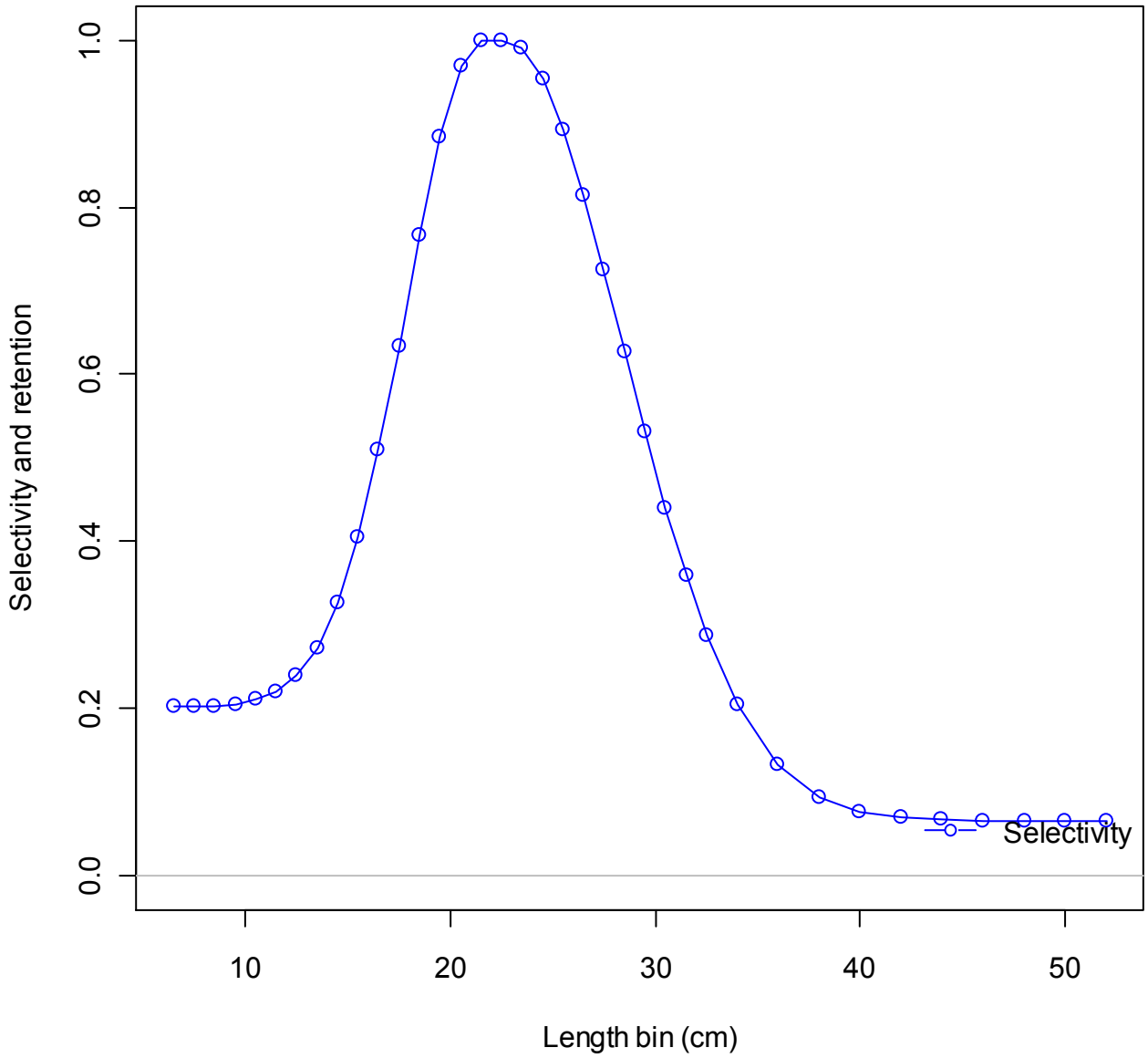


Figure 38. Female ending year selectivity for the Triennial Shelf Survey.

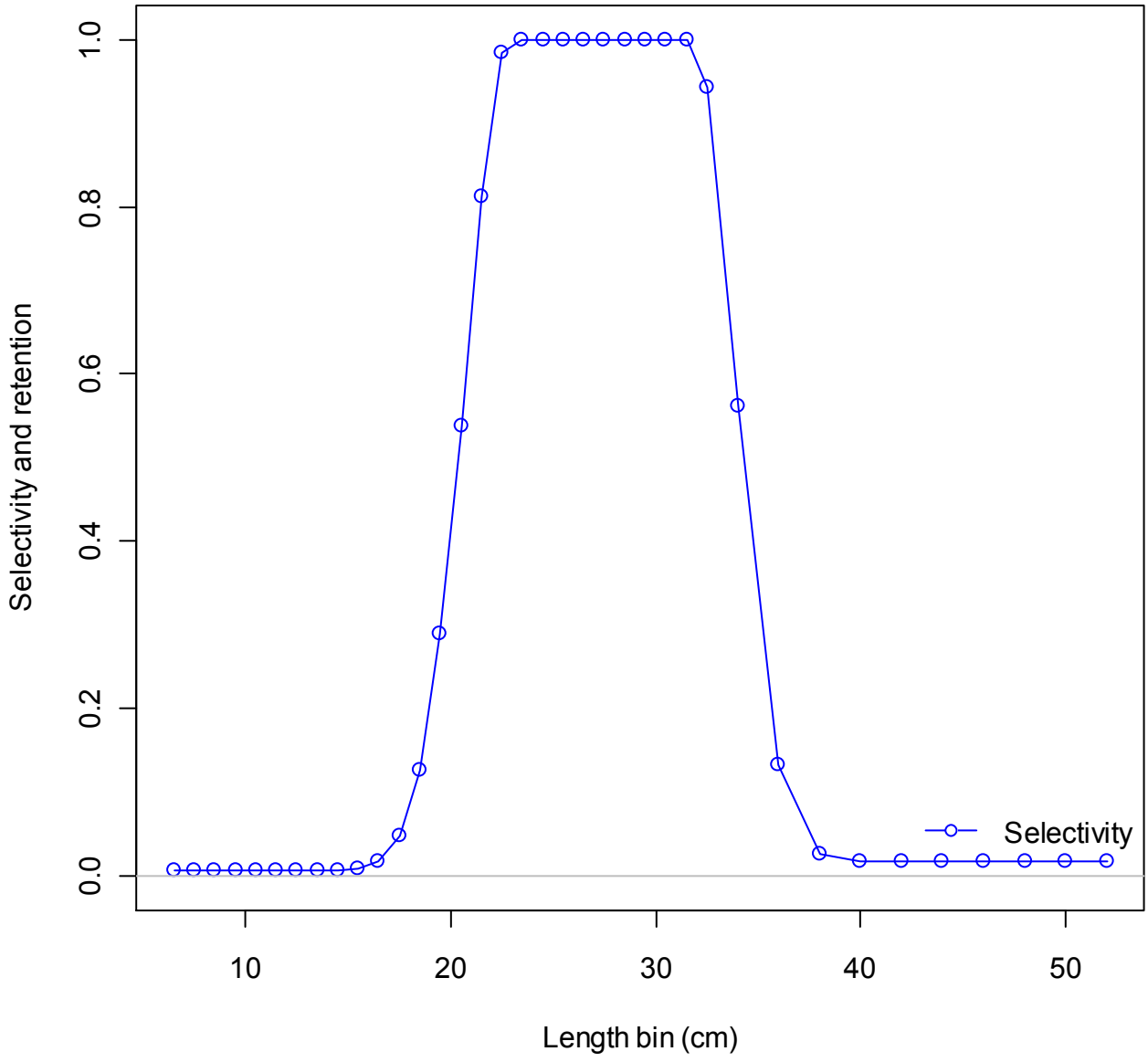


Figure 39. Female ending year selectivity for the AFSC Slope Survey.

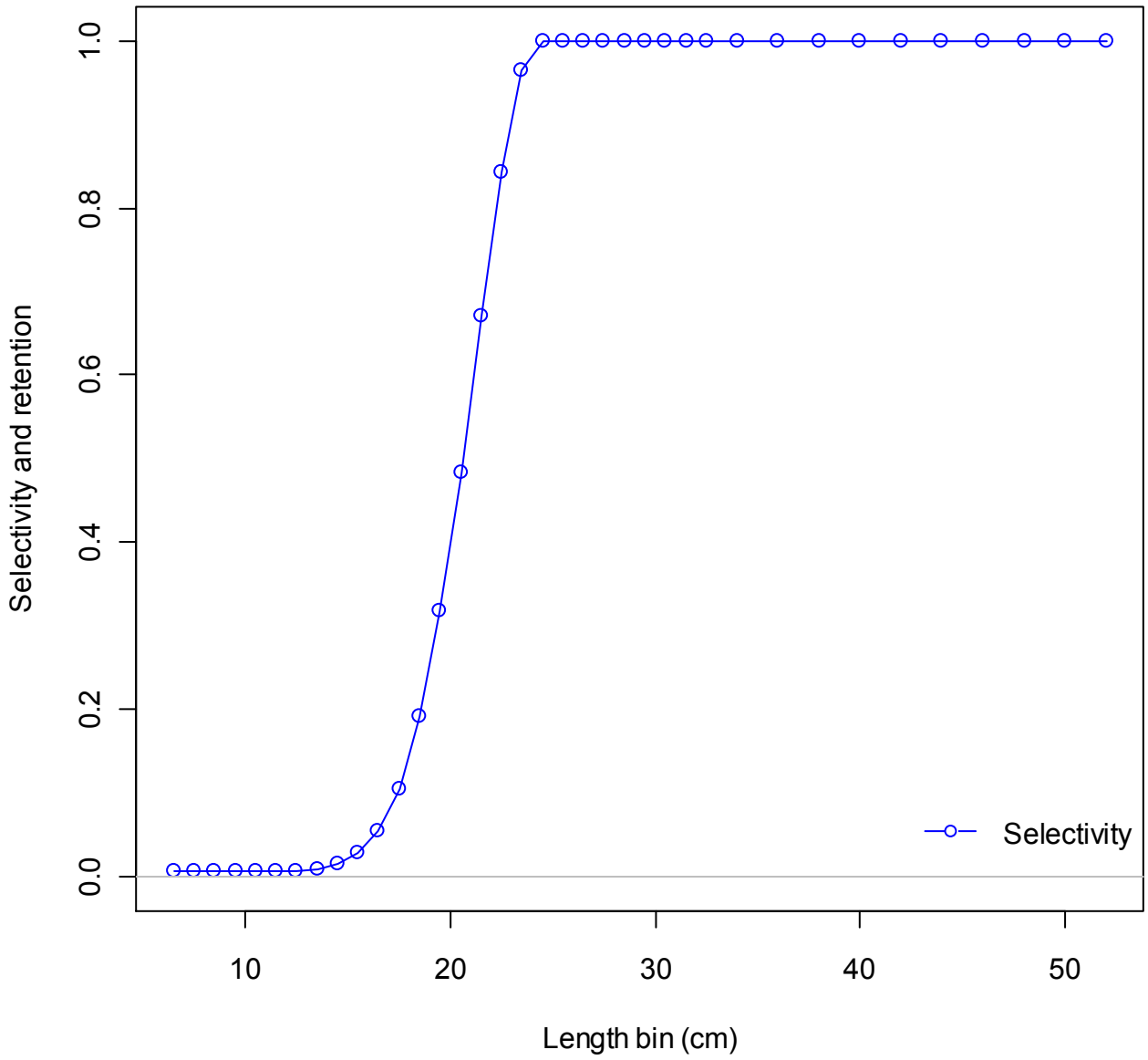


Figure 40. Female ending year selectivity for the NWFSC Slope Survey.

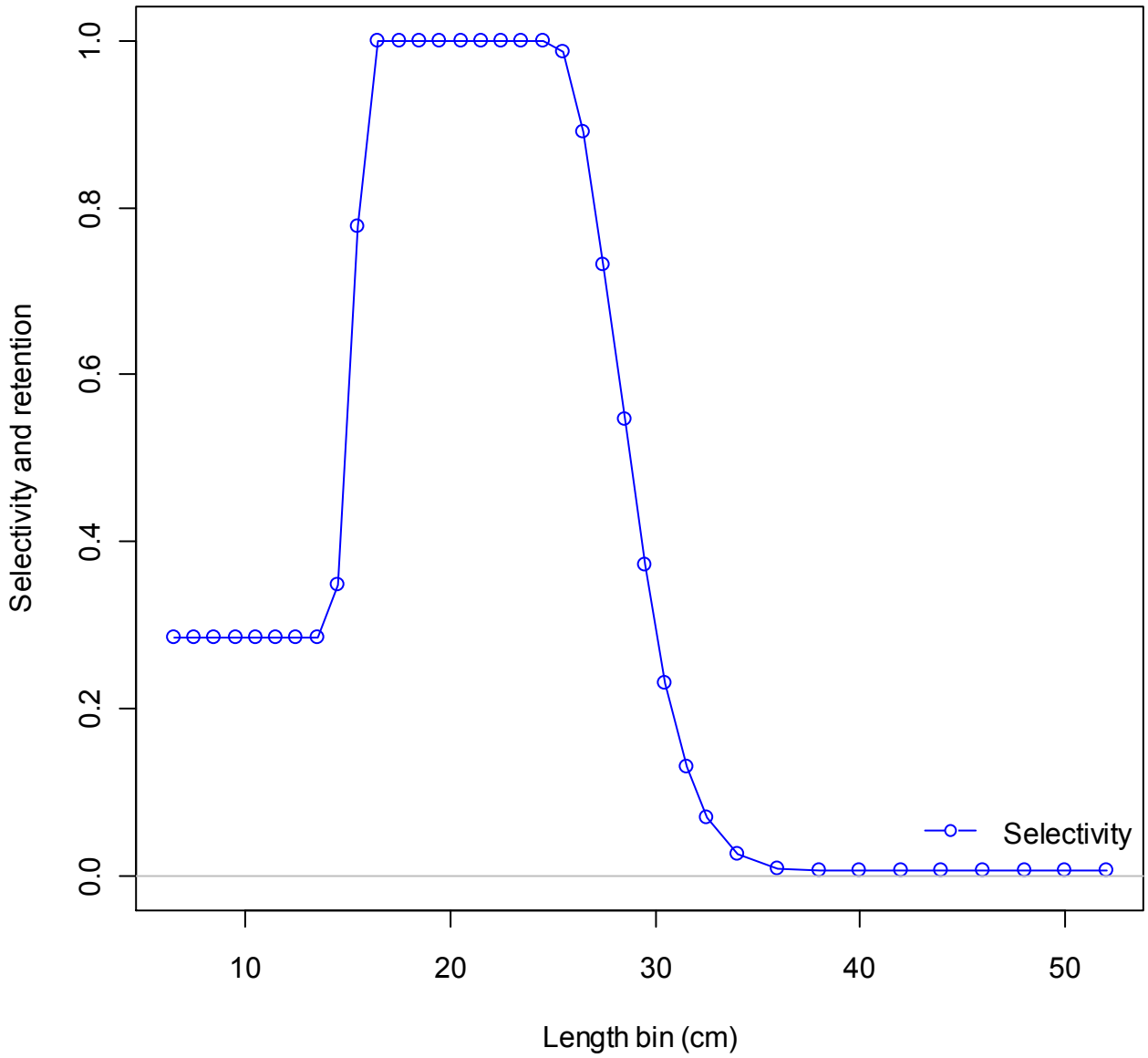


Figure 41 Female ending year selectivity for the NWFSC Shelf Survey.

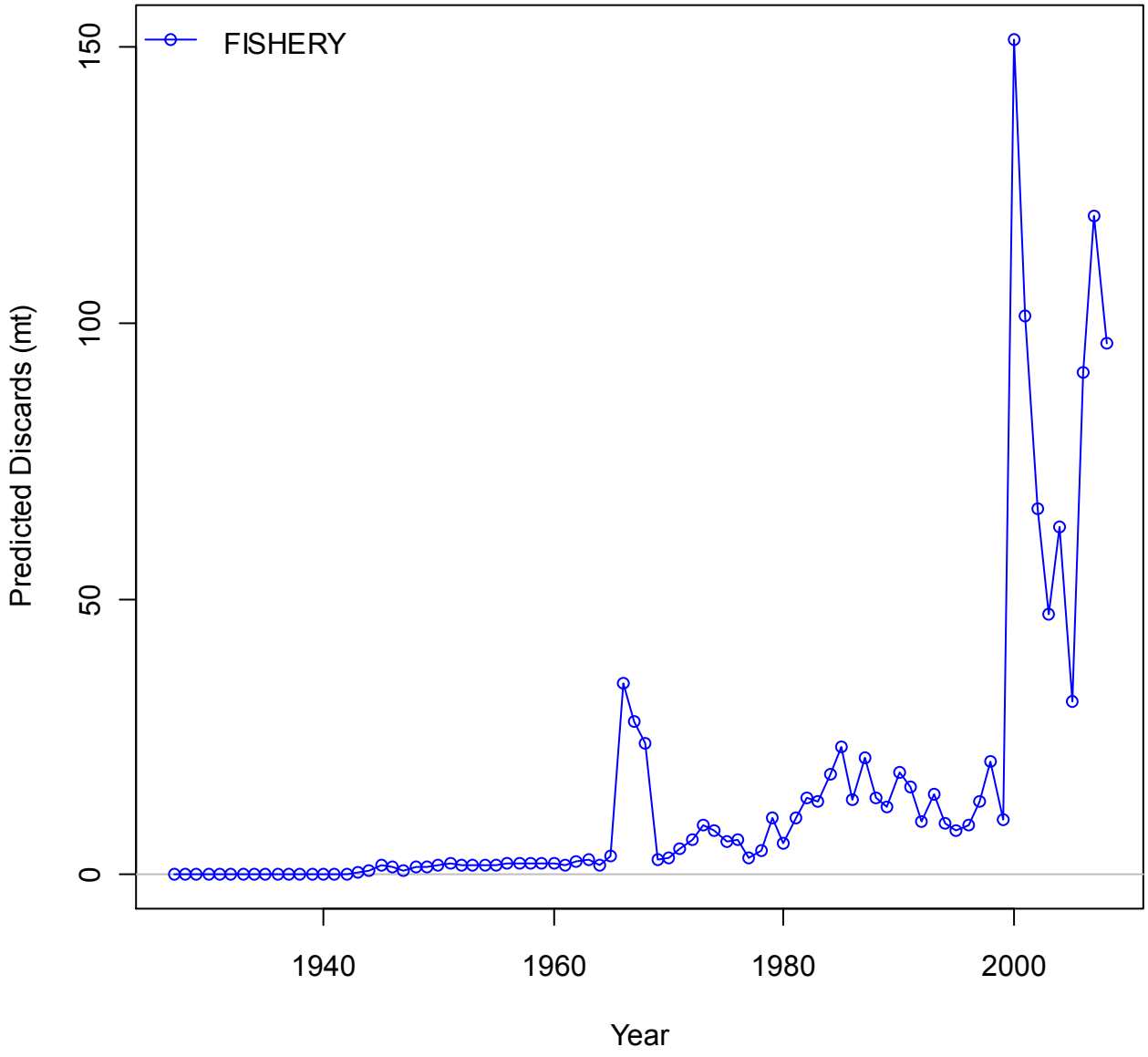


Figure 42. Time series of estimated discards.

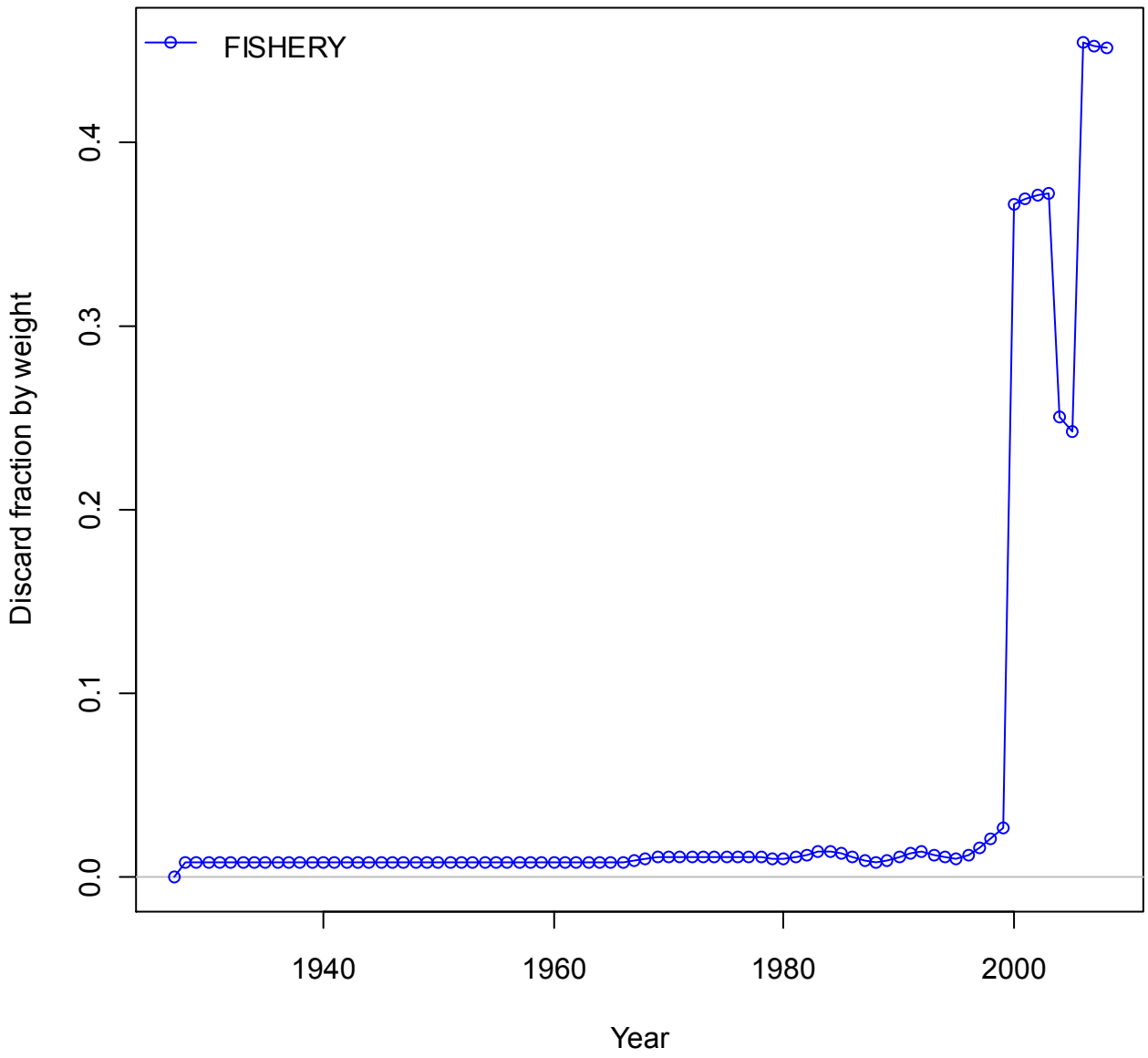


Figure 43. Time series of estimated discard fraction by weight.

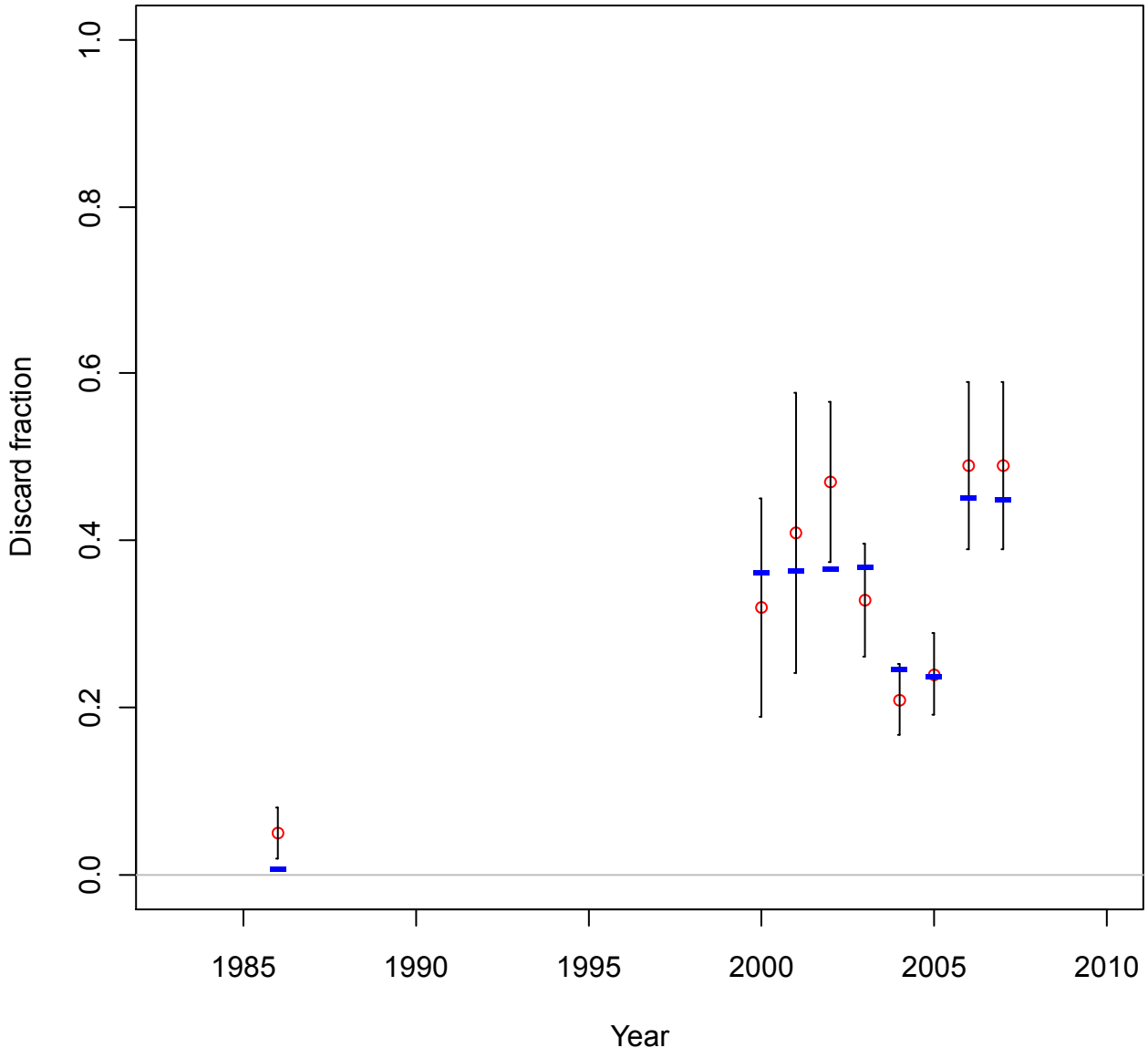


Figure 44. Fit to discard fraction data.

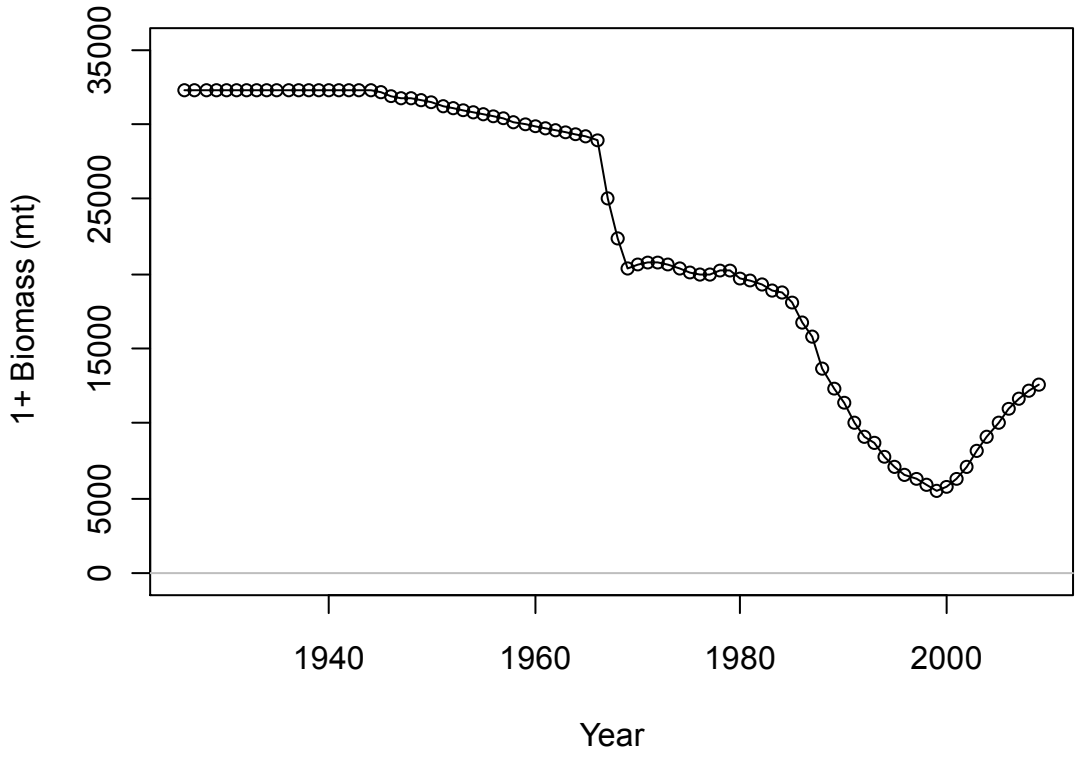


Figure 45. Time series of summary biomass.

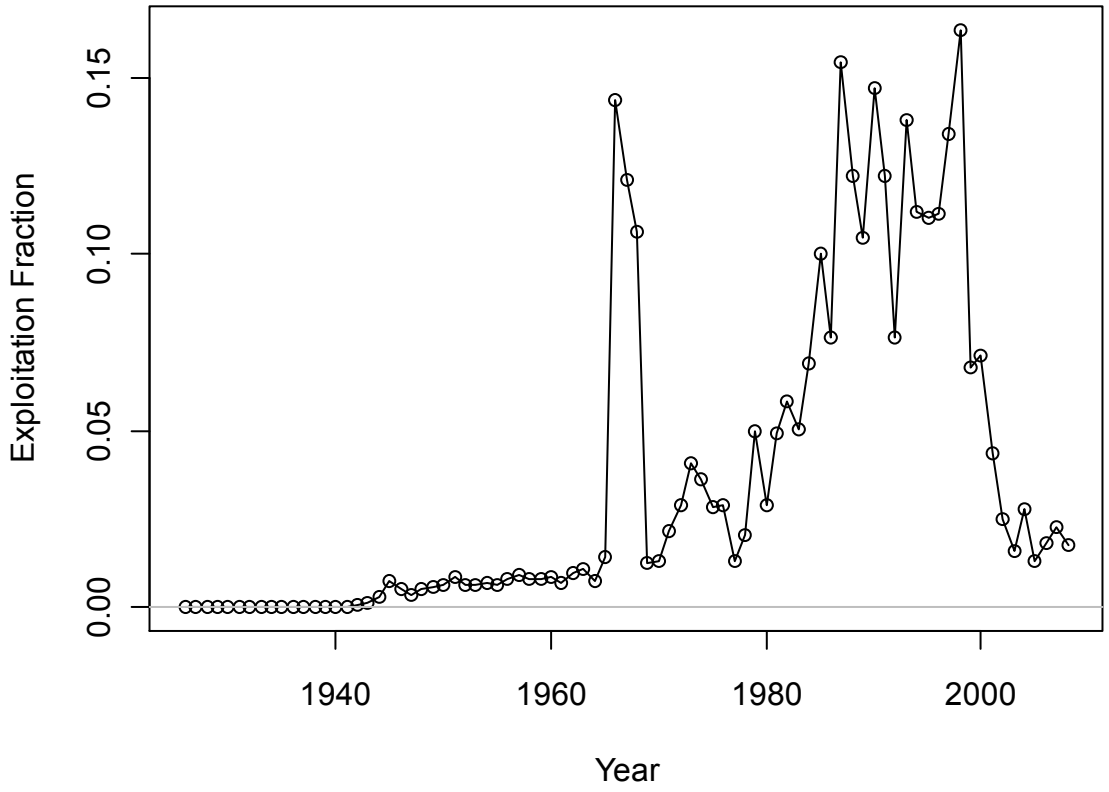


Figure 46. Time series of exploitation fraction (catch/summary biomass).

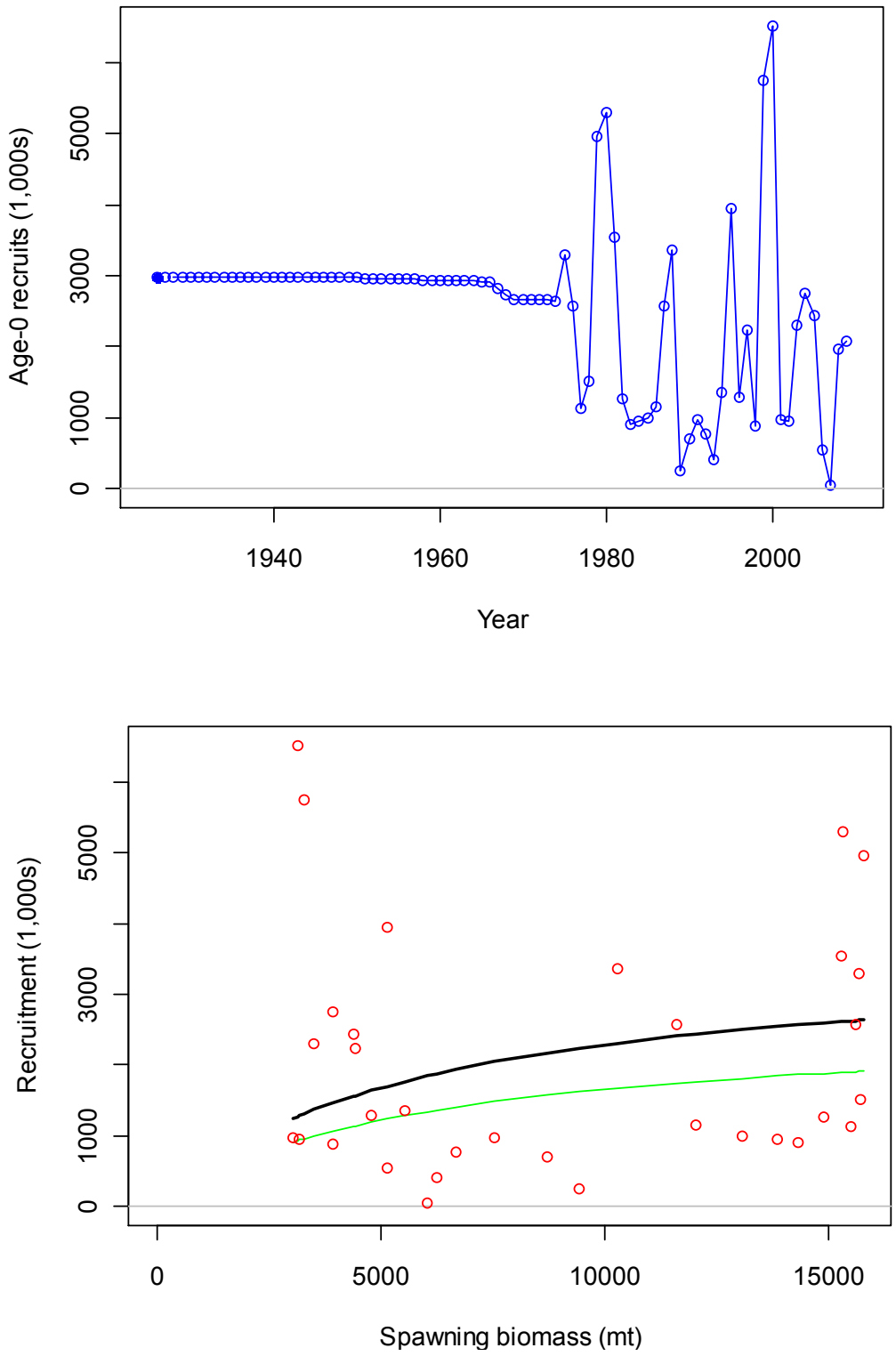


Figure 47. Time series of recruitment and spawner-recruit curve. In the bottom figure, the top line is the expected-mean recruitment curve and the bottom line is bias-adjusted.

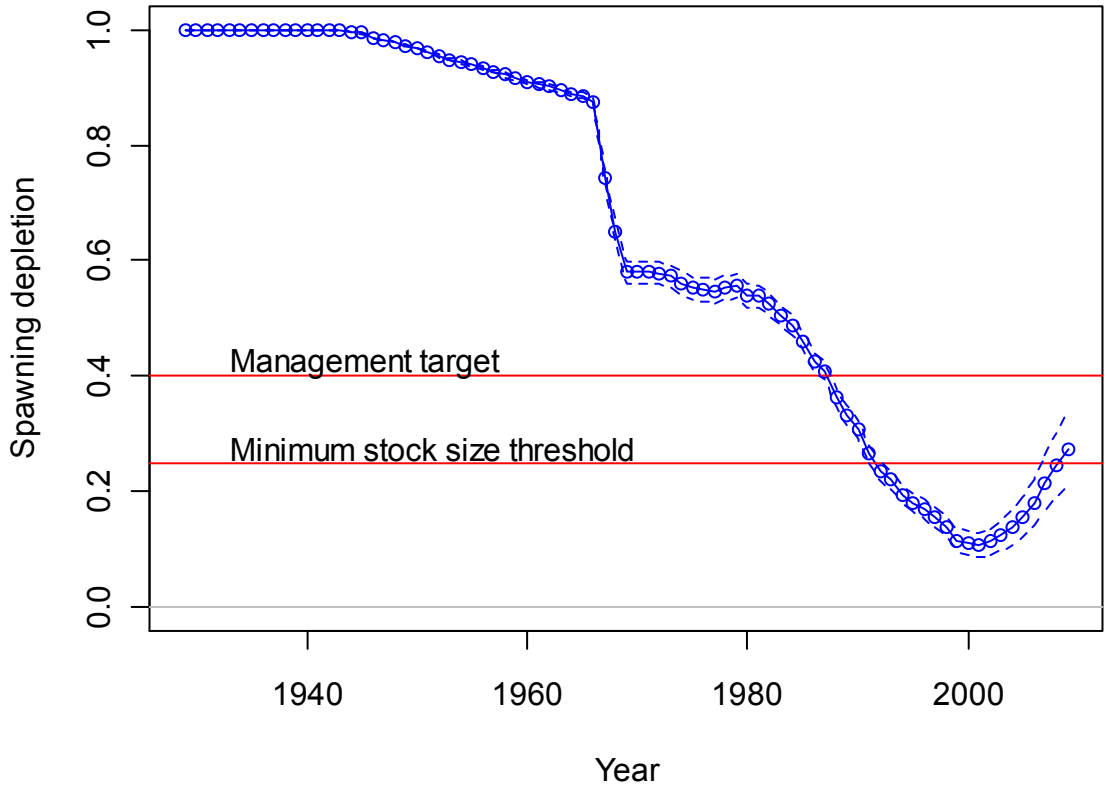
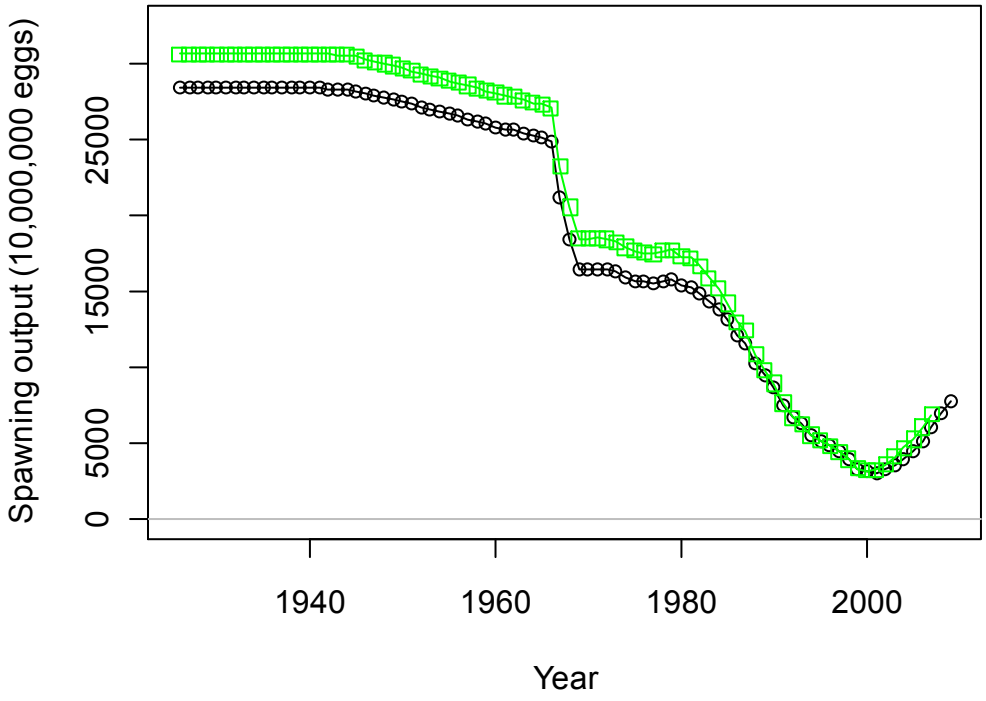


Figure 48. Time series of spawning output depletion level with 95% confidence intervals.

(A)



(B)

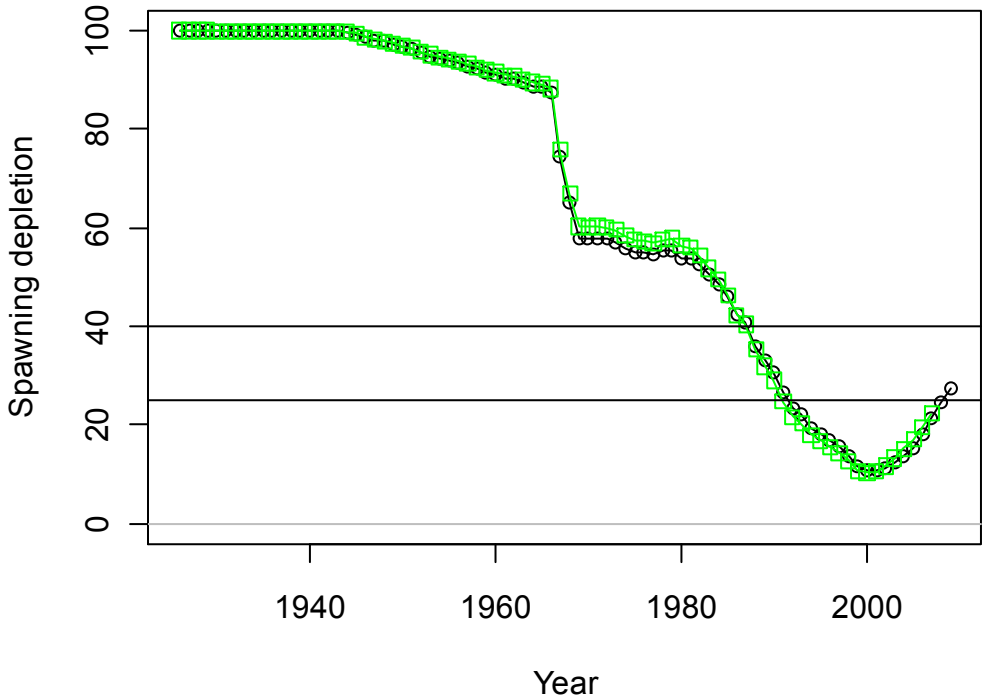


Figure 49. Comparison of histories of spawning output (A) and depletion (B) between the 2007 (squares) and 2009 (circles) assessments.

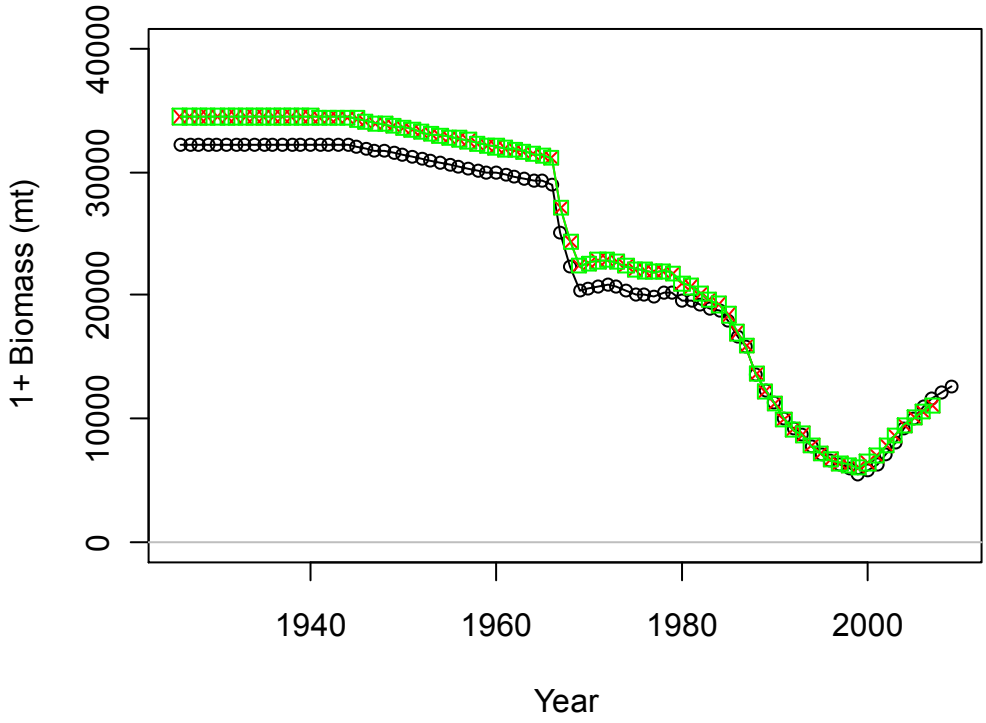


Figure 50. Comparison of summary biomass from the 2007 assessment (X's), the 2007 data applied to the SS model ver. 3.03a (squares) and 2009 assessment with SS model ver. 3.03a (circles).

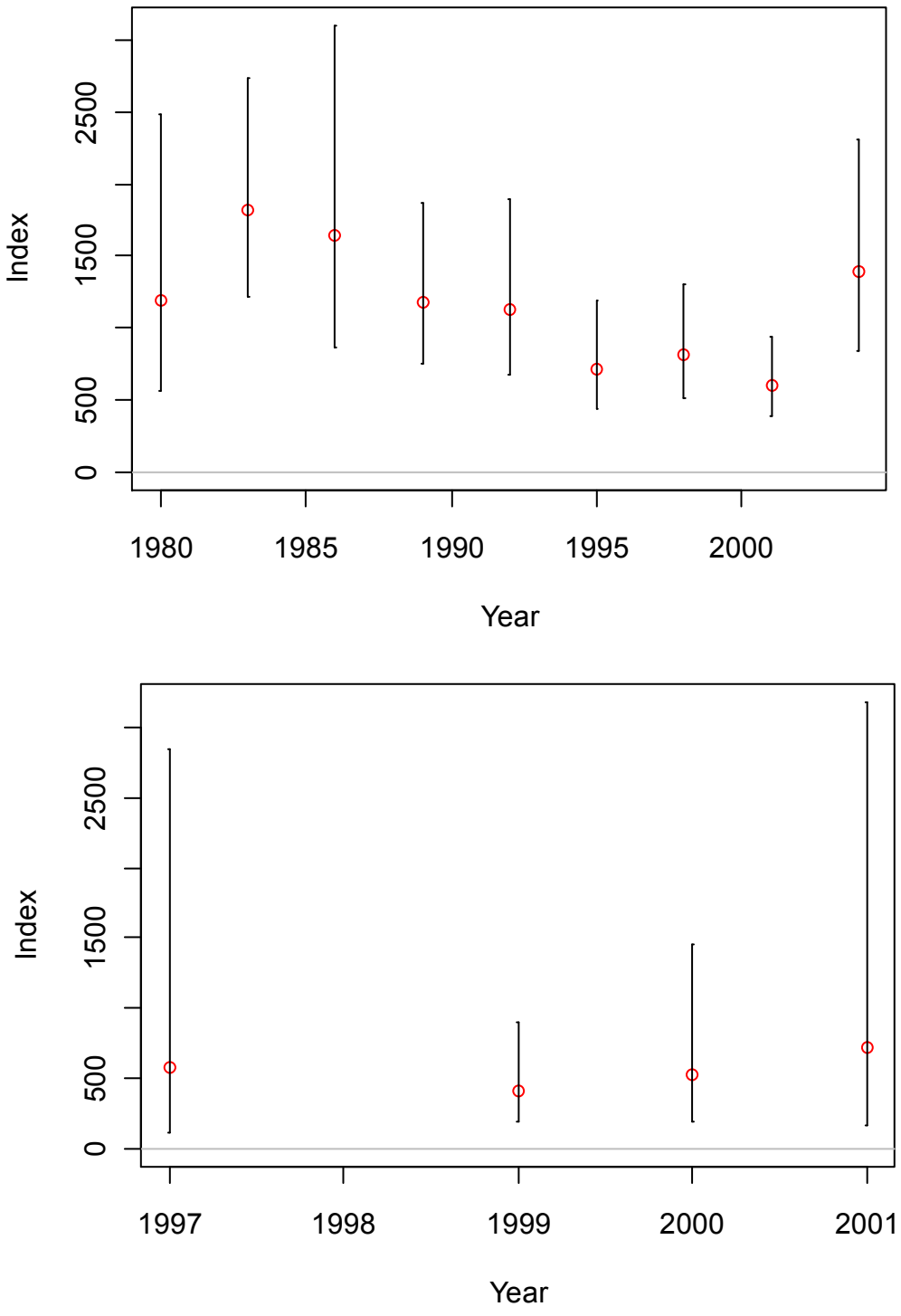


Figure 51. Model fits to Triennial shelf and AFSC Slope Survey indices

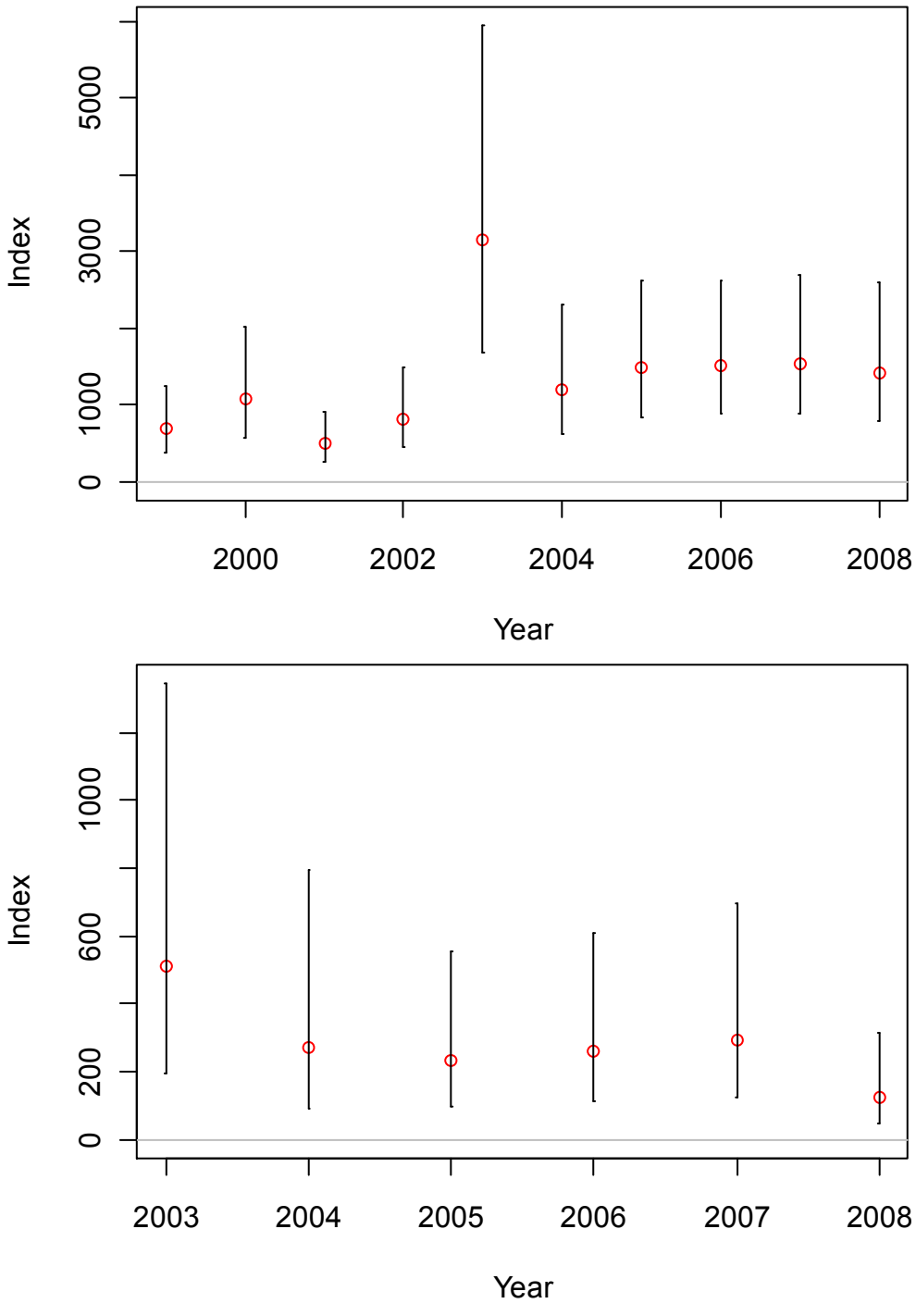


Figure 52. Model fits to NWFSC slope (top) and NMFSC shelf survey indices.

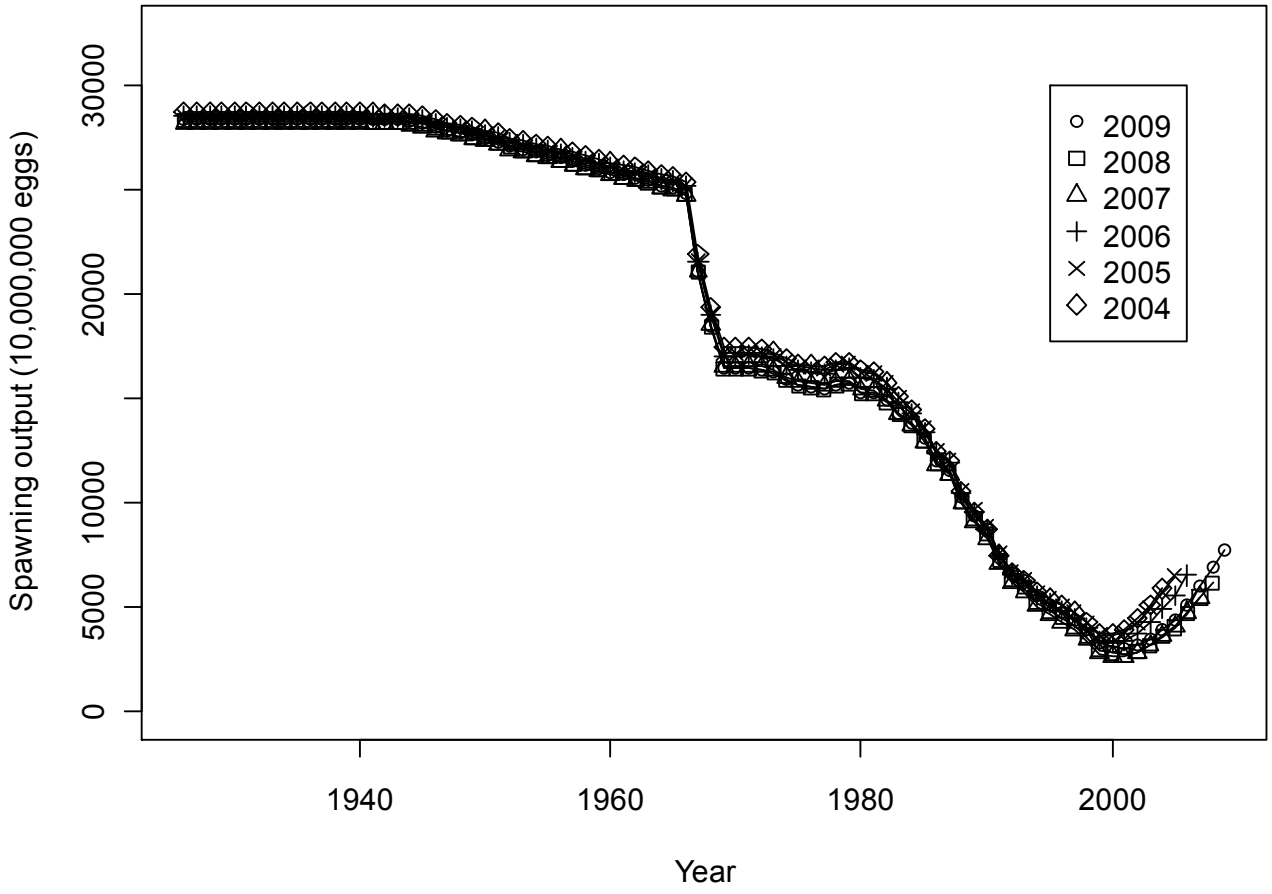


Figure 53. Retrospective pattern showing spawning output estimates from current assessment ("2009") and retrospective assessments as if counducted in 2004-2008.

Appendix: Input Files

Starter File:

```
# darkblotched starter file for SS v3.x

darkblotched_data.SS        # Data file
darkblotched_control.SS     # Control file

0                   # Read initial values from .par file: 0=no,1=yes
1                   # DOS display detail: 0,1,2
2                   # Report file detail: 0,1,2
0                   # Detailed checkup.sso file (0,1)
0                   # Write parameter iteration trace file during minimization
2                   # Write cumulative report: 0=skip,1=short,2=full
0                   # Include prior likelihood for non-estimated parameters
0                   # Use Soft Boundaries to aid convergence (0,1) (recommended)
0                   # N bootstrap datafiles to create
25                  # Last phase for estimation
1                   # MCMC burn-in
1                   # MCMC thinning interval
0                   # Jitter initial parameter values by this fraction
-1                  # Min year for spbio sd_report (neg val = styr-2, virgin state)
-2                  # Max year for spbio sd_report (-1=endyr+1, -2=entire forecast)
0                   # N individual SD years
0.0001              # Ending convergence criteria
0                   # Retrospective year relative to end year (i.e. -4)
1                   # Min age for summary biomass
1                   # Depletion basis: denom is: 0=skip; 1=rel X*B0; 2=rel X*Bmsy; 3=rel X*B_styr
1                   # Fraction (X) for Depletion denominator (e.g. 0.4)
1                   # (1-SPR)_reporting:  0=skip; 1=rel(1-SPR); 2=rel(1-SPR_MSY); 3=rel(1-SPR_Btarget);
4=notrel
1                   # F_std reporting: 0=skip; 1=exploit(Bio); 2=exploit(Num); 3=sum(frates)
0                   # F_report_basis: 0=raw; 1=rel Fspr; 2=rel Fmsy ; 3=rel Fbtgt

999 # end of file marker
```

Control File:

```
# darkblotched control file
# for SS v3.x

# Morph setup
1        # Number of growth patterns
1        # N sub morphs within growth patterns

2 # Blocks
1  3  # blocks in each design
2000 2008
2000 2003 2004 2005 2006 2008

# Mortality and growth specifications
0.5      # Fraction female at birth
1        # M setup: 0=single
Par,1=N_breakpoints,2=Lorenzen,3=agespecific;_4=agespec_withseasinterpolate
2        # Number of M breakpoints
4 15     # Ages at M breakpoints
1       # Growth model: 1=VB with L1 and L2, 2=VB with A0 and Linf, 3=Richards, 4=Read vector of L@A
1.7      # Age for growth Lmin
29       # Age for growth Lmax or 999 = Linf
0.1      # SD constant added to LAA (0.1 mimics v1.xx for compatibility only)
0        # Variability about growth: 0=CV~f(LAA) [mimic v1.xx], 1=CV~f(A), 2=SD~f(LAA), 3=SD~f(A)
1        # Maturity option: 1=length logistic, 2=age logistic, 3=read age-maturity matrix by
growth_pattern
2        # First age allowed to mature
1       # fecundity option
0       # hermaphro
3        # mg parm offset option:
#old key: 1=direct assignment, 2=each pat. x gender offset from pat. 1 gender 1, 3=offsets as SS2
V1.xx with M old and CV old offset from young values
#new key: 1=none, 2= M, G, CV_G as offset from female-GP1, 3=like SS2 V1.x)

1        # mg parm adjust method 1=do V1.23 approach, 2=use logistic transform between bounds approach

# Maturity & Growth Parameters
# min    max   init       prior pr_type    sd       phase    env     UseDev   Minyr    Maxyr    DevSD
         use_bl bl_type
```

```
0.01    0.15    0.07    0.08    0       0.8     -3      0       0       0       0       0
        0       0       # natM Young
-3      3       0       0       0       0.8     -3      0       0       0       0       0
        0       0       # natM old exp offset
12      16      14.5    14.6    0       5       2       0       0       0       0       0
        0       0       # Lmin
40      60      42.44   42.5    0       10      2       0       0       0       0       0
        0       0       # Lmax
0.05    0.25    0.215   0.2     0       0.8     3       0       0       0       0       0
        0       0       # VBK
0.05    0.25    0.065   0.07    0       0.8     3       0       0       0       0       0
        0       0       # CV Young
-3      3       0       0       0       0.8     4       0       0       0       0       0
        0       0       # CV old offset
-3      3       0       0       0       0.8     -3      0       0       0       0       0
        0       0       # Male natmort offset
-3      3       0       0       0       0.8     -3      0       0       0       0       0
        0       0       # male natmore offset
-3      3       0       0       0       0.8     -5      0       0       0       0       0
        0       0       # Male Lmin offset
-3      3       -0.12   0       0       0.8     3       0       0       0       0       0
        0       0       # Male Lmax offset *
-3      3       0.233   0       0       0.8     3       0       0       0       0       0
        0       0       # Male VBK offset *
-3      3       0       0       0       0.8     -6      0       0       0       0       0
        0       0       # Male cv Y offset
-3      3       0       0       0       0.8     -6      0       0       0       0       0
        0       0       # Male cv old offset

-3      3       2.10E-05 0       0       0.8     -3      0       0       0       0       0
        0       0       # F L to wt coeff
-3      3       2.96142 2.64694 0       0.8     -3      0       0       0       0       0
        0       0       # F L to Wt exp
0       60      34.59   55      0       0.8     -3      0       0       0       0       0
        0       0       # Mat infl
-3      3       -0.6429 -0.25   0       0.8     -3      0       0       0       0       0
        0       0       # Mat logistic slope (negative)
-3      3       0.1458  1       0       0.8     -3      0       0       0       0       0
        0       0       # fecund intercept
0       2       1.325   1       0       0.8     -3      0       0       0       0       0
        0       0       # fecund multiplier
-3      3       2.10E-05 0      0       0.8     -3      0       0       0       0       0
        0       0       # Male L to wt coeff
-3      3       2.96142 2.64694 0       0.8     -3      0       0       0       0       0
        0       0       # Male L to wt exp

0       1       1       1       0       50      -50     0       0       0       0       0
        0       0       # Recruitment apportionment by growth pattern
0       1       1       1       0       50      -50     0       0       0       0       0
        0       0       # Rec app by Area
0       1       1       1       0       50      -50     0       0       0       0       0
        0       0       # Rec app by Season
0       1       1       1       0       50      -50     0       0       0       0       0
        0       0       # Cohort growth deviation

# Seasonal effects on biology parameters (0=none)
 0 0 0 0 0 0 0 0 0 0

3 #Recruitment Function 1 BH w/flat top, 2 Ricker, 3 BH, 4 none
# Recruitment Parms
# Low    High    Init    Prior PrType    SD      phase
3       31      8.2     8       0       10      1       # R0
0.2     0.95    0.6     0.507   2       0.141   -2      # h
0       2       0.8     0.8     0       0.8     -1      # sigma R
-5      5       0       0       0       1       -3      # Env link coeff
-5      5       0       0       0       1       -3      # Init Equilb offset to virgin
-1      1       0       0       0       100     -1      # placeholder for Autocorrelation

0 # index of environmental variable to be used
0 # env target parameter: 0=none, 1=rec devs, 2=R0, 3=steepness

# Recruitment residuals
1       # rec dev type: 0=none, 1=devvector (zero-sum), 2=simple deviations (no sum constraint)
1975    # Start year recruitment residuals
2007    # End year recruitment residuals
3       # Phase

1 # Read 11 advanced recruitment options: 0=no, 1=yes
0       # first year for early rec devs
-4      # phase for early rec devs
5       # Phase for forecast recruit deviations
```

```
1       # Lambda for forecast recr devs before endyr+1
1974    #_last_yr_nobias_adj_in_MPD
1975    # first year of full bias correction (linear ramp up from this year minus the plus-age to this
year)
2007    # last year for full bias correction in_MPD
2008    #_first_recent_yr_nobias_adj_in_MPD
1.0     # Max bias correction
0       # placeholder
-15     # Lower bound rec devs
15      # Upper bound rec devs
0       # read intitial values for rec devs

# Fishing mortality setup
0.06    # F ballpark for tuning early phases
1999    # F ballpark year
1       # F method:  1=Pope's; 2=Instan. F; 3=Hybrid (recommended)
0.9     # max F or harvest rate, depends on F_Method

# Initial Fishing Mortality Parameters
0  1  0  0.01  0  99  -1

# Catchability Specification
0  0  0  0  1  0
0  0  0  0  1  0
0  0  0  0  1  0
0  0  0  0  1  0
0  0  0  0  1  0

# Selectivity Specification
#Type    Retent   Moffset  Special
#Length
24      1       0       0 #Fishery
24      0       0       0 #Triennial
24      0       0       0 #AFSC slope
24      0       0       0 #NW slope
24      0       0       0 #NW shelf

10      0       0       0 #Age selects 10 = flat
10      0       0       0
10      0       0       0
10      0       0       0

# Selectivity Parameter

#Low    High    Init    Prior   PrType  SD      Phase   env     usedev  minyr   maxyear sd
       block   blswitch
20      45      36      32      0       50      2       0       0       0       0       0.5
        0       0       # 1 = baseparm*exp(blockparm)
-6      4       1       0       0       50      2       0       0       0       0       0
        0       0
-1      9       4       4       0       50      3       0       0       0       0       0
        0       0

-1      9       5       5.5     0       50      3       0       0       0       0       0
        0       0

-5      9       -2      -2      0       50      2       0       0       0       0       0
        0       0

-5      9       9       5       0       50      -3      0       0       0       0       0
        0       0


15      70      27      35      0       99      2       0       0       0       0       0.5
        1       2
0.1     10      2       1       0       99      2       0       0       0       0       0.5
        0       0       # 1 means that parm' = baseparm + blockparm
0.001   1       1       1       0       99      -3      0       0       0       0       0.5
        2       2       # 2 means that parm' = blockparm
0       0       0       0       0       99      -3      0       0       0       0       0.5
        0       0


10      45      21      23      0       50      2       0       0       0       0       0
        0       0
-6      4       -4      -1      0       50      2       0       0       0       0       0
        0       0
-1      9       4       4       0       50      3       0       0       0       0       0
        0       0
```

```
-1      9       4       6       0       50      4       0       0       0       0       0
        0       0

-5      9       -2      -4      0       50      2       0       0       0       0       0
        0       0

-5      9       -3      -1      0       50      3       0       0       0       0       0
        0       0

10      45      23      28      0       50      2       0       0       0       0       0
        0       0
-6      4       -1      -1      0       50      2       0       0       0       0       0
        0       0
-1      9       2       4       0       50      3       0       0       0       0       0
        0       0

-1      9       2       4       0       50      3       0       0       0       0       0
        0       0

-5      9       -5      -4      0       50      -4      0       0       0       0       0
        0       0

-5      9       -4      -2      0       50      3       0       0       0       0       0
        0       0



10      45      25      28      0       50      2       0       0       0       0       0
        0       0
-6      4       3       1       0       50      2       0       0       0       0       0
        0       0
-1      9       3       4       0       50      3       0       0       0       0       0
        0       0

-1      9       4       4       0       50      3       0       0       0       0       0
        0       0

-5      9       -5      -4      0       50      -4      0       0       0       0       0
        0       0

-5      9       9       1       0       50      -3      0       0       0       0       0
        0       0

8       45      18      20      0       50      2       0       0       0       0       0
        0       0
-6      4       -1      -1      0       50      3       0       0       0       0       0
        0       0
-1      9       0       2       0       50      3       0       0       0       0       0
        0       0

-1      9       3       4       0       50      4       0       0       0       0       0
        0       0

-5      9       -1      -3      0       50      4       0       0       0       0       0
        0       0

-5      9       -5      -4      0       50      -3      0       0       0       0       0
        0       0

1       # Selex block setup: 0=Read one line apply all, 1=read one line each parameter
# Lo    Hi      Init    Prior   P_type  SD      Phase
15  70  25  30  0  99  4
0.3  1  .7  .7  0  99  3
0.3  1  .8  .8  0  99  3
0.3  1  .6  .6  0  99  3

1 #_env/block/dev_adjust_method (1=standard; 2=logistic trans to keep in base parm bounds)
0 # Tagging flag: 0=none,1=read parameters for tagging

### Likelihood related quantities ###
# variance/sample size adjustment by fleet
1 # Do variance adjustments
0  0  0  0  0   # const added to survey cv
0  0  0  0  0   # const added to discard sd
0  0  0  0  0   # const added to body weight sd
.76  .71  .64  .69  1   # mult scalar for length comps
1 .71  1  1  1   # mult scalar for age comps
1  1  1  1  1   # mult scalar for length at age obs

30      # DF discard fraction data t-distribution
30      # DF mean body weight data t-distribution
```

```
1        # Max N lambda phases: read this N values for each item below
0        # SD offset (CPUE, discard, mean body weight, recruitment devs): 0=omit log(s) term, 1=include

0 # N changes to default Lambdas = 1.0
# Component codes:
#  1=survey
#  2=discard
#  3=mean body weight
#  4=length frequency
#  5=age frequency
#  6=Weight frequency
#  7=size at age
#  8=catch
#  9=initial equilibrium catch
#  10=rec devs
#  11=parameter priors
#  12=parameter deviations
#  13=Crash penalty
#  14=Morph composition
#  15=Tag composition
#  16=Tag return
# Component fleet/survey  phase  value  wtfreq_method

0 # extra SD pointer

999 # end of control file
```

Data File:

```
# data file for darkblothced rockfish in SS v3.x 2008
# Annotated by Ian Stewart, NWFSC

### Global model specifications ###
1928     # Start year
2008     # End year
1        # N seasons per year
12       # Months per season
1        # Spawning Season
1        # N fishing fleets
4        # N surveys
1        # Number of areas
FISHERY%TRIENNIAL%SLOPE%NWSLOPE%NWSHELF #Names divided by "%"
0.5  0.7  0.92  0.6  0.6 #Timing of each fishery/survey (.42 POP)
1 1 1 1 1        # Area of each fleet
1        # Units for catch by fishing fleet: 1=Biomass(mt),2=Numbers(1000s)
0.01     # SE of log(catch) by fleet for equilibrium and continuous options
2        # Number of Genders
45       # Accumulator age

### Catch section ###
# Initial equilibrium catch (landings + discard) by fishing fleet
0        # Fleet 1

81 # Number of lines catch data
# Landed catch (only) time series by fleet
# Catch(by fleet) Year    Season
1        1928     1
3        1929     1
3        1930     1
1        1931     1
1        1932     1
1        1933     1
2        1934     1
2        1935     1
2        1936     1
2        1937     1
5        1938     1
7        1939     1
8        1940     1
9        1941     1
10       1942     1
39       1943     1
91       1944     1
236      1945     1
160      1946     1
100      1947     1
160      1948     1
171      1949     1
201      1950     1
```

```
261      1951     1
195      1952     1
194      1953     1
201      1954     1
197      1955     1
244      1956     1
269      1957     1
246      1958     1
243      1959     1
258      1960     1
203      1961     1
276      1962     1
323      1963     1
208      1964     1
415      1965     1
4129     1966     1
3001     1967     1
2358     1968     1
256      1969     1
265      1970     1
441      1971     1
595      1972     1
836      1973     1
733      1974     1
567      1975     1
574      1976     1
263      1977     1
410      1978     1
992      1979     1
557      1980     1
956.5    1981     1  #1981-2004 updated 6.14.2007
1116.2   1982     1  #Tagart 1982 value for Oregon = 920 - big? alt total = 700
939.9    1983     1
1273.8   1984     1
1787.1   1985     1
1265.2   1986     1
2420.0   1987     1
1655.1   1988     1
1274.9   1989     1
1650.9   1990     1
1208.1   1991     1
687.4    1992     1
1193.7   1993     1
864.4    1994     1
783.0    1995     1
729.6    1996     1
824.1    1997     1
944.0    1998     1
361.8    1999     1
262.0    2000     1
173.2    2001     1
112.6    2002     1
80.0     2003     1
189.0    2004     1
97.8     2005     1  # New 5.13.2009
109.3    2006     1  # New 5.13.2009 PacFIN had CA correction (mentioned in E.J.'s email of 07 May 2009)
144.8    2007     1  # New 5.13.2009
117.2    2008     1  # New 5.13.2009


29   # number of Survey data points
1980  1  2  1189  0.377  # Triennial
1983  1  2  1825  0.206
1986  1  2  1641  0.325
1989  1  2  1179  0.234
1992  1  2  1129  0.265
1995  1  2  718   0.261
1998  1  2  818   0.236
2001  1  2  601   0.225
2004  1  2  1397  0.258
1997  1  3  578   0.813  # AFSC slope
1999  1  3  407   0.407
2000  1  3  520   0.526
2001  1  3  724   0.755
1999  1  4  695   0.299  # NWFSC slope
2000  1  4  1087  0.319
2001  1  4  489   0.315
2002  1  4  822   0.306
2003  1  4  3165  0.322
2004  1  4  1198  0.335
2005  1  4  1482  0.292
```

```
2006  1  4  1524  0.278
2007  1  4  1541  0.283
2008  1  4  1423  0.306
2003  1   5  510    0.495  # NWFSC shelf
2004  1   5  270    0.550
2005  1   5  233    0.443
2006  1   5  261    0.433
2007  1   5  295    0.437
2008  1   5  124    0.472


2   # Discards Type 1 = biomass(mt), 2 = fraction of total
9   # Discards N observations
1986  1  1  0.05  0.3
2000  1  1  0.32  0.2
2001  1  1  0.41  0.2
2002  1  1  0.47  0.1
2003  1  1  0.33  0.1
2004  1  1  0.21  0.1  #Updated based on new info (2007)
2005  1  1  0.24  0.1  #NEW (2007)
2006  1  1  0.49  0.1  #NEW 13 May 2009
2007  1  1  0.49  0.1  #NEW 13 May 2009
0   # Mean Body Weight

## Population size structure
3  # Length bin method: 1=Use data bins,
  # 2=generate from min/max/width read below
  # 3=Read count and vector below
37 # Count of population bins
# Lower edge of bins
6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32
33  35  37  39  41  43  45  47  49  51

-1       # Minimum proportion for compressing tails of observed compositional data
0.0001   # Constant added to expected frequencies

0        # Combine males and females at and below this bin number

37 # Number of Length Bins
6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32
33  35  37  39  41  43  45  47  49  51

65   # Length Composition Observations - 1983-2008 Updated 11.May.2009 -JRW
#Year    Seas     Fleet    Gender   Part     effn     6        7        8        9        10       11
         12       13       14       15       16       17       18       19       20       21       22
         23       24       25       26       27       28       29       30       31       32       33
         35       37       39       41       43       45       47       49       51       6        7
         8        9        10       11       12       13       14       15       16       17       18
         19       20       21       22       23       24       25       26       27       28       29
         30       31       32       33       35       37       39       41       43       45       47
         49       51
1977     1        1        3        2        22       0.00     0        0        0        0        0
         0        0        0        0        0        0        0        0        0        0
         0.006578947       0        0.023026316       0.016447368       0.029605263       0.078947368
         0.065789474       0.072368421       0.082236842       0.046052632       0.046052632
         0.075657895       0.016447368       0        0        0        0        0        0        0
         0        0        0        0        0        0        0        0        0        0        0
         0        0        0        0        0        0        0.003289474       0.003289474
         0.013157895       0.016447368       0.032894737       0.0625   0.078947368       0.085526316
         0.049342105       0.036184211       0.032894737       0.019736842       0        0
         0.003289474       0        0        0        0.003289474       0        0
1978     1        1        3        2        9        0.00     0        0        0        0        0
         0        0        0        0        0        0        0        0        0        0        0
         0        0        0.01     0.015    0.025    0.04     0.045    0.06     0.065    0.09     0.12
         0.015    0        0        0        0        0        0        0        0        0        0
         0        0        0        0        0        0        0        0        0        0        0
         0        0        0        0        0        0        0        0.02     0.04     0.055    0.08
         0.145    0.065    0.05     0.055    0.005    0        0        0        0        0        0
         0        0
1981     1        1        3        2        44       0.00     0        0        0        0        0
         0        0        0        0        0        0        0        0        0        0        0
         0        0        0.009352168       0        0.000923447       0.009658981       0
         0.017071936       0.009914631       0.002308139       0.004315309       0.029660242
         0.079223767       0.163936007       0.201138023       0.07768508       0.045483208
         0.007295434       0        0        0        0        0        0        0        0        0
         0        0        0        0        0        0        0        0        0        0        0
         0        0        0        0        0.001580486       0        0.001576187       0
         0.004283547       0.007270873       0.046535231       0.184208021       0.087405632
         0.009173651       0        0        0        0
1982     1        1        3        2        89       0.00     0        0        0        0        0
         0        0        0        0        0        0        0        0        0        0
```

```
        0.000209381     0       0.000276902     0.001000681     0.00038614      0.005672158
        0.006879098     0.010054919     0.006879155     0.01852027      0.035607596
        0.035969079     0.09680007      0.106453931     0.150588258     0.107370175
        0.050012385     0.016759029     0.003351308     0.018290696     0.003854013     0
        0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.002052348     0.000400223     0.00490636
        0.003430074     0.001632034     0.005899893     0.004138135     0.010646879
        0.008556366     0.01623941      0.049246598     0.12613895      0.064697219
        0.015629436     0.004155975     0.005121676     0.000582645     0.000582645
        0.000582645     0.000425247
1983    1       1       3       2       165     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.001436253     0.000640144     0.001623491     0.001550364     0.002568905
        0.001631408     0.005490415     0.006200823     0.004880457     0.02629336
        0.043581878     0.11995565      0.105118332     0.161450797     0.069672418
        0.036127869     0.006750827     0.004831328     0.002521959     0       0       0
        0       0       0       0       0       0       0       0       0
        0       0       0       2.894e-05       0.000508026     0.000200907     0.000619296
        0.00087674      0.001105158     0.004593141     0.004854462     0.010252466
        0.013841374     0.046059499     0.107873795     0.116588641     0.065169305
        0.018075785     0.000642701     0.002397549     0       0.001992768     0.001992768
1984    1       1       3       2       332     0       0       0       0       0       0
        0       0       0       0       0.000123029     0       0       0       0       0
        0       0       0.000229561     0.000387029     0.000594001     0.000822722
        0.006404647     0.011997875     0.011162728     0.007756905     0.018850844
        0.031464026     0.06305443      0.118815542     0.10033663      0.108346922
        0.082382059     0.036430253     0.008618094     0.002385729     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.002142319     0.002291479     0.000710311
        0.000651822     0.002990391     0.009200048     0.007620995     0.007943567
        0.016599816     0.063568776     0.123856417     0.087160378     0.056576816
        0.005849984     0.001224734     0.001247875     0       0       0.000201245
1985    1       1       3       2       485     0       0       0       0       0       0
        5.3584e-05      0       0       0       0       0       0
        0.000357638     4.3009e-05      0.000319699     0.001269967     0.000735044
        0.001171229     0.004361312     0.003897284     0.006913197     0.017094358
        0.023591055     0.034986178     0.056976028     0.071982767     0.081785821
        0.088103246     0.069949645     0.041359911     0.023224914     0.002611598
        0.001255309     0.000363115     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       3.1286e-05      0
        0.000411222     0.00010021      0.000356477     0.002282826     0.001589442
        0.005602972     0.004021602     0.01323916      0.016109365     0.024100215
        0.041991327     0.085148054     0.122832404     0.082271629     0.041210365
        0.014892136     0.00637586      0.002400775     0.001131825     0.001131825
        0.000363115
1986    1       1       3       2       267     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.002336091     0       0.000126758     0.000621894     0.001640218     0.00208535
        0.00672149      0.011036079     0.015074762     0.045183599     0.126151576
        0.084583946     0.100371265     0.085564688     0.076254721     0.028088509
        0.011719856     0.001699998     5.0139e-05      0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.002336091     0       0.000126758     5.0139e-05      0.000296866     0.001435623
        0.003141301     0.004869212     0.007668502     0.015612004     0.025412968
        0.034391943     0.088043782     0.115193453     0.073064835     0.024754509
        0.004291074     0       0       0       0       0
1987    1       1       3       2       410     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       4.1431e-
05      4.1431e-05      0.000330214     0.000820605     0.000308121     0.000313303
        0.000196718     0.001589481     0.003966118     0.006879617     0.017025068
        0.070754205     0.120441187     0.131445907     0.083398876     0.037759342
        0.013432351     0.001293588     0.000611052     9.8283e-05      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       6.1606e-05      0.000155231     0.000147465     0.000224129
        0.000296763     0.000230189     0.002043342     0.003611713     0.012226573
        0.017828825     0.043823948     0.138174013     0.170389614     0.093054994
        0.019980372     0.003507247     0.00228702      0       0.001033204     0
        0.00017685
1988    1       1       3       2       185     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.000637007     0.000165217     0.000165217     0.002345454     0.001640025
        0.000700713     0.004456563     0.002270845     0.002821435     0.010988893
        0.090579565     0.131666501     0.109219912     0.115514134     0.049461409
        0.011305879     0.003530126     0.002174828     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.000582841     0.00079032      0.001916613
        0.001222563     0.002439905     0.007123079     0.007670696     0.032937274
        0.114279354     0.160855833     0.094558388     0.03031777      0.005411952     0
        0.000249688     0       0       0
1989    1       1       3       2       135     0       0       0       0       0       0
        0       0       0       0       0       0       0       0.000880136     0       0
```

```
        0       0       0.000322198     0.000644397     0.003991556     0.007215661
        0.009078429     0.01231198      0.006565148     0.0215359       0.022136969
        0.069202458     0.145445632     0.069490923     0.070972882     0.042012125
        0.026856672     0.011252273     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.000880136
        0       0       0       0.000322198     0       0.000811716     0.006312287
        0.00933858      0.004528414     0.006255233     0.014922144     0.015230329
        0.037842581     0.14781916      0.148776411     0.057694405     0.025100248
        0.004153434     0       0       9.7385e-05      0       0
1990    1       1       3       2       179     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.00259181      0.003859105     0.011520278     0.006322889
        0.013098289     0.018055826     0.026792846     0.087766574     0.097510064
        0.090205401     0.066591828     0.033612053     0.032885332     0.013565733
        0.004619517     0.003377364     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.00259181      0.003859105     0.005332824     0.012510343
        0.019285743     0.019602689     0.025245983     0.092407164     0.094416337
        0.084017947     0.061951237     0.030518326     0.022057287     0.008925143
        0.003072653     0.001830501     0
1991    1       1       3       2       143     0       0       0       0       0       0
        0       0       0       0       0       6.1898e-05      6.1898e-05      0
        0.000452421     0       0.00221914      0.000660687     0.004588875     0.007958897
        0.00966071      0.007431082     0.007223661     0.011229918     0.008498161
        0.013591667     0.011570672     0.045651443     0.087068102     0.090413418
        0.080171553     0.047294787     0.061924478     0.02851248      0.010901837
        0.000923142     0       0       0       0       0       0       0       0
        0       0       0       6.1898e-05      6.1898e-05      0       0.000452421     0
        0.00221914      0.000660687     0.004588875     0.007958897     0.00966071
        0.007431082     0.007223661     0.011229918     0.009421304     0.013591667
        0.017569165     0.064340245     0.096295661     0.060420953     0.062865532
        0.034604477     0.037007363     0.010976639     0.003286879     0       0
1992    1       1       3       2       57      0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.001593168     0       0.002622574     0.001100646     0.007628311
        0.010303436     0.015781925     0.015141792     0.024788256     0.049146609
        0.099610034     0.10300208      0.08527745      0.044195291     0.030892303
        0.007023758     0.001892367     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.001593168     0       0.002622574     0.001100646     0.007628311
        0.010303436     0.015781925     0.015141792     0.024788256     0.049146609
        0.099610034     0.10300208      0.08527745      0.044195291     0.030892303
        0.007023758     0.001892367     0       0
1993    1       1       3       2       66      0       0       0       0       0       0
        0       0       0       0       0       0       0       0.000631702     0.000631702
        0.0017728       0.000593859     0.000291456     0.002888005     0.001140241
        0.00094086      0.001973107     0.017324776     0.011251648     0.024815141
        0.032329211     0.029534349     0.08474358      0.127818176     0.082980239
        0.04186255      0.024871842     0.006435325     0.003274328     0.001263403
        0.000631702     0       0       0       0       0       0       0       0
        0       0       0       0       0       0.000631702     0.000631702     0.0017728
        0.000593859     0.000291456     0.002888005     0.001140241     0.00094086
        0.001973107     0.017324776     0.011251648     0.024815141     0.032329211
        0.029534349     0.08474358      0.127818176     0.082980239     0.04186255
        0.024871842     0.006435325     0.003274328     0.001263403     0.000631702     0
1994    1       1       3       2       118     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.00020866      0.000231057     0.000907239     0.001182532     0.000584972
        0.000108868     0.003049058     0.003939803     0.01353596      0.016554972
        0.031306079     0.079808668     0.093285611     0.089740561     0.089687212
        0.045390788     0.034948283     0.014104074     0.004227847     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.00020866      0.000231057     0.000907239
        0.001182532     0.000584972     0.000108868     0.003049058     0.003939803
        0.01977914      0.016554972     0.041874976     0.1076652       0.108180226
        0.078933885     0.054874164     0.022573309     0.01094191      0.003059619
        0.002548163     0       0
1995    1       1       3       2       182     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        9.5118e-05      0.000425522     0.00060939      0.004239351     0.00074805
        0.000292776     0.002965204     0.004331131     0.023143704     0.039500619
        0.07812888      0.113716017     0.092757198     0.06313496      0.061395171
        0.036907142     0.010958689     0.001263698     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.000133531     9.5118e-05      0.000425522     0.00060939
        0.00410582      0.000881581     0.003236496     0.003098735     0.005374058
        0.028974464     0.047846212     0.090431485     0.110694086     0.083150362
        0.044604438     0.030286025     0.007920012     0.003232916     0.000287128     0
        0
1996    1       1       3       2       426     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1.588e-
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05      0.000213695     0.001157808     0.001700513     0.002849475     0.004016581
        0.007134804     0.00537882      0.011702558     0.018303034     0.025977223
        0.08642447      0.106513086     0.070356406     0.055109452     0.042956227
        0.021736995     0.015486979     0.006042648     0.000926796     0       0       0
        0       0       0       0       0       0       0       0       0
        0       0       0       1.588e-05       0.000491638     0.001554118     0.001671954
        0.002719564     0.002582506     0.005850281     0.006783373     0.015902117
        0.029125931     0.049481104     0.126285613     0.120209417     0.061039891
        0.043174299     0.024189687     0.013383917     0.00755857      0.003049893
        0.000926796     0
1997    1       1       3       2       405     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       4.7134e-
05      0.000867301     0.001943861     0.003248878     0.007014217     0.003024128
        0.009128099     0.012666853     0.021107281     0.016318144     0.032969464
        0.074486885     0.088829466     0.068553337     0.063565645     0.051016508
        0.027464778     0.019917234     0.003239272     0.002383729     0       0       0
        0       0       0       0       0       0       0       0       0
        0       0       0.000213475     4.7134e-05      0.001119278     0.002157336
        0.003808635     0.008169718     0.004293645     0.009093009     0.017643086
        0.029962476     0.028604997     0.052009173     0.093828083     0.092304855
        0.057852098     0.043065035     0.022371714     0.013003364     0.011384431
        0.001276246     0       0
1998    1       1       3       2       413     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.000797371
        0.001876738     0.001309351     0.003698056     0.005963145     0.01184596
        0.013243921     0.014736572     0.014193339     0.013773672     0.020740638
        0.018831027     0.06262017      0.074695358     0.081250383     0.058642014
        0.05486104      0.03417459      0.013779083     0.002991611     0.000394304     0
        0       0       0       0       0       0       0       0       0
        0       0       0       0       0.000640209     0.001719577     0.001309351
        0.003540895     0.005963145     0.011531637     0.012154347     0.014617594
        0.015607313     0.014071748     0.019034049     0.031727772     0.106950262
        0.087953807     0.073038072     0.040548562     0.029504485     0.018095727
        0.004628395     0.002550408     0.000394304     0
1999    1       1       3       2       250     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.000638363
        0.002248491     0.003909166     0.008567244     0.018163122     0.038543696
        0.03622928      0.040175258     0.029613328     0.040003522     0.017833741
        0.01599999      0.042250902     0.082916498     0.074289 0.039215736     0.023356861
        0.015750712     0.010739085     0.002810879     0.000748465     0.000146076     0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.000320783     0.002248491     0.004201319     0.00915155
        0.017753149     0.042251447     0.036080494     0.038717133     0.036801613
        0.035755503     0.024794674     0.024538463     0.063058955     0.055063425
        0.031671335     0.022093618     0.007405969     0.002756546     0.00054081
        0.000207078     0.000292153     0.000146076
2000    1       1       3       2       275     0       0       0       0       0       0
        0       0       2.4194e-05      0       4.8388e-05      0       0       0       0
        0       0.001007258     0.000926306     0.004148516     0.004090782     0.016485625
        0.019899879     0.046642127     0.046218475     0.044040289     0.028294553
        0.042023218     0.046766705     0.046045875     0.059220171     0.066197094
        0.055022987     0.025003032     0.01163735      0.001779498     0.000461644     0
        0       0       0       0       0       0       0       0       2.4194e-05      0
        4.8388e-05      0       0       0       0       0       0.001407317     0.000926306
        0.003948486     0.004320173     0.015885535     0.017104655     0.046047675
        0.050440962     0.039982529     0.023798923     0.033773881     0.049319235
        0.056268047     0.04287132      0.026253559     0.012722841     0.004625115
        0.003823301     0.00017926      0.000244331     0
2001    1       1       3       2       471     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.001822252
        0.000265276     0.000746193     0.000370923     0.000772511     0.003180596
        0.006934874     0.008559135     0.022109286     0.023688143     0.055037687
        0.060861913     0.072840025     0.093798775     0.052626359     0.029321933
        0.030344565     0.016275055     0.01109205      0.008689432     0.003622286     5.0593e-
05      0.000296739     0       0       0       0       0       0       0       0       0
        0       0       0       0       0.001822252     0.000265276     0.000597823
        0.0003288       0.00092088      0.004035226     0.005569569     0.01264606
        0.028099141     0.027200349     0.059280771     0.085456704     0.068846828
        0.078611092     0.056240855     0.025735964     0.022209656     0.009988192
        0.004308912     0.003343174     0.001185875     0       0
2002    1       1       3       2       440     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.000735667
        0.002030145     0.002486726     0.004124887     0.003036015     0.004197409
        0.006239814     0.008457617     0.010169893     0.016982577     0.02789801
        0.042336035     0.11728523      0.084674237     0.041647623     0.037148416
        0.040971525     0.039136811     0.010906269     0.004851177     0.000438473     0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.001050441     0.002030145     0.002801501
        0.004124887     0.003665565     0.006068289     0.008456286     0.013227342
        0.014514378     0.020329007     0.041794402     0.060263364     0.106973845
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        0.091905537     0.032273957     0.023523879     0.026040429     0.025566311
        0.006839737     0.002200282     0.000595861     0
2003    1       1       3       2       456     0       0       0       0       0       0
        0       0       0       0       5.9307e-05      8.5996e-05      0.00072094      5.3377e-
05      0.000593608     0.000391167     0.001721796     0.001382777     0.005072991
        0.00280281      0.001959858     0.004803839     0.007812889     0.00631773
        0.010347258     0.012853647     0.014979635     0.085495582     0.125912668
        0.087502828     0.065772195     0.048588664     0.051962513     0.022515293
        0.005705496     0.001857224     0.000261071     0       0       0       0       0
        0       0       0       0       0       5.9307e-05      0.000139372     0.000393584
        0.000349103     0.000577674     0.001333008     0.001569857     0.003298966
        0.005126584     0.002454585     0.002042078     0.004172502     0.008015649
        0.007336594     0.00675156      0.013592299     0.03607883      0.128467137
        0.107311594     0.06325779      0.022249008     0.010608784     0.003216542
        0.003326932     0       0.000324227     0.000413273
2004    1       1       3       2       430     0       0       0       0       0       0
        0       1.0212e-05      0       0       0       0       0       0       0
        0       6.3314e-05      6.5358e-05      0.003311848     0.00437655      0.005341742
        0.006193434     0.013228205     0.009556716     0.013503421     0.010763691
        0.041366328     0.090878746     0.08578879      0.090882711     0.071946447
        0.035671553     0.016762704     0.00661227      0.000788894     0.00075066      0
        0       0       0       0       0       0       1.0212e-05      0       0       0
        0       0       0       0       0       0       2.0424e-05      6.5358e-05
        0.003769013     0.004375148     0.008571534     0.010391343     0.019032098
        0.015669576     0.025874675     0.035906514     0.119714202     0.142393596
        0.064246359     0.027347028     0.009405462     0.002982051     0.002361814     0
        0       0
2005    1       1       3       2       360     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
        0.000134112     3.7885e-05      0.001350752     0.00191949      0.005319015
        0.009661229     0.011657174     0.018751979     0.029831504     0.040164833
        0.037804737     0.063658879     0.069373578     0.08304808      0.066464513
        0.030687786     0.018471032     0.005984545     0.005826327     0.001304693
        0.000668552     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0.000520108     0.000153767
        0.001350752     0.001786406     0.005181985     0.010746105     0.013606973
        0.015346904     0.041196376     0.053956701     0.047167212     0.106098735
        0.107433571     0.052581164     0.024679277     0.012717445     0.002062593
        0.000847783     0.000137449     0       0.000307999
2006    1       1       3       2       500     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.000149666     0.000665147     0.00039911      0.000641807     0.00265252
        0.006994549     0.006734521     0.020236915     0.031373256     0.071320441
        0.083663425     0.064626266     0.079011365     0.052615338     0.03828512
        0.022316193     0.008813746     0.001122067     0.000225883     0.000552475     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.000149666     0.000365815     0.000299332
        0.000774755     0.001580278     0.009132527     0.013038615     0.032207533
        0.056530838     0.064473846     0.114356447     0.0813114       0.061520167
        0.038168702     0.022696643     0.007830448     0.002980889     0.000155959     2.6328e-
05      0
2007    1       1       3       2       500     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.000110748     0.000103064     0.000444043     0.000571913     0.001320021
        0.004646295     0.011874818     0.01783044      0.042889971     0.142415177
        0.087756652     0.079047158     0.064864578     0.047789974     0.034209035
        0.020919026     0.007116702     0.002514457     0.000662877     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2.9237e-05      0       0       0       0       0.000132301     0.001525587
        0.003624163     0.007764166     0.017138902     0.033463368     0.058378047
        0.121350723     0.078230425     0.059434081     0.02848038      0.016026962
        0.004492846     0.002478623     0.000363241     0       0

2008    1       1       3       2       500     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.00014154      5.1044e-
05      0.000520408     0.000310173     0.000664839     0.001017032     0.001524311
        0.001654559     0.003897288     0.007448754     0.01037049      0.018365575
        0.04476795      0.138069608     0.100277558     0.060251414     0.046134947
        0.036271929     0.030863331     0.012237088     0.00420151      0.000800815
        0.000639582     0       0       0       0       0       0       0       0
        0       0       0       0       3.1859e-05      0       4.5964e-05      4.5964e-05
        0.000305452     0.000788478     0.000804498     0.001062131     0.001909855
        0.003938387     0.018523387     0.021955691     0.028409813     0.076763026
        0.142091285     0.1147318       0.041662195     0.016188562     0.003686465
        0.002892181     0.002242789     0.000987472     0.000309306     0.000141696
# 2006-2008 above, capped at 500. Original values were 2006:560, 2007:798, 2008:927 .
#
# Discard by half for it rewt
1986    1       1       0       1       50      0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.006756757
        0.006756757     0.040540541     0.040540541     0.081081081     0.101351351
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        0.074324324     0.108108108     0.195945946     0.195945946     0.074324324
        0.067567568     0.006756757     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2002    1       1       0       1       64      0       0       0       0       0
        0.00041424      0.00041424      0.00041424      0       0.00041424      0.006253056
        0.0108097       0.015760858     0.019903261     0.020060936     0.050030254
        0.052840082     0.044758088     0.106417853     0.078939885     0.047944158
        0.018276196     0.02329974      0.018635895     0.02497316      0.022490632
        0.047450852     0.147400774     0.140001816     0.068056168     0.015385119
        0.011358431     0.005472095     0.001824032     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0
2003    1       1       0       1       80      0       0       0       0       0       0
        0       0.000159518     0       0.000159518     0.000239277     0.000239277     7.98e-05
        0.004341226     0.014743057     0.019828823     0.02629995      0.024196474
        0.018065404     0.008267206     0.003283008     0.025905685     0.025627316
        0.037638259     0.026243917     0.032938354     0.086507537     0.251770105
        0.18890752      0.102759684     0.054014741     0.030278445     0.004763829
        0.008754163     0.003987948     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
2004    1       1       0       1       89      0       0       0       0       0       0
        0.000276003     0.000276003     0.00185588      0.000138001     0.000414004
        0.000414004     0.000552005     0.001551674     0.000751266     0.000414004
        0.003730114     0.003538167     0.012179536     0.017373038     0.013803292
        0.013706765     0.021865287     0.009471137     0.021798839     0.035470092
        0.093270332     0.191551429     0.23113931      0.111632928     0.113682272
        0.033110814     0.055456389     0.010439413     0.000138001     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       0       1       160     0       0       0.000272538     0
        0.000272538     0.000817614     0.002316572     0.004921714     0.005714552
        0.006745522     0.003732086     0.008784993     0.016621945     0.016408976
        0.006897648     0.004148586     0.00698651      0.003582724     0.005470468
        0.005090898     0.041261323     0.05589004      0.044983846     0.051031259
        0.057880738     0.07685997      0.060261066     0.191349634     0.188997867
        0.092902313     0.024045815     0.011390572     0.001372423     0.002169634     0
        0.000545076     0.000272538     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2006    1       1       0       1       138     0       0       0.000200323     0.000924567
        0.00221896      0.004807747     0.008045894     0.013035963     0.015937219
        0.012973469     0.009842171     0.01277015      0.023765952     0.025781913
        0.024328604     0.040716146     0.017457473     0.019727798     0.011803636
        0.004669062     0.003713676     0.006333282     0.005034445     0.013050924
        0.046932145     0.065521584     0.068953686     0.180782107     0.127503982
        0.119578898     0.02923694      0.046906327     0.026658341     0.006302463
        0.002080275     0       0.002403874     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2007    1       1       0       1       94      0       0       0       0       0.000124014
        0.00062007      0.001279462     0.028796534     0.010066219     0.003458168
        0.003820077     0.007375606     0.014055948     0.01232497      0.006820771
        0.006305378     0.007267222     0.00511489      0.003186612     0.004979368
        0.004967861     0.013572875     0.003017675     0.013655258     0.013101592
        0.045856035     0.050625537     0.175849797     0.291182956     0.117633473
        0.08570034      0.025932864     0.038112241     0.005196188     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       1       0       1       38      0       0       0       0       0       0
        0       0       0       0       0.000283681     0.00014184      0.000340417     0
        0.000538994     0.000765938     0.000482258     0.000283681     0.00014184
        0.000936147     0.011035187     0.010382721     0.033706169     0.011035187
        0.031351618     0.03467999      0.07105276      0.301971187     0.226593083
        0.058381701     0.136223569     0.030438961     0.012964217     0.026127011     0
        0.00014184      0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
```

```
#Triennial
1980  1  2  3  0 54  0  0  0  0  0  0.0006  0.0016  0.0044  0  0.0014  0.0016  0.004  0.0059  0.0141
0.0011  0.0071  0.0084  0.0103  0.0305  0.0339  0.0402  0.044  0.0434  0.0171  0.0151  0.0348  0.0378
0.0692  0.0327  0.0365  0.0226  0.0096  0.0094  0.0058  0  0  0  0  0  0  0  0  0.001  0.003
0.0016  0.0028  0.0023  0.0078  0.009  0.0147  0.0066  0.0059  0.0056  0.0079  0.0074  0.0132  0.0227
0.0171  0.0368  0.0272  0.042  0.0541  0.0356  0.0414  0.0513  0.0366  0  0.0036  0  0  0  0  0
1983  1  2  3  0          210  0  0  0  0  0  0.0006  0.0011  0.0019  0.001  0.0019  0.0043  0.0205
0.038  0.0223  0.0293  0.031  0.0442  0.0396  0.0352  0.034  0.0398  0.0232  0.0151  0.005  0.0062
0.0061  0.004  0.0072  0.0075  0.009  0.0205  0.0212  0.011  0.0044  0.0013  0.0001  0  0  0  0  0
0.0001  0.0012  0.0013  0.0043  0.002  0.0017  0.0055  0.0207  0.0315  0.0316  0.026  0.0377  0.0656
0.0553  0.0402  0.0369  0.0365  0.0256  0.0112  0.0053  0.0074  0.0036  0.0043  0.0063  0.0216  0.0197
0.0085  0.0015  0.0006  0  0  0  0
1986  1  2  3  0          168  0  0  0  0  0.0005  0.0003  0.0004  0.0044  0.0125  0.009  0.0057
0.0029  0.0082  0.0173  0.0148  0.0073  0.0063  0.0105  0.0169  0.0201  0.0325  0.0332  0.0256  0.0458
0.0418  0.0375  0.0304  0.0492  0.0233  0.0116  0.0092  0.0096  0.007  0.0036  0.002  0.0008  0
0.0007  0.0003  0  0  0.0007  0.0001  0.003  0.0052  0.0097  0.0082  0.0047  0.0026  0.0032  0.0106
0.0163  0.0069  0.0061  0.0153  0.0148  0.0197  0.0424  0.0378  0.0378  0.064  0.0412  0.0459  0.0343
0.0282  0.0184  0.0048  0.0096  0.0056  0.0016  0  0  0  0
1989  1  2  3  0          416  0  0  0  0.0002  0.0002  0.0005  0.0061  0.0384  0.0657  0.0285  0.0049
0.015  0.0332  0.0615  0.0318  0.0374  0.0136  0.0204  0.0206  0.0175  0.0168  0.0141  0.0097  0.0087
0.0086  0.0101  0.0033  0.0097  0.0088  0.0071  0.0055  0.0047  0.0004  0.0008  0.0002  0  0  0  0  0
0.0008  0.0003  0.0018  0.0083  0.0378  0.0647  0.0453  0.0079  0.0139  0.0419  0.0571  0.0333  0.0246
0.0157  0.0177  0.0125  0.0172  0.011  0.0151  0.0111  0.0114  0.012  0.0053  0.0069  0.0105  0.0039
0.0033  0.0028  0.0009  0.0005  0.0002  0  0  0
1992  1  2  3  0          135  0  0  0  0  0.0002  0.0016  0  0.0015  0.0022  0.0035  0.0014  0.0004
0.0021  0.019  0.0399  0.0247  0.0061  0.0108  0.0161  0.0287  0.025  0.0466  0.0958  0.0707  0.0447
0.0256  0.0084  0.0078  0.0005  0.0007  0.0004  0.0002  0.0006  0.0007  0  0  0  0  0  0  0  0.0002  0
0.0013  0.0015  0.0016  0.0048  0.0025  0.0011  0.0038  0.0179  0.0288  0.0287  0.0109  0.007  0.0312
0.0263  0.0188  0.0929  0.111  0.0769  0.0313  0.0085  0.0031  0.0016  0.0009  0.0013  0.0002  0  0  0
0  0  0
1995  1  2  3  0          275  0  0  0.0004  0  0.0003  0.0006  0.0007  0.0082  0.023  0.0121  0.002
0.0006  0.0056  0.0132  0.0085  0.0089  0.0096  0.0264  0.0454  0.0386  0.0243  0.0237  0.0172  0.0134
0.0164  0.0086  0.0083  0.0215  0.0327  0.0337  0.03  0.037  0.0262  0.0101  0.0043  0  0  0  0
0.0004  0  0.0003  0.0013  0.0027  0.0107  0.0239  0.0122  0.0017  0.0016  0.005  0.0108  0.0195
0.0121  0.0111  0.0287  0.047  0.0403  0.024  0.0162  0.0141  0.0108  0.0093  0.0147  0.0147  0.0529
0.0599  0.0354  0.0055  0.0011  0.0008  0  0  0  0
1998  1  2  3  0 318  0  0  0  0  0.0003  0.0022  0.0093  0.0078  0.0032  0.0009  0.0067  0.0116
0.0079  0.0155  0.0246  0.0465  0.0765  0.0818  0.0362  0.0321  0.0294  0.0271  0.0189  0.0111  0.0055
0.0036  0.0034  0.0064  0.0047  0.0013  0.0003  0.0029  0.0004  0.0003  0.0003  0  0  0  0  0  0  0
0.007  0.0129  0.0106  0.0012  0.0016  0.0061  0.0139  0.0107  0.0105  0.0327  0.0535  0.0817  0.0745
0.0525  0.0337  0.0293  0.0277  0.0181  0.0084  0.0075  0.0084  0.0064  0.0087  0.0008  0.0016  0.0003
0  0  0  0  0.001  0
2001  1  2  3  0 395  0  0  0.0009  0.0016  0.0005  0.0023  0.0143  0.0359  0.0226  0.0063  0.003
0.0117  0.0386  0.0867  0.0836  0.0232  0.0022  0.0044  0.0039  0.0076  0.009  0.0093  0.0049  0.0111
0.0045  0.0246  0.0304  0.1062  0.0068  0.0043  0.0064  0.0017  0.0016  0.0002  0.0006  0  0  0  0
0.0009  0.0016  0.0003  0.0024  0.0113  0.0307  0.0198  0.0076  0.0025  0.011  0.0422  0.0774  0.0761
0.0275  0.0043  0.0015  0.0045  0.0064  0.0071  0.0083  0.0042  0.0059  0.0066  0.0224  0.0149  0.0225
0.0044  0.0033  0.0004  0.0007  0  0  0  0  0
#AFSC
1997  1  3  3  0 42  0  0  0  0  0  0  0  0  0  0  0.0099  0.0396  0.0556  0.0545  0.0484  0.039
0.0366  0.085  0.1285  0.03  0.0226  0.0009  0.0009  0.0004  0  0.0009  0.0084  0.0003  0  0  0.0008
0.0005  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0.0099  0.0198  0.0561  0.1236  0.0567  0.0178
0.0315  0.0533  0.0232  0.0138  0.0164  0  0.0033  0.0009  0.0032  0.0021  0.0038  0.0013  0.0004  0
0.0001  0  0  0  0  0
1999  1  3  3  0          42  0.0014  0  0  0  0  0  0  0  0  0.0034  0  0.0034  0.0005  0.0014  0.0014
0.0018  0.0005  0.0034  0.0189  0  0.0098  0.0772  0.116  0.113  0.0734  0.0615  0.0199  0.0194
0.0001  0.0011  0.0004  0.0001  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0.0005  0  0.0152
0  0  0.0015  0.0028  0.0074  0.0277  0.1335  0.1448  0.0736  0.0469  0.0092  0.0058  0.0005  0.0024
0.0005  0  0  0  0  0  0  0
2000  1  3  3  0          36  0  0  0  0  0  0  0  0  0  0  0.0001  0.0006  0  0  0.0007  0.0101  0.01
0.0366  0.0676  0.0821  0.0756  0.0131  0.026  0.0282  0.021  0.0385  0.0448  0.0022  0.0034  0
0.0002  0.0002  0  0.0002  0.0002  0.0003  0  0  0  0  0  0  0  0  0  0  0  0  0.0007  0.0006  0.0019
0.0007  0  0  0  0.0299  0.0533  0.1108  0.1628  0.0624  0.0239  0.0041  0.0416  0.0169  0.0173
0.0078  0  0.0027  0.0002  0.0005  0  0  0  0.0001  0  0  0
2001  1  3  3  0          37  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0.003  0.0162  0.0138  0.0121
0.0074  0.0013  0.0101  0.0068  0.0126  0.0159  0.0213  0.0238  0.0368  0.1106  0.1632  0.0754  0.0084
0.0008  0.0058  0.0006  0.0039  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0.0014  0  0.0037  0.0106
0.0135  0.0053  0.0034  0.0042  0.0101  0.0129  0.0261  0.0185  0.0104  0.0163  0.1051  0.1296  0.064
0.0046  0.0008  0.0058  0.0039  0  0  0  0  0
#NWFSC Slope and Shelf
2000     1        4        3        0        46       0        0        0        0        0        0
         0        0        0.000719347      0        0.002472138       0.001406115       0.001406115
         0.002819034       0        0.00071448        0.013552271       0.013446374       0.016939868
         0        0.010745129      0.022304662       0.073931755       0.061157049       0.1028647
         0.023696561       0.0115264        0.004181701       0        0.020293282       0.039464483
         0.059196724       0.039909532       0.032887032       0        0        0        0        0
         0        0        0        0        0        0        0.002125462       0.00070917
         0.006690594       0.002812286       0        0.000698439       0.001406115       0
         0.001373314       0.002095344       0.008094524       0.012508235       0.002230945
         0.025701386       0.049054231       0.062974307       0.035100691       0.021124224
```

```
        0.002457977     0.033610445     0.119811842     0.027476135     0.013154791
        0.006577395     0.006577395     0       0       0       0
2001    1       4       3       0       79      0       0       0       0       0       0
        0       0       0.001230496     0       0.000717904     0.006849279     0.00949804
        0.027383138     0.061277025     0.018617255     0.010225538     0.002640537
        0.007275526     0.006000075     0.008308387     0.011524563     0.005988288
        0.013767361     0.011677244     0.01628674      0.057666125     0.061119135
        0.016837983     0.026615893     0.047780213     0.014559002     0.004852909     0
        0       0       0       0       0       0       0       0       0
        0.004068122     0       0       0.001973619     0.007672991     0.005199115
        0.02290083      0.049420236     0.032377764     0.016325665     0.004542887
        0.002786092     0.002769371     0.018230207     0.01827242      0.004205179
        0.011811012     0.025400473     0.034766939     0.052916008     0.060207707
        0.099753544     0.066273569     0.007931206     0       0.001496387     0       0
        0       0
2002    1       4       3       0       123     0       0       0       0       0       0
        0       0       0.001044436     0       0.001068986     0.004077679     0.019285241
        0.011193339     0.010209487     0.003424601     0.02519036      0.070657637
        0.097064281     0.079620477     0.056097769     0.012345736     0.01589208
        0.023109528     0.017606678     0.016315885     0.014008219     0.019262343
        0.006875332     0.005770886     0.001066832     0.001565721     0.000478359
        0.002972802     0.000997777     0       0       0       0       0       0
        0       0       0       0.000497453     0.001044436     0       0.00256436
        0.009344938     0.015279632     0.00461289      0.003429626     0.020434336
        0.055651928     0.087920621     0.065948487     0.066459435     0.020870487
        0.019036012     0.023715372     0.01889618      0.013316523     0.013919496
        0.01829055      0.006051125     0.009022778     0.004658974     0.00183189      0
        0       0       0       0
2003    1       4       3       0       183     0       0       0       0       0       0
        0       0       0       0       0       0       0.000584258     0.000194753
        0.000327155     0.002607145     0.005906372     0.014184258     0.019210801
        0.012870511     0.011284605     0.024243956     0.026013986     0.017202956
        0.005783083     0.008358143     0.026492952     0.080301901     0.140792306
        0.076130062     0.041690489     0.024760041     0.030918922     0.029620126
        0.00838577      0.002406085     0       0       0       0       0       0       0
        0       0       0       0.000194753     0       0       0.000194753     0.000584258
        0.000209158     0.002381218     0.007052933     0.015507437     0.017969078
        0.012067755     0.020107098     0.023659061     0.018548727     0.015623372
        0.005792757     0.009440231     0.017858237     0.106462876     0.083184375
        0.017991974     0.011767468     0.002567479     0.000120818     0.000264654
        0.000178892     0       0
2004    1       4       3       0       82      0       0       0       0       0       0
        0       0       0       0       0       0       0       0.001015773     0
        0.035759822     0.008939989     0.012732802     0.029854244     0.033407434
        0.034683068     0.048218443     0.052378488     0.040714979     0.034723744
        0.024585239     0.02447  0.021313088     0.01371321      0.006900374     0.005365957
        0.004141758     0.001447013     0.002694744     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.019313948     0.019400277     0.060112432     0.066522804
        0.036303209     0.031270666     0.053124787     0.062822909     0.05433433
        0.035761839     0.015756455     0.021900715     0.0176179       0.030349491
        0.027178998     0.006468059     0.002794385     0.001906626     0       0       0
        0
2005    1       4       3       0       117     0       0       0       0       0       0
        0       0.000408042     0.000408042     0.000408042     0       0       0.00116009
        0       0.001303232     0.000756616     0.00164726      0.001305986     0.00120196
        0.002297208     0.003144863     0.007977066     0.010515688     0.007116156
        0.016010377     0.028427142     0.034508325     0.057794188     0.126779627
        0.11749635      0.044031134     0.004229274     0.005577086     0.002234605
        0.006367646     0.000333258     0       0       0       0       0       0       0
        0       0       0       0.000408042     0.001224082     0.001728045     0.00244812
        0.001598852     0.001276498     0.001004433     0.002330615     0.001477765
        0.003363797     0.003685233     0.006225287     0.00963288      0.016851718
        0.019993447     0.021958964     0.027826005     0.081385545     0.194095414
        0.081241307     0.03250564      0.003373917     0.000622318     0.000302808     0
        0       0       0
2006    1       4       3       0       144     0       0       0       0       0       0
        0       0       0       0       0.001611022     0.00202593      0.006890246
        0.002348124     0.010200502     0.012321913     0.016850418     0.013232019
        0.007410074     0.01402603      0.006813102     0.01131459      0.018453737
        0.011847005     0.05042789      0.037862066     0.03823314      0.070317746
        0.052107919     0.052231502     0.041514101     0.01699581      0.014641447
        0.005548414     0       0       0       0       0       0       0       0
        0       0       0       0       0.000743991     0.005557854     0.005106761
        0.009810658     0.009239292     0.019192087     0.012694072     0.010731289
        0.005106056     0.008068024     0.018399921     0.022265594     0.032585447
        0.045221471     0.04654681      0.039092142     0.098510965     0.054697295
        0.035804888     0.004656319     0.000744317     0       0       0       0       0
2007    1       4       3       0       137     0       0       0       0       0       0
        0       0       0       0       0.000888375     0.000725792     0.002209207
        0.001422161     0.006175 0.011250977     0.017608091     0.015929499     0.013283143
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0.011342668 0.01477087 0.022686223 0.017647532 0.025080588
0.015982003 0.038449715 0.035924599 0.065609519 0.036572903
0.024492523 0.016080415 0.019178885 0.012431292 0.009320394
0.002944384 0.000744815 0 0 0 0 0 0 0
0 0 0 0 0.000888375 0.000888375 0.001671997
0.003760979 0.011065439 0.017245258 0.016295629 0.013271983
0.015165281 0.026044548 0.01601282 0.016543943 0.015337629
0.035445345 0.045846247 0.042179496 0.050507902 0.102816016
0.0616384 0.041939679 0.021338506 0.001503833 0.000849441
0.002991307 0 0 0
2008 1 4 3 0 139 0 0 0 0 0 0
0 0 0.000895938 0.000895938 0.000895938 0.001051646
0.000728999 0.002874143 0.026968235 0.038785681 0.025776843
0.029552008 0.026594396 0.031411985 0.027975545 0.015906272
0.015992579 0.014347661 0.015679982 0.015926607 0.018861638
0.070098708 0.043456548 0.019473827 0.015150908 0.008730609
0.009589778 0.003729765 0.003092512 0 0 0 0 0
0 0 0 0 0.000895938 0 0.001493703 0.003373187
0.000790714 0.001051646 0.004198779 0.027105263 0.027049577
0.025787366 0.033983344 0.041456943 0.029391099 0.024129916
0.014027261 0.018429748 0.009239229 0.028223234 0.024390492
0.039629598 0.079848686 0.059967324 0.011240134 0.00805233
0.001799798 0 0 0 0 0
2003 1 5 3 0 80 0 0 0 0 0 0
0 0.001033821 0.003264143 0.000531555 0.001149471 0.003392429
0.002938114 0.003538456 0.007976506 0.02370056 0.067252426
0.082275886 0.109710051 0.059207467 0.027327386 0.02220029
0.024764507 0.026308795 0.016675531 0.002833845 0.00589196
0.000842187 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0.003447576
0.007131976 0.00600761 0.006903103 0.014829148 0.01007645
0.013133561 0.022230416 0.025623431 0.067271506 0.098096009
0.077884364 0.046089472 0.023893868 0.02790095 0.036467756
0.014665631 0.002575431 0 0.002956357 0 0 0 0 0
0 0 0 0 0
2004 1 5 3 0 71 0 0 0.00027594 0
0.002448397 0.001519763 0.000661263 0.005662886 0.004779793
0.003598197 0.003378604 0.011815219 0.013935385 0.005812924
0.008524054 0.00856587 0.008629711 0.019087377 0.023924967
0.091738083 0.099560714 0.071640511 0.029552661 0.016490101
0.022183872 0.003844784 0.00340005 0.001700108 0.000850054 0
0 0 0 0 0 0 0 0.00027594
0.000928634 0.002363772 0.000506588 0.000928634 0.008866361
0.005732523 0.009576892 0.002006809 0.003689611 0.008724934
0.01807031 0.002376524 0.002209511 0.005109017 0.026786053
0.037356414 0.09765774 0.15803127 0.060791353 0.023030613
0.032380378 0.020073973 0.00340005 0.001700025 0.003844784 0
0 0 0 0 0 0 0 0
2005 1 5 3 0 129 0 0.001279818 0.000403396
0.000475512 0 0.004091402 0.007985199 0.014101043 0.014713385
0.011784319 0.013129034 0.032630652 0.03505006 0.019626015
0.016237509 0.012772582 0.023271685 0.008541256 0.002617619
0.009484516 0.00947093 0.045459762 0.049488995 0.056483747
0.042102431 0.00535363 0.007262106 0.001275875 0.000637938 0
0 0 0 0 0 0 0 0.001279818
0.000403396 0.001540318 0 0.005066564 0.007695525 0.021602481
0.028440509 0.014884242 0.017506652 0.036957565 0.053992163
0.02907414 0.013563242 0.012527669 0.021274657 0.015645061
0.010801028 0.01073795 0.021075598 0.075897358 0.070230643
0.047104401 0.021915264 0.00969971 0.003356481 0.001997149 0
0 0 0 0 0 0 0 0
2006 1 5 3 0 120 0 0.000473618 0 0.001481883
0 0.001780672 0.015558792 0.011480106 0.010835133 0.013642557
0.012347498 0.031147869 0.055124212 0.040702169 0.031806935
0.074143528 0.060517819 0.038936704 0.020735223 0.011616848
0.014982584 0.005846379 0.008828632 0.00740037 0.019593427
0.013496899 0.007946555 0.006096397 0 0 0.00110666 0
0 0 0 0 0 0 0.000473618 0 0.001481883
0.001030881 0.003642106 0.01288739 0.013454683 0.021318183
0.011039329 0.01057915 0.01992001 0.052647764 0.042879959
0.031311619 0.058633377 0.063668279 0.040594269 0.019455111
0.012265951 0.007043895 0.008837809 0.001850027 0.015361347
0.009796713 0.01610065 0.004898357 0.001198171 0 0 0
0 0 0 0 0 0
2007 1 5 3 0 138 0 0 0 0.000500471 0
0.000661612 0.006274105 0.005864073 0.006022019 0.003111149
0.029659863 0.02021271 0.044000369 0.035219987 0.037983172
0.036764571 0.049308295 0.031725103 0.019616922 0.017020822
0.024009132 0.018207127 0.00153752 0.008349101 0.006861818
0.010716552 0.012617847 0.007065797 0 0 0 0 0
0 0 0 0 0 0 0 0.000500471 0

```
        0.000807055     0.004519598     0.005569487     0.003267581     0.003791824
        0.027582512     0.029764936     0.053302304     0.025733473     0.044575972
        0.033881175     0.061581767     0.035189149     0.023632461     0.023158567     0.028534
        0.028748856     0.026993116     0.019183846     0.043761628     0.024917783
        0.013723525     0.002431258     0.00153752      0       0       0       0       0
        0       0       0
2008    1       5       3       0       88      0       0       0.000860201     0.000556924
        0.000407968     0.001145919     0.001089733     0.000439064     0.00319222
        0.007216534     0.009586112     0.015503198     0.005999277     0.007981283
        0.036683005     0.030725007     0.043794636     0.052473811     0.067593125
        0.088827564     0.03929123      0.039904736     0.031526309     0       0.007764921
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.000860201     0.000556924     0.000929039     0
        0.001015163     0.001514864     0.004655685     0.009404901     0.009884207
        0.006220729     0.008789566     0.017477399     0.054455115     0.042788801
        0.033335152     0.035373192     0.050299711     0.075766685     0.08961405
        0.032036162     0.023761387     0       0.008231606     0       0       0       0.000466684
        0       0       0       0       0       0       0       0       0
31 # Number of Age Bins
0  1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27
28  29  30

1 # Number of Aging Error Matrices
0.5  1.5  2.5  3.5  4.5  5.5  6.5  7.5  8.5  9.5  10.5  11.5  12.5  13.5  14.5  15.5  16.5  17.5  18.5
19.5  20.5  21.5  22.5  23.5  24.5  25.5  26.5  27.5  28.5  29.5  30.5  31.5  32.5  33.5  34.5  35.5
36.5  37.5  38.5  39.5  40.5  41.5  42.5  43.5  44.5  45.5
0.05    0.1   0.158113883  0.324442842  0.376192055  0.484366512  0.719693812  0.737838276
0.758854932  0.781541625  0.83763068  0.907620383  0.977610085  1.047599788  1.117589491  1.187579194
1.257568896  1.327558599  1.397548302  1.467538004  1.537527707  1.60751741  1.677507113  1.747496815
1.817486518  1.887476221  1.957465924  2.027455626  2.097445329  2.167435032  2.237424735  2.307414437
2.37740414  2.447393843  2.517383546  2.587373248  2.657362951  2.727352654  2.797342356  2.867332059
2.937321762  3.007311465  3.077301167  3.14729087  3.217280573  3.5

800   # Number of age comp observations using restricted length ranges ***
2   # Length bin refers to: 1=population length bin indices; 2=data length bin indices; 3= actual pop?
data? lengths match bins?
0 #_combine males into females at or below this bin number
#Year    Seas     Fleet    Gender   Part
1991    1       1       1       0       1       11      15      0.1     0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1991    1       1       1       0       1       16      19      0.3     0       0       0
        0.8     0.2     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1991    1       1       1       0       1       20      22      1.4     0       0       0
        0       0.95    0.05    0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1991    1       1       1       0       1       23      25      1.4     0       0       0
        0       0.047619048     0.571428571     0.285714286     0       0       0       0
        0.047619048     0       0       0       0       0       0       0       0       0
        0       0       0.047619048     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
1991    1       1       1       0       1       26      27      1       0       0       0
        0       0       0       0.357142857     0.285714286     0.142857143     0.071428571
        0.071428571     0       0.071428571     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
1991    1       1       1       0       1       27      28      1.7     0       0       0
        0       0       0.041666667     0.125   0.583333333     0.083333333     0       0
        0.083333333     0       0       0.041666667     0       0       0       0.041666667
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
```

```
1991    1       1       1       0       1       28      29      2.8     0       0       0
        0       0       0       0       0.125   0.25    0.275   0.15    0       0.1     0
        0       0       0       0.025   0       0.025   0       0       0       0       0
        0       0.025   0       0       0       0.025   0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1991    1       1       1       0       1       29      30      4.1     0       0       0
        0       0       0       0.016949153     0       0.06779661      0.220338983
        0.152542373     0.050847458     0.118644068     0.050847458     0.033898305     0
        0       0.050847458     0       0       0.016949153     0.050847458     0.016949153
        0.033898305     0.016949153     0       0       0       0.016949153     0
        0.084745763     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
1991    1       1       1       0       1       30      31      2.6     0       0       0
        0       0       0       0       0       0       0.078947368     0.026315789
        0.105263158     0.131578947     0.052631579     0.052631579     0       0.078947368
        0       0.052631579     0       0.026315789     0.078947368     0.026315789
        0.026315789     0       0.026315789     0       0.026315789     0.052631579     0
        0.157894737     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
1991    1       1       1       0       1       31      32      3.9     0       0       0
        0       0       0       0       0       0       0.01754386      0       0.01754386
        0.01754386      0.122807018     0.105263158     0.035087719     0.035087719
        0.052631579     0.035087719     0.052631579     0.070175439     0.01754386
        0.01754386      0.01754386      0.01754386      0.01754386      0.01754386
        0.01754386      0.035087719     0.01754386      0.263157895     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
1991    1       1       1       0       1       32      33      1.7     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.04    0.04    0.04    0.08    0.12    0.04    0.08    0.08    0       0       0
        0.08    0.04    0       0.08    0       0.28    0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1991    1       1       1       0       1       33      34      1.4     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.05    0       0       0.05    0.05    0       0.1     0.05    0.1
        0.05    0.05    0       0       0.2     0.3     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1991    1       1       1       0       1       34      35      0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.142857143     0       0       0.142857143
        0       0       0.285714286     0       0       0       0       0.428571429     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1991    1       1       1       0       1       35      36      0.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.5     0.5     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1991    1       1       2       0       1       11      15      0.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1991    1       1       2       0       1       16      19      0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.8     0.2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1991    1       1       2       0       1       20      22      1.4     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0.95
        0.05    0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
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1991    1       1       2       0       1       23      25      1.4     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.047619048     0.571428571     0.285714286     0       0       0       0       0
        0.047619048     0       0       0       0       0       0       0       0       0
        0       0       0.047619048     0       0       0       0       0       0       0
1991    1       1       2       0       1       26      27      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.357142857     0.285714286     0.142857143     0.071428571     0.071428571
        0       0.071428571     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
1991    1       1       2       0       1       27      28      1.7     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.041666667     0.125   0.583333333     0.083333333     0       0       0.083333333
        0       0       0.041666667     0       0       0       0.041666667     0       0
        0       0       0       0       0       0       0       0       0
1991    1       1       2       0       1       28      29      2.8     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.125   0.25    0.275   0.15    0       0.1     0       0       0
        0       0.025   0       0.025   0       0       0       0       0       0       0.025
        0       0       0       0.025
1991    1       1       2       0       1       29      30      4.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.016949153     0       0.06779661      0.220338983     0.152542373
        0.050847458     0.118644068     0.050847458     0.033898305     0       0
        0.050847458     0       0       0.016949153     0.050847458     0.016949153
        0.033898305     0.016949153     0       0       0       0.016949153     0
        0.084745763
1991    1       1       2       0       1       30      31      2.6     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.078947368     0.026315789     0.105263158
        0.131578947     0.052631579     0.052631579     0       0.078947368     0
        0.052631579     0       0.026315789     0.078947368     0.026315789     0.026315789
        0       0.026315789     0       0.026315789     0.052631579     0       0.157894737
1991    1       1       2       0       1       31      32      3.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.01754386      0       0.01754386      0.01754386
        0.122807018     0.105263158     0.035087719     0.035087719     0.052631579
        0.035087719     0.052631579     0.070175439     0.01754386      0.01754386
        0.01754386      0.01754386      0.01754386      0.01754386      0.01754386
        0.035087719     0.01754386      0.263157895
1991    1       1       2       0       1       32      33      1.7     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.04    0.04
        0.04    0.08    0.12    0.04    0.08    0.08    0       0       0       0.08    0.04
        0       0.08    0       0.28
1991    1       1       2       0       1       33      34      1.4     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.05    0       0       0.05    0.05    0       0.1     0.05    0.1     0.05    0.05
        0       0       0.2     0.3
1991    1       1       2       0       1       34      35      0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.142857143     0       0       0.142857143     0       0
        0.285714286     0       0       0       0       0.428571429
1991    1       1       2       0       1       35      36      0.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.5     0.5
1998    1       1       1       0       1       16      19      1       0       0       0
        0.785714286     0.214285714     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1998    1       1       1       0       1       20      22      3.3     0       0       0
        0.020833333     0.8125  0.145833333     0.020833333     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1998    1       1       1       0       1       23      25      2.6     0       0       0
        0       0.243243243     0.594594595     0.081081081     0       0.027027027     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0.027027027     0       0
        0.027027027     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
1998    1       1       1       0       1       26      27      1.9     0       0       0
        0       0       0.142857143     0.428571429     0.25    0.035714286     0.071428571
        0.035714286     0       0       0       0       0       0.035714286     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
1998    1       1       1       0       1       27      28      3.7     0       0       0
        0       0       0.092592593     0.444444444     0.185185185     0.074074074
        0.055555556     0.074074074     0.037037037     0       0       0.018518519     0
        0       0       0.018518519     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       28      29      0       0       0       0
        0       0       0.076923077     0.05982906      0.196581197     0.153846154
        0.213675214     0.076923077     0.034188034     0.034188034     0       0.025641026
        0.025641026     0.025641026     0.017094017     0.008547009     0.008547009     0
        0.008547009     0.025641026     0       0       0       0       0.008547009     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
1998    1       1       1       0       1       29      30      0       0       0       0
        0       0       0.032520325     0.016260163     0.040650407     0.130081301
        0.162601626     0.048780488     0.073170732     0.073170732     0.016260163
        0.06504065      0.032520325     0.073170732     0.024390244     0.016260163
        0.040650407     0.032520325     0.024390244     0.024390244     0.016260163     0
        0.008130081     0       0.008130081     0.016260163     0       0.024390244     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1998    1       1       1       0       1       30      31      0       0       0       0
        0       0       0.0078125       0.015625 0.0234375      0.03125 0.1015625
        0.1328125       0.0859375       0.046875 0.046875 0.03125  0.046875 0.0703125       0.09375
        0.0234375       0.0390625       0.0234375       0.0234375       0.0078125
        0.0234375       0       0.015625 0.015625 0       0.015625 0.0234375       0.0546875
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
1998    1       1       1       0       1       31      32      0       0       0       0
        0       0       0       0       0       0.010416667     0       0.020833333
        0.083333333     0.052083333     0.03125  0.0625  0.114583333     0.083333333
        0.072916667     0.052083333     0.03125  0.03125 0.020833333     0.020833333
        0.041666667     0.020833333     0.020833333     0       0.041666667     0
        0.041666667     0.145833333     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0
1998    1       1       1       0       1       32      33      5.3     0       0       0
        0       0       0       0       0.038961039     0.012987013     0.012987013
        0.025974026     0       0.025974026     0.025974026     0.051948052     0.051948052
        0.064935065     0.064935065     0.103896104     0.025974026     0.038961039
        0.025974026     0.051948052     0.064935065     0.051948052     0.012987013
        0.012987013     0       0.025974026     0       0.207792208     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
```

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1998    1       1       1       0       1       33      34      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.045454545     0.022727273     0.090909091     0       0.068181818
        0.022727273     0       0.068181818     0.022727273     0.045454545     0.022727273
        0       0.045454545     0.159090909     0       0.386363636     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
1998    1       1       1       0       1       34      35      0.8     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.090909091     0       0       0.090909091     0       0       0.818181818     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1998    1       1       1       0       1       35      36      0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.142857143     0       0       0       0       0       0.142857143
        0.142857143     0       0       0       0       0       0       0.571428571     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1998    1       1       1       0       1       36      37      0.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1998    1       1       2       0       1       16      19      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0.785714286
        0.214285714     0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
1998    1       1       2       0       1       20      22      3.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0.020833333
        0.8125  0.145833333     0.020833333     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1998    1       1       2       0       1       23      25      2.6     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.243243243     0.594594595     0.081081081     0       0.027027027     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.027027027     0       0       0       0.027027027
1998    1       1       2       0       1       26      27      1.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.142857143     0.428571429     0.25    0.035714286     0.071428571     0.035714286
        0       0       0       0       0       0.035714286     0       0       0       0
        0       0       0       0       0       0       0       0       0       0
1998    1       1       2       0       1       27      28      3.7     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.092592593     0.444444444     0.185185185     0.074074074     0.055555556
        0.074074074     0.037037037     0       0       0.018518519     0       0       0
        0.018518519     0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       2       0       1       28      29      0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.076923077     0.05982906      0.196581197     0.153846154     0.213675214
        0.076923077     0.034188034     0.034188034     0       0.025641026     0.025641026
        0.025641026     0.017094017     0.008547009     0.008547009     0       0.008547009
        0.025641026     0       0       0       0.008547009     0       0       0
1998    1       1       2       0       1       29      30      0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.032520325     0.016260163     0.040650407     0.130081301     0.162601626
        0.048780488     0.073170732     0.073170732     0.016260163     0.06504065
        0.032520325     0.073170732     0.024390244     0.016260163     0.040650407
```

```
        0.032520325     0.024390244     0.024390244     0.016260163     0       0.008130081
        0       0.008130081     0.016260163     0       0.024390244
1998    1       1       2       0       1       30      31      0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.0078125       0.015625 0.0234375       0.03125  0.1015625       0.1328125
        0.0859375       0.046875 0.046875 0.03125  0.046875 0.0703125       0.09375  0.0234375
        0.0390625       0.0234375       0.0234375       0.0078125       0.0234375       0
        0.015625 0.015625 0       0.015625 0.0234375       0.0546875
1998    1       1       2       0       1       31      32      0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.010416667     0       0.020833333     0.083333333
        0.052083333     0.03125  0.0625   0.114583333     0.083333333     0.072916667
        0.052083333     0.03125  0.03125  0.020833333     0.020833333     0.041666667
        0.020833333     0.020833333     0       0.041666667     0       0.041666667
        0.145833333
1998    1       1       2       0       1       32      33      5.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.038961039     0.012987013     0.012987013     0.025974026     0
        0.025974026     0.025974026     0.051948052     0.051948052     0.064935065
        0.064935065     0.103896104     0.025974026     0.038961039     0.025974026
        0.051948052     0.064935065     0.051948052     0.012987013     0.012987013     0
        0.025974026     0       0.207792208
1998    1       1       2       0       1       33      34      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.045454545     0.022727273     0.090909091     0       0.068181818     0.022727273
        0       0.068181818     0.022727273     0.045454545     0.022727273     0
        0.045454545     0.159090909     0       0.386363636
1998    1       1       2       0       1       34      35      0.8     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.090909091     0       0       0.818181818
1998    1       1       2       0       1       35      36      0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.142857143     0       0       0       0       0       0.142857143     0.142857143
        0       0       0       0       0       0       0.571428571
1998    1       1       2       0       1       36      37      0.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1
2003    1       1       1       0       1       11      15      2.6     0       0
        0.647058824     0.294117647     0.058823529     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2003    1       1       1       0       1       16      19      7.8     0       0       0
        0.762711864     0.220338983     0.016949153     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2003    1       1       1       0       1       20      22      3.9     0       0       0
        0.173913043     0.695652174     0.086956522     0.043478261     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2003    1       1       1       0       1       23      25      6.4     0       0       0
        0       0.648648649     0.054054054     0.189189189     0.108108108     0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2003    1       1       1       0       1       26      27      13.5    0       0       0
        0       0.096153846     0.211538462     0.269230769     0.25    0.096153846
        0.057692308     0.019230769     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2003    1       1       1       0       1       27      28      18.4    0       0       0
        0       0.037037037     0.234567901     0.222222222     0.296296296     0.074074074
        0.024691358     0.037037037     0.012345679     0.012345679     0       0
        0.024691358     0.012345679     0       0       0       0       0.012345679     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2003    1       1       1       0       1       28      29      42.4    0       0       0
        0       0.025089606     0.078853047     0.150537634     0.365591398     0.150537634
        0.05734767      0.010752688     0.003584229     0.025089606     0.003584229
        0.021505376     0.003584229     0.017921147     0.025089606     0.014336918
        0.007168459     0.017921147     0.003584229     0.003584229     0       0.003584229
        0       0.007168459     0.003584229     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2003    1       1       1       0       1       29      30      46.6    0       0       0
        0       0.007672634     0.025575448     0.145780051     0.301790281     0.217391304
        0.076726343     0.043478261     0.046035806     0.002557545     0.007672634
        0.007672634     0.007672634     0.007672634     0.010230179     0.00511509
        0.017902813     0.012787724     0.010230179     0.00511509      0.002557545
        0.002557545     0.00511509      0.002557545     0.007672634     0       0
        0.020460358     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2003    1       1       1       0       1       30      31      43.8    0       0       0
        0       0.006896552     0.006896552     0.044827586     0.186206897     0.275862069
        0.075862069     0.089655172     0.062068966     0.031034483     0.037931034
        0.006896552     0.04137931      0.020689655     0.020689655     0.027586207
        0.013793103     0       0       0.003448276     0.003448276     0.020689655
        0.006896552     0.003448276     0       0       0.013793103     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2003    1       1       1       0       1       31      32      36.2    0       0       0
        0       0.005102041     0       0       0.06122449      0.030612245     0.06122449
        0.081632653     0.020408163     0.035714286     0.12755102      0.020408163
        0.06122449      0.076530612     0.081632653     0.066326531     0       0.015306122
        0.045918367     0.040816327     0.010204082     0.025510204     0.045918367     0
        0.005102041     0       0       0.081632653     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       1       1       0       1       32      33      29.4    0       0       0
        0       0.005882353     0       0       0       0.011764706     0.023529412
        0.023529412     0.023529412     0.035294118     0.070588235     0.011764706
        0.035294118     0.082352941     0.094117647     0.058823529     0.064705882
        0.035294118     0.082352941     0.070588235     0.058823529     0.052941176
        0.035294118     0       0.011764706     0.017647059     0       0.094117647     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2003    1       1       1       0       1       33      34      23.1    0       0       0
        0       0       0       0       0       0       0       0.013422819     0       0
        0       0       0       0.026845638     0.040268456     0.013422819     0.026845638
        0.013422819     0.053691275     0.174496644     0.026845638     0.080536913
        0.067114094     0.013422819     0.026845638     0.013422819     0.067114094
        0.342281879     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2003    1       1       1       0       1       34      35      15      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.03125 0       0.09375
        0.03125 0.03125 0.0625  0       0.03125 0.71875 0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       1       1       0       1       35      36      10      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
```

```
        0       0       0       0       0       0       0       0       0       0
        0.076923077     0       0.076923077     0       0       0       0.846153846     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2003    1       1       1       0       1       36      37      2.8     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       1       2       0       1       11      15      2.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.473684211
        0.473684211     0.052631579     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2003    1       1       2       0       1       16      19      9.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.070588235
        0.788235294     0.129411765     0.011764706     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2003    1       1       2       0       1       20      22      2.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.105263158
        0.842105263     0       0.052631579     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2003    1       1       2       0       1       23      25      12.1    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.033898305
        0.576271186     0.13559322      0.220338983     0.033898305     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2003    1       1       2       0       1       26      27      18.7    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.014705882     0.25    0.441176471     0.161764706     0.102941176     0.014705882
        0.014705882     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2003    1       1       2       0       1       27      28      39      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.018867925     0.194968553     0.364779874     0.176100629     0.150943396
        0.025157233     0.018867925     0.006289308     0.006289308     0.012578616     0
        0       0.018867925     0       0       0       0       0.006289308     0       0
        0       0       0       0       0       0       0
2003    1       1       2       0       1       28      29      76.9    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.013435701     0.042226488     0.211132438     0.307101727     0.184261036
        0.076775432     0.013435701     0.013435701     0.009596929     0.013435701
        0.011516315     0.009596929     0.032629559     0.021113244     0.011516315     0
        0.013435701     0.001919386     0.005758157     0       0.001919386     0
        0.003838772     0.001919386     0       0       0
2003    1       1       2       0       1       29      30      71.8    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.006711409     0.004474273     0.082774049     0.161073826     0.149888143
        0.067114094     0.060402685     0.058165548     0.024608501     0.03803132
        0.03803132      0.020134228     0.042505593     0.035794183     0.017897092
        0.020134228     0.024608501     0.031319911     0.026845638     0.020134228
        0.006711409     0.008948546     0.002237136     0.011185682     0.008948546     0
        0.031319911
2003    1       1       2       0       1       30      31      57      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.007246377     0       0.010869565     0.028985507     0.028985507     0.036231884
        0.014492754     0.036231884     0.018115942     0.047101449     0.050724638
        0.014492754     0.072463768     0.043478261     0.057971014     0.028985507
```

0.043478261 0.065217391 0.065217391 0.06884058 0.061594203
0.043478261 0.028985507 0.018115942 0.028985507 0 0.079710145
2003 1 1 2 0 1 31 32 25.9 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
0.011627907 0 0 0 0.023255814 0 0 0
0.011627907 0.011627907 0.023255814 0 0.034883721 0
0.034883721 0 0.011627907 0.058139535 0.023255814 0
0.034883721 0.058139535 0.069767442 0.034883721 0.046511628 0
0.511627907
2003 1 1 2 0 1 32 33 11.5 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
0.027777778 0 0 0 0 0 0 0 0 0
0 0 0 0.055555556 0 0.027777778 0 0
0.055555556 0 0.138888889 0 0 0.055555556 0.027777778
0 0.611111111
2003 1 1 2 0 1 33 34 3.6 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0.222222222 0 0 0 0 0
0 0 0 0 0.777777778
2003 1 1 2 0 1 34 35 0.3 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 1
2003 1 1 2 0 1 36 37 0.2 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0.666666667 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0.333333333
2004 1 1 1 0 1 23 25 7.1 0 0 0
0 0.064516129 0.64516129 0.161290323 0 0.064516129
0.064516129 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
2004 1 1 1 0 1 26 27 13 0 0 0
0 0.148148148 0.518518519 0.111111111 0.185185185 0 0
0 0.037037037 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
2004 1 1 1 0 1 27 28 15 0 0 0
0 0.111111111 0.444444444 0.148148148 0.148148148 0.148148148
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
2004 1 1 1 0 1 28 29 26 0 0 0
0 0.044444444 0.133333333 0.277777778 0.311111111 0.155555556
0.055555556 0.011111111 0 0.011111111 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0
2004 1 1 1 0 1 29 30 29 0 0 0
0 0 0 0.131147541 0.270491803 0.360655738 0.163934426
0.049180328 0.008196721 0 0 0 0.008196721 0 0
0 0 0 0.008196721 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0
2004 1 1 1 0 1 30 31 27 0 0 0
0 0 0.01010101 0.01010101 0.171717172 0.242424242
0.272727273 0.151515152 0.050505051 0.03030303 0.03030303
0.01010101 0 0 0 0.01010101 0 0 0 0

```
        0.01010101      0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       1       1       0       1       31      32      24      0       0       0
        0       0       0       0       0.014705882     0.161764706     0.220588235
        0.117647059     0.073529412     0.073529412     0.058823529     0.044117647
        0.044117647     0.029411765     0.058823529     0.029411765     0       0.014705882
        0.014705882     0       0.014705882     0.014705882     0       0       0       0
        0       0.014705882     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
2004    1       1       1       0       1       32      33      16      0       0       0
        0       0       0       0       0       0.022727273     0       0       0.068181818
        0.045454545     0.045454545     0.068181818     0.068181818     0.045454545
        0.068181818     0.045454545     0.068181818     0.068181818     0.090909091
        0.090909091     0       0.045454545     0.068181818     0       0       0.022727273
        0.022727273     0.045454545     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0
2004    1       1       1       0       1       33      34      19      0       0       0
        0       0       0       0       0       0       0.021276596     0       0
        0.042553191     0       0       0.021276596     0.106382979     0.106382979
        0.021276596     0       0.042553191     0.063829787     0       0.021276596
        0.063829787     0.063829787     0.063829787     0       0.021276596     0.021276596
        0.319148936     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2004    1       1       1       0       1       34      35      15      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.05    0       0       0       0       0       0       0       0.1
        0       0       0       0       0.05    0.8     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       1       1       0       1       35      36      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       1       1       0       1       36      37      2.7     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.2     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.8     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       1       2       0       1       23      25      13.9    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.035087719
        0.140350877     0.631578947     0.122807018     0.070175439     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2004    1       1       2       0       1       26      27      24.9    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.046511628     0.348837209     0.418604651     0.139534884     0.023255814     0
        0       0       0.023255814     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2004    1       1       2       0       1       27      28      31.3    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.037735849     0.169811321     0.320754717     0.301886792     0.056603774
        0.037735849     0.037735849     0       0       0       0.018867925     0       0
        0       0       0.018867925     0       0       0       0       0       0       0
        0       0       0       0
2004    1       1       2       0       1       28      29      57.8    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.037433155     0.165775401     0.219251337     0.278074866     0.181818182
        0.064171123     0.016042781     0.021390374     0.005347594     0       0
        0.005347594     0       0       0       0.005347594     0       0       0       0
        0       0       0       0       0       0
```

```
2004    1       1       2       0       1       29      30      53      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.013157895     0.039473684     0.164473684     0.197368421     0.184210526
        0.131578947     0.039473684     0.026315789     0.026315789     0.006578947
        0.013157895     0.013157895     0.026315789     0.026315789     0.006578947
        0.019736842     0.013157895     0.019736842     0.006578947     0       0
        0.006578947     0       0.006578947     0       0.013157895
2004    1       1       2       0       1       30      31      35.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.057971014     0.086956522     0.072463768     0.072463768
        0.057971014     0.086956522     0.057971014     0.014492754     0.043478261     0
        0.130434783     0.072463768     0.014492754     0.014492754     0       0
        0.028985507     0.028985507     0.028985507     0.028985507     0       0.014492754
        0.014492754     0.072463768
2004    1       1       2       0       1       31      32      14.2    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.043478261     0       0       0       0       0.043478261     0
        0.086956522     0       0       0       0.086956522     0.086956522     0.043478261
        0.086956522     0       0.043478261     0.130434783     0       0.043478261     0
        0.043478261     0.043478261     0.217391304
2004    1       1       2       0       1       32      33      2.6     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.25    0       0.25
        0       0       0       0.5
2004    1       1       2       0       1       33      34      0.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1
2004    1       1       2       0       1       34      35      1.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.5     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.5
2005    1       1       1       0       1       16      19      0.1     0       0       0
        0.8     0.2     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       1       1       0       1       20      22      2.9     0       0       0
        0       0.818181818     0.181818182     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       1       1       0       1       23      25      13.8    0       0       0
        0       0.135416667     0.6875  0.15625 0.020833333     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       1       1       0       1       26      27      11.7    0       0       0
        0       0       0.459459459     0.486486486     0.027027027     0.027027027     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       1       1       0       1       27      28      12      0       0       0
        0       0       0.164179104     0.671641791     0.074626866     0.029850746
        0.029850746     0.029850746     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2005    1       1       1       0       1       28      29      25.4    0       0       0
        0       0       0.125   0.383928571     0.214285714     0.116071429     0.116071429
        0.017857143     0.017857143     0       0       0       0       0.008928571     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2005    1       1       1       0       1       29      30      29.3    0       0       0
        0       0       0       0.115853659     0.280487805     0.323170732     0.158536585
        0.06097561      0       0.012195122     0       0.012195122     0.024390244     0
        0       0       0       0       0       0       0       0.012195122     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0
2005    1       1       1       0       1       30      31      22.5    0       0       0
        0       0       0       0.012738854     0.21656051      0.152866242     0.25477707
        0.21656051      0.031847134     0.025477707     0.012738854     0       0.012738854
        0.025477707     0.012738854     0       0       0.012738854     0       0
        0.006369427     0       0       0       0       0       0       0.006369427     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2005    1       1       1       0       1       31      32      24.3    0       0       0
        0       0       0       0       0.043478261     0.108695652     0.065217391
        0.152173913     0.02173913      0.130434783     0.02173913      0.054347826
        0.086956522     0.152173913     0.032608696     0.043478261     0.02173913
        0.02173913      0       0       0       0.02173913      0       0       0       0
        0       0.02173913      0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
2005    1       1       1       0       1       32      33      17.1    0       0       0
        0       0       0       0       0       0.071428571     0.035714286     0.071428571
        0       0.035714286     0.035714286     0.035714286     0.071428571     0.035714286
        0.142857143     0.071428571     0.017857143     0       0.035714286     0.107142857
        0.035714286     0.107142857     0       0       0.035714286     0.035714286     0
        0.017857143     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2005    1       1       1       0       1       33      34      17      0       0       0
        0       0       0       0       0       0       0       0       0       0.057142857
        0.028571429     0.028571429     0       0       0.057142857     0.085714286
        0.057142857     0.085714286     0.028571429     0       0.142857143     0       0.028571429
        0       0       0.085714286     0.057142857     0       0.257142857     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2005    1       1       1       0       1       34      35      9       0       0       0
        0       0       0       0       0       0       0       0.055555556     0       0
        0       0       0       0       0.055555556     0       0.055555556     0.055555556
        0.055555556     0       0       0.055555556     0.055555556     0.055555556
        0.055555556     0       0.055555556     0.444444444     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0
2005    1       1       1       0       1       35      36      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0.076923077     0.076923077     0
        0.076923077     0.076923077     0       0       0.153846154     0       0
        0.538461538     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2005    1       1       1       0       1       36      37      4.8     0       0       0
        0       0       0       0       0.166666667     0       0       0       0       0
        0       0       0       0       0       0       0       0       0.166666667     0
        0       0       0       0       0       0       0       0.666666667     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       1       2       0       1       16      19      1.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.8     0.2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       1       2       0       1       20      22      4.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.060606061
        0.757575758     0.181818182     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       1       2       0       1       23      25      22.3    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.066037736     0.754716981     0.160377358     0.018867925     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2005    1       1       2       0       1       26      27      18.1    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.318181818     0.545454545     0.090909091     0.045454545     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2005    1       1       2       0       1       27      28      20.3    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.194805195     0.480519481     0.142857143     0.103896104     0.077922078     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2005    1       1       2       0       1       28      29      44.3    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.036036036     0.220720721     0.252252252     0.112612613     0.121621622
        0.108108108     0.018018018     0.009009009     0       0.027027027     0
        0.022522523     0.009009009     0.027027027     0.009009009     0       0.009009009
        0.009009009     0.009009009     0       0       0       0       0       0       0
2005    1       1       2       0       1       29      30      47.4    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.015873016     0.05952381      0.111111111     0.234126984     0.103174603
        0.079365079     0.047619048     0.015873016     0.055555556     0.015873016
        0.031746032     0.031746032     0.007936508     0.031746032     0.03968254
        0.03968254      0.007936508     0.015873016     0.023809524     0.015873016
        0.007936508     0       0       0.007936508     0       0
2005    1       1       2       0       1       30      31      32.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.016260163     0.016260163     0.113821138     0.048780488
        0.024390244     0.048780488     0.016260163     0       0.06504065      0.016260163
        0.048780488     0.032520325     0.032520325     0.048780488     0.032520325
        0.048780488     0.056910569     0.06504065      0.097560976     0.06504065
        0.016260163     0.048780488     0.016260163     0.024390244
2005    1       1       2       0       1       31      32      20.4    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.0625  0.03125 0       0.09375 0.03125 0       0.03125 0.046875 0
        0       0.015625 0.0625 0.0625  0       0.0625  0       0.0625  0       0.0625  0.03125
        0       0.03125 0       0.3125
2005    1       1       2       0       1       32      33      8.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.066666667
        0       0       0.066666667     0       0.1     0       0       0.066666667     0
        0.066666667     0.066666667     0       0       0       0       0.566666667
2005    1       1       2       0       1       33      34      1.7     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.2     0
        0       0       0.2     0       0.2     0       0       0       0       0       0
        0       0       0       0.4
2005    1       1       2       0       1       34      35      0.4     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.333333333     0.333333333     0       0       0       0       0
        0       0.333333333     0       0       0       0
```

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2005    1       1       2       0       1       35      36      0.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0
2005    1       1       2       0       1       36      37      0.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       1       1       0       1       20      22      0.1     0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       1       1       0       1       23      25      8.6     0       0       0
        0       0       0.228571429     0.6     0.114285714     0.057142857     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2006    1       1       1       0       1       26      27      19.4    0       0       0
        0       0       0.048780488     0.597560976     0.280487805     0.073170732     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2006    1       1       1       0       1       27      28      23.8    0       0       0
        0       0       0.037974684     0.35443038      0.443037975     0.126582278
        0.012658228     0.012658228     0       0       0       0       0       0
        0.012658228     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0
2006    1       1       1       0       1       28      29      40.6    0       0       0
        0       0       0.006329114     0.186708861     0.386075949     0.208860759
        0.088607595     0.047468354     0.041139241     0.003164557     0       0
        0.006329114     0.006329114     0       0.006329114     0       0.006329114     0
        0       0.006329114     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2006    1       1       1       0       1       29      30      40.1    0       0       0
        0       0       0       0.083333333     0.148148148     0.296296296     0.115740741
        0.12037037      0.074074074     0.046296296     0.027777778     0       0.023148148
        0       0.018518519     0.018518519     0.013888889     0.00462963      0       0
        0       0       0.009259259     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2006    1       1       1       0       1       30      31      40.7    0       0       0
        0       0       0       0.008547009     0.064102564     0.094017094     0.158119658
        0.162393162     0.141025641     0.132478632     0.025641026     0.02991453
        0.047008547     0.021367521     0.034188034     0.008547009     0.008547009
        0.025641026     0.004273504     0       0       0       0.008547009     0.004273504
        0       0       0       0.021367521     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       31      32      31.3    0       0       0
        0       0       0       0.013422819     0.013422819     0.053691275     0
        0.10738255      0.127516779     0.093959732     0.060402685     0.020134228
        0.053691275     0.040268456     0.073825503     0.127516779     0.053691275
        0.006711409     0.033557047     0.020134228     0.020134228     0       0.026845638
        0.013422819     0       0       0       0.040268456     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0
2006    1       1       1       0       1       32      33      22.5    0       0       0
        0       0       0       0       0       0       0       0.018348624     0.036697248
        0.027522936     0.036697248     0.064220183     0.100917431     0.036697248
        0.110091743     0.064220183     0.055045872     0       0.073394495     0.027522936
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        0.036697248     0.064220183     0.027522936     0.055045872     0.036697248
        0.018348624     0.036697248     0.073394495     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       1       1       0       1       33      34      14.5    0       0       0
        0       0       0       0       0       0       0       0       0       0.028985507
        0       0       0.028985507     0.014492754     0.028985507     0.028985507
        0.057971014     0.072463768     0       0.072463768     0       0.057971014
        0.144927536     0.057971014     0.057971014     0.101449275     0.057971014
        0.188405797     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2006    1       1       1       0       1       34      35      6.2     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.095238095     0       0       0.095238095     0       0       0
        0.095238095     0       0.095238095     0.095238095     0.047619048     0
        0.142857143     0.333333333     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0
2006    1       1       1       0       1       35      36      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0.2
        0       0       0       0       0.2     0.6     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       1       1       0       1       36      37      0.2     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       1       2       0       1       20      22      0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.5     0.5     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       1       2       0       1       23      25      14.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.31372549      0.333333333     0.352941176     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2006    1       1       2       0       1       26      27      34.2    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.027027027     0.371621622     0.304054054     0.189189189     0.054054054
        0.013513514     0.013513514     0.013513514     0.013513514     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       2       0       1       27      28      40.9    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.00990099      0.297029703     0.356435644     0.227722772     0.02970297
        0.00990099      0.04950495      0       0.00990099      0.00990099      0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       2       0       1       28      29      65.3    0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.122159091     0.306818182     0.215909091     0.079545455     0.133522727
        0.059659091     0.042613636     0       0.005681818     0.011363636     0
        0.005681818     0.005681818     0       0       0.005681818     0.005681818     0
        0       0       0       0       0       0       0
2006    1       1       2       0       1       29      30      55.6    0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.007042254     0.056338028     0.035211268     0.133802817     0.116197183
        0.154929577     0.126760563     0.077464789     0.042253521     0.028169014
        0.031690141     0.021126761     0.007042254     0.035211268     0.045774648
```

0.01056338 0 0.021126761 0.014084507 0.007042254 0.007042254
0.014084507 0 0.007042254 0 0
2006 1 1 2 0 1 30 31 35.1 0 0 0
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0 0 0 0 0 0 0 0 0 0 0
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0 0 0.022727273 0.015151515 0.037878788 0.060606061
0.159090909 0.022727273 0.060606061 0.007575758 0.068181818
0.083333333 0.090909091 0.045454545 0.03030303 0.015151515
0.037878788 0 0.03030303 0.015151515 0.075757576 0.022727273
0.015151515 0 0 0.083333333
2006 1 1 2 0 1 31 32 18.8 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0.028985507 0 0.028985507 0.043478261
0.028985507 0.072463768 0.014492754 0.086956522 0.028985507
0.014492754 0.072463768 0.057971014 0.043478261 0.043478261
0.101449275 0.072463768 0 0.057971014 0.028985507 0.057971014
0 0.028985507 0.086956522
2006 1 1 2 0 1 32 33 6.4 0 0 0
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0 0 0 0 0 0 0.095238095 0.047619048 0
0.047619048 0.047619048 0 0 0.047619048 0.095238095 0
0 0.047619048 0.095238095 0.047619048 0.047619048 0.095238095
0 0.19047619 0 0.095238095
2006 1 1 2 0 1 33 34 0.6 0 0 0
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2006 1 1 2 0 1 34 35 0.3 0 0 0
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0.2 0 0.2 0.2
2006 1 1 2 0 1 36 37 0.1 0 0 0
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0 0 0 1
2007 1 1 1 0 1 20 22 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0
0 0 0 0
2007 1 1 1 0 1 23 25 5 0 0 0
0 0 0.2 0.6 0.2 0 0 0 0 0 0
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0 0 0 0
2007 1 1 1 0 1 26 27 23 0 0 0
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0.060606061 0.03030303 0.03030303 0 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0
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0
2007 1 1 1 0 1 27 28 33 0 0 0
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0.04109589 0.04109589 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0.01369863 0
0 0 0 0 0 0 0 0 0 0 0
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0
2007 1 1 1 0 1 28 29 64 0 0 0
0 0 0 0.116666667 0.46 0.27 0.093333333 0.04 0

```
        0.013333333     0       0.003333333     0       0.003333333     0       0       0
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2007    1       1       1       0       1       29      30      62      0       0       0
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        0.070175439     0.057017544     0.035087719     0.01754386      0       0
        0.004385965     0       0.004385965     0       0       0.004385965     0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0
2007    1       1       1       0       1       30      31      46      0       0       0
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        0.201680672     0.12605042      0.12605042      0.042016807     0.025210084
        0.008403361     0.025210084     0.008403361     0       0       0       0.008403361
        0       0.008403361     0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0
2007    1       1       1       0       1       31      32      50      0       0       0
        0       0       0       0       0.008130081     0.073170732     0.048780488
        0.105691057     0.138211382     0.105691057     0.06504065      0.048780488
        0.040650407     0.048780488     0.040650407     0.040650407     0.032520325
        0.048780488     0.032520325     0.024390244     0.024390244     0.008130081
        0.024390244     0.008130081     0.008130081     0.008130081     0.016260163     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2007    1       1       1       0       1       32      33      38      0       0       0
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        0.034090909     0.079545455     0.034090909     0.068181818     0.102272727
        0.045454545     0.102272727     0.102272727     0.068181818     0.056818182
        0.034090909     0.056818182     0.045454545     0       0.011363636     0.034090909
        0.045454545     0.034090909     0.011363636     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0
2007    1       1       1       0       1       33      34      35      0       0       0
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        0.013888889     0.013888889     0.013888889     0       0.027777778     0.055555556
        0.055555556     0.083333333     0.069444444     0.083333333     0.013888889
        0.027777778     0.069444444     0.069444444     0.027777778     0.069444444
        0.055555556     0.027777778     0.166666667     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       1       1       0       1       34      35      26      0       0       0
        0       0       0       0       0       0       0       0       0       0       0.01754386
        0       0       0       0.01754386      0       0.035087719     0       0.035087719
        0.01754386      0.035087719     0       0.105263158     0.035087719     0.105263158
        0.035087719     0.070175439     0.070175439     0.421052632     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       1       1       0       1       35      36      6       0       0       0
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        0       0       0       0       0       0       0.071428571     0       0       0
        0.071428571     0.071428571     0.071428571     0       0.285714286     0.071428571
        0.357142857     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2007    1       1       1       0       1       36      37      9.2     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.111111111     0.111111111     0       0       0.777777778     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       1       2       0       1       23      25      15      0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.181818182     0.590909091     0.136363636     0.045454545     0.045454545     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2007    1       1       2       0       1       26      27      49.8    0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
```

```
        0.042253521     0.23943662      0.422535211     0.197183099     0.028169014
        0.056338028     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0.014084507     0       0
        0
2007    1       1       2       0       1       27      28      64.3    0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.189189189     0.405405405     0.261261261     0.081081081     0.036036036
        0.027027027     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
2007    1       1       2       0       1       28      29      95.9    0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.064935065     0.277056277     0.333333333     0.125541126     0.086580087
        0.038961039     0.038961039     0.008658009     0.008658009     0.004329004
        0.004329004     0.004329004     0.004329004     0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       1       2       0       1       29      30      85.3    0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0.023668639     0.071005917     0.112426036     0.124260355     0.136094675
        0.106508876     0.088757396     0.023668639     0.041420118     0.023668639
        0.023668639     0.029585799     0.029585799     0.035502959     0.029585799
        0.029585799     0.01183432      0.00591716      0.00591716      0.017751479
        0.01183432      0       0       0.00591716      0.01183432
2007    1       1       2       0       1       30      31      57.7    0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.024793388     0.033057851     0.05785124      0.090909091
        0.05785124      0.090909091     0.082644628     0.049586777     0.024793388
        0.033057851     0.066115702     0.05785124      0.024793388     0.049586777
        0.024793388     0.049586777     0.05785124      0.008264463     0.041322314
        0.008264463     0.016528926     0.016528926     0.016528926     0.016528926
2007    1       1       2       0       1       31      32      29.9    0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.01754386      0       0.01754386      0       0.070175439
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        0.052631579     0.035087719     0.052631579     0       0.070175439     0.01754386
        0.052631579     0.140350877     0.01754386      0.035087719     0.052631579
        0.01754386      0.210526316
2007    1       1       2       0       1       32      33      19.4    0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.04    0.04    0.04    0.04    0       0       0       0.08    0.04
        0.04    0       0       0.68
2007    1       1       2       0       1       33      34      2.4     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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2007    1       1       2       0       1       34      35      0.1     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1
2008    1       1       1       0       1       16      19      1       0       0       0
        0.125   0.875   0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       1       1       0       1       20      22      2       0       0       0
        0       0.5     0.375   0       0.125   0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
```

```
2008    1       1       1       0       1       23      25      7       0       0       0
        0       0       0.1     0.5     0.3     0.1     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       1       1       0       1       26      27      16      0       0       0
        0       0       0       0.125   0.375   0.25    0.208333333     0.041666667     0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       1       1       0       1       27      28      28      0       0       0
        0       0       0       0.066666667     0.3     0.416666667     0.15    0.016666667
        0.033333333     0.016666667     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2008    1       1       1       0       1       28      29      53      0       0.007874016
        0       0       0       0       0.019685039     0.216535433     0.42519685
        0.216535433     0.086614173     0.023622047     0       0       0       0.003937008
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0
2008    1       1       1       0       1       29      30      53      0       0       0
        0       0       0       0.00456621      0.118721461     0.296803653     0.264840183
        0.159817352     0.063926941     0.03196347      0.02283105      0.01826484      0
        0.00456621      0       0.00456621      0       0       0.00456621      0.00456621
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       1       1       0       1       30      31      47      0       0       0
        0       0       0       0       0.035714286     0.125   0.151785714     0.142857143
        0.098214286     0.142857143     0.133928571     0.071428571     0.035714286     0
        0.008928571     0       0.008928571     0.026785714     0       0       0.008928571
        0       0       0       0       0.008928571     0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       1       1       0       1       31      32      32      0       0       0
        0       0       0       0       0       0.011111111     0.011111111     0.155555556
        0.066666667     0.088888889     0.177777778     0.044444444     0.044444444
        0.077777778     0.033333333     0.033333333     0.011111111     0.044444444
        0.022222222     0.022222222     0.011111111     0.011111111     0.011111111
        0.033333333     0.022222222     0.011111111     0.022222222     0.033333333     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2008    1       1       1       0       1       32      33      28      0       0       0
        0       0       0       0       0       0       0.013888889     0.055555556
        0.041666667     0.027777778     0.041666667     0.013888889     0.027777778
        0.041666667     0.097222222     0.041666667     0.069444444     0.069444444
        0.055555556     0.083333333     0.041666667     0.041666667     0.027777778
        0.013888889     0.013888889     0.041666667     0.013888889     0.125   0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       1       1       0       1       33      34      28      0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.02739726      0.02739726      0.068493151     0.02739726      0       0.02739726
        0.04109589      0.02739726      0.04109589      0.082191781     0.082191781
        0.02739726      0.082191781     0.054794521     0.095890411     0.054794521
        0.054794521     0.178082192     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0
2008    1       1       1       0       1       34      35      17      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.027027027     0.027027027     0.081081081     0       0.027027027
        0.027027027     0.027027027     0.054054054     0.027027027     0.054054054
        0.081081081     0.027027027     0.054054054     0.081081081     0.405405405     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
```

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2008    1       1       1       0       1       35      36      12      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0.055555556     0.055555556     0
        0       0.055555556     0.166666667     0       0       0       0       0.666666667
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2008    1       1       1       0       1       36      37      2.4     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       1       2       0       1       11      15      0.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       1       2       0       1       16      19      0.4     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.333333333
        0.666666667     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       1       2       0       1       20      22      2.4     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0.6
        0.4     0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       1       2       0       1       23      25      9.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.285714286     0.571428571     0       0.142857143     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       1       2       0       1       26      27      33.2    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.019230769     0.173076923     0.326923077     0.288461538     0.192307692     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2008    1       1       2       0       1       27      28      51.4    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.048076923     0.326923077     0.375   0.182692308     0.048076923
        0.019230769     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
2008    1       1       2       0       1       28      29      89.2    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.024193548     0.161290323     0.370967742     0.189516129     0.112903226
        0.032258065     0.048387097     0.016129032     0.008064516     0.004032258
        0.012096774     0       0       0       0.004032258     0.004032258     0       0
        0.004032258     0       0.004032258     0       0.004032258     0       0
2008    1       1       2       0       1       29      30      71.2    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.00621118      0.01863354      0.080745342     0.167701863     0.093167702
        0.155279503     0.111801242     0.093167702     0.062111801     0.049689441
        0.02484472      0.01242236      0.00621118      0.01863354      0.00621118
        0.01863354      0.01863354      0.01863354      0.01242236      0.00621118
        0.00621118      0       0.00621118      0       0.00621118
2008    1       1       2       0       1       30      31      54.2    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.009708738     0.029126214     0.077669903     0.038834951
        0.048543689     0.155339806     0.058252427     0.019417476     0.048543689
        0.067961165     0.009708738     0.067961165     0.048543689     0.048543689
```

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        0.019417476     0.029126214     0.019417476     0.038834951     0.009708738
        0.019417476     0.029126214     0.029126214     0.009708738     0.067961165
2008    1       1       2       0       1       31      32      22.6    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.041666667     0.020833333     0.041666667
        0.020833333     0.041666667     0.020833333     0.020833333     0.020833333
        0.020833333     0.041666667     0.083333333     0.041666667     0       0.041666667
        0.083333333     0.083333333     0       0.020833333     0.020833333     0.0625
        0.041666667     0.229166667
2008    1       1       2       0       1       32      33      12.9    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.047619048     0       0       0       0       0       0.095238095
        0       0       0       0       0       0       0       0.047619048     0.047619048
        0       0.047619048     0.047619048     0.047619048     0.047619048     0.047619048     0.095238095
        0.095238095     0.380952381
2008    1       1       2       0       1       33      34      2.6     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1
2008    1       1       2       0       1       34      35      1.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0.5     0       0       0
        0       0       0       0.5
2004    1       1       0       1       1       6       10      0.3     0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       1       0       1       1       11      15      2.0     0       0
        0.360267704     0.639732296     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       1       0       1       1       16      19      6.9     0       0       0
        0.18687718      0.633465624     0.015283836     0.16437336      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2004    1       1       0       1       1       20      22      23.5    0       0       0
        0.028177033     0.815321692     0.079759691     0.031086902     0       0.006389873
        0.012065037     0       0       0       0       0.027199771     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2004    1       1       0       1       1       23      25      11.9    0       0       0
        0       0.459105107     0.433720654     0.094300618     0.012873622     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2004    1       1       0       1       1       26      27      6.6     0       0       0
        0       0       0.855328304     0.019638039     0.007517975     0.109997706     0
        0.007517975     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2004    1       1       0       1       1       28      28      9.6     0       0       0
        0.008361935     0       0.008361935     0.111673272     0.206642815     0.082251627
        0.025085806     0       0       0       0       0.55762261      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
```

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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2004    1       1       0       1       1       29      29      9.3     0       0       0
        0.006191144     0       0       0.071905774     0.241350402     0.153387248
        0.089539286     0       0       0.412861571     0       0.006191144     0
        0.006191144     0.012382288     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       1       0       1       1       30      30      5.6     0       0       0
        0       0       0       0.112206577     0       0.416327063     0       0
        0.15298569      0.014413174     0       0.014413174     0       0.014413174     0
        0.079015935     0.167398864     0       0.014413174     0       0       0       0
        0       0.014413174     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       1       0       1       1       31      31      2.0     0       0       0
        0       0       0       0       0.683483227     0.129163295     0       0
        0.129163295     0       0       0       0       0.037691579     0       0
        0.010249302     0       0       0.010249302     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2004    1       1       0       1       1       32      32      1.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.499759277     0       0       0       0       0       0       0       0
        0       0       0.420927421     0       0       0       0.079313303     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       1       0       1       1       33      33      1.7     0       0       0
        0       0       0       0       0       0       0       0       0       0.135301967
        0       0       0.039482925     0       0       0       0       0       0       0
        0       0       0.039482925     0       0       0       0.715966752     0.06976543
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2004    1       1       0       1       1       35      35      0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       1       0       1       1       1       5       0.6     0       0.5     0
        0       0.5     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       1       0       1       1       6       10      6.5     0       0.902615215
        0.097384785     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       1       0       1       1       11      15      28.0    0       0.027508021
        0.925548717     0.041075355     0       0.005867908     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2005    1       1       0       1       1       16      19      12.5    0       0
        0.181179359     0.694366592     0.058753328     0.015530433     0.050170288     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
2005    1       1       0       1       1       20      22      14.6    0       0       0
        0       0.108146403     0.837391598     0.003658727     0       0       0
        0.050803272     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
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2005    1       1       0       1       1       23      25      28.3    0       0       0
        0       0.235490856     0.656550272     0.064892281     0.022111163     0.014317768
        0.00319436      0       0       0       0.0034433       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2005    1       1       0       1       1       26      27      17.0    0       0       0
        0       0       0.525418748     0.251239335     0.136687013     0.062880344     0
        0.003728904     0       0       0       0       0       0.010022829     0
        0       0.010022829     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2005    1       1       0       1       1       28      28      14.6    0       0       0
        0       0       0.008942898     0.425634874     0.042357471     0.315330958
        0.178824073     0.006614778     0.022294948     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
2005    1       1       0       1       1       29      29      15.8    0       0       0
        0       0       0       0.021200933     0.28160237      0.27102761      0.015048084
        0.077760663     0.003762021     0.263111014     0.057176617     0.003762021     0
        0.003667656     0       0       0       0       0       0       0       0
        0.001881011     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0
2005    1       1       0       1       1       30      30      8.0     0       0       0
        0       0       0       0.004005645     0.295551827     0       0.028039518
        0.324406324     0.017602319     0       0       0.004005645     0.008011291     0
        0.299557472     0       0.010808667     0.004005645     0       0       0
        0.004005645     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       1       0       1       1       31      31      1.8     0       0       0
        0       0       0       0       0       0       0.138378637     0.16724949
        0.083624745     0       0       0       0       0.145475333     0       0       0
        0       0       0       0       0       0       0.465271795     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
2005    1       1       0       1       1       32      32      0.6     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.5     0       0       0       0       0.5     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       1       0       1       1       33      33      1.2     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.776895387     0       0       0.223104613     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       1       0       1       1       34      34      0.3     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       1       0       1       1       36      36      0.3     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       1       0       1       1       37      37      0.3     0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
```

```
2004    1       2       3       0       1       1       -1      213     0.00110392
        0.037170243     0.02591038      0.031416999     0.173777906     0.13906161
        0.024789484     0.004510081     0.003999326     0.003803302     0       0
        0.000139717     0       0       0       0       0.00E+00 0.00E+00 0     0       0
        0       0.00E+00 0      0       0.000275636     0       0       0.000132646     0
        0.00110392      0.055804462     0.027995229     0.033750929     0.238206031
        0.151271425     0.023363925     0.005680731     0.009593011     0.003336342
        0.000902929     0.000810247     0       0       0.000255318     0.000252794
        0.000252794     9.31E-05 9.31E-05 0      0.000255318     0.000524036     0       9.31E-05
        0.000269875     0       0       0       0       0       0
2001    1       3       1       0       1       14      14      1.0     0       0
        0.833333333     0.166666667     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       15      15      1.5     0       0
        0.888888889     0.111111111     0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       16      16      2.6     0       0       1
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0
2001    1       3       1       0       1       17      17      1.4     0       0       1
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0
2001    1       3       1       0       1       18      18      0.7     0       0       0.5
        0.5     0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       19      19      0.3     0       0       0.5
        0.5     0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       20      20      0.5     0       0       0
        0.666666667     0.333333333     0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       21      21      0.2     0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       22      22      0.3     0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       23      23      0.3     0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
```

```
2001    1       3       1       0       1       24      24      1.0     0       0       0
        0.166666667     0.666666667     0.166666667     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       25      25      0.2     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       26      26      1.0     0       0       0
        0       0.166666667     0.5     0.333333333     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       27      27      1.5     0       0       0
        0       0       0.444444444     0.555555556     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       28      28      3.1     0       0       0
        0       0.055555556     0.166666667     0.777777778     0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       29      29      1.2     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       30      30      0.2     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       31      31      0.2     0       0       0
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        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       32      32      0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0.5     0       0       0.5
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       33      33      0.2     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       2       0       1       14      14      0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.833333333
        0.166666667     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       2       0       1       15      15      1.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.888888889
```

	0.111111111	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0			
2001	1	3	2	0	1	16	16	2.2	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2001	1	3	2	0	1	17	17	1.2	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2001	1	3	2	0	1	18	18	0.2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0.5	0.5	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2001	1	3	2	0	1	19	19	0.3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0.5	0.5	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2001	1	3	2	0	1	20	20	0.2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0.666666667	
	0.333333333	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0					
2001	1	3	2	0	1	21	21	0.2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2001	1	3	2	0	1	22	22	0.9	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2001	1	3	2	0	1	23	23	0.9	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2001	1	3	2	0	1	24	24	0.3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0.166666667	
	0.666666667	0.166666667	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0				
2001	1	3	2	0	1	25	25	0.5	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2001	1	3	2	0	1	26	26	1.5	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	
	0.166666667	0.5	0.333333333	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0				

```
2001    1       3       2       0       1       27      27      2.0     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.444444444     0.555555556     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2001    1       3       2       0       1       28      28      1.0     0       0       0
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        0       0       0       0       0       0       0       0       0       0
        0.055555556     0.166666667     0.777777778     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2001    1       3       2       0       1       29      29      0.3     0       0       0
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        0.285714286     0.571428571     0.142857143     0       0       0       0       0
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2001    1       3       2       0       1       31      31      0.2     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0
2001    1       3       2       0       1       32      32      0.2     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.5     0       0       0.5     0       0
        0       0       0       0
2003    1       4       1       0       1       13      13      0.4     0       0       0
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        0       0       0       0
2003    1       4       1       0       1       14      14      0.4     0       0       0
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        0       0       0       0
2003    1       4       1       0       1       16      16      0.8     0       0       0
        1       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0
2003    1       4       1       0       1       17      17      1       0       0       0
        0.212571178     0.787428822     0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2003    1       4       1       0       1       18      18      2       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2003    1       4       1       0       1       19      19      3.2     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2003    1       4       1       0       1       20      20      2.4     0       0       0
        0.183215095     0.816784905     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2003    1       4       1       0       1       21      21      4.6     0       0       0
        0.073463623     0.746708151     0.179828225     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2003    1       4       1       0       1       22      22      4.8     0       0       0
        0       0.544643034     0.455356966     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2003    1       4       1       0       1       23      23      6.7     0       0       0
        0       0.67802646      0.063755877     0.169406616     0.088811047     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2003    1       4       1       0       1       24      24      6.4     0       0       0
        0       0.89912206      0.024120629     0.076757311     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2003    1       4       1       0       1       25      25      4       0       0       0
        0       0.556946009     0.033135541     0.047085469     0.362832982     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2003    1       4       1       0       1       26      26      2       0       0       0
        0       0.088378937     0.005662567     0.891390986     0.014567511     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2003    1       4       1       0       1       27      27      2.8     0       0       0
        0       0       0.040315059     0.162626956     0.747023655     0       0.05003433
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2003    1       4       1       0       1       28      28      7.5     0       0       0
        0       0       0.022971224     0.002684482     0.323296895     0.316027846
        0.022807441     0.312212111     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2003    1       4       1       0       1       29      29      9.1     0       0       0
        0       0       0       0       0.217587058     0.216047018     0.291179346
        0.203878455     0.057003328     0.007152397     0       0       0       0       0
        0.007152397     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
2003    1       4       1       0       1       30      30      7.5     0       0       0
        0       0       0       0       0.289671331     0.298373979     0.298275078
        0.112521237     0       0       0       0       0.001158375     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
2003    1       4       1       0       1       31      31      3.6     0       0       0
        0       0       0       0       0       0       0.14586162      0.291723239
        0.008759029     0       0.519770271     0       0       0.005466247     0       0
        0       0.013269972     0       0       0.015149623     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0
2003    1       4       1       0       1       32      32      2.8     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.039949172     0       0       0.109045287     0.725785397     0       0       0
        0.085270972     0       0       0       0       0       0       0       0.039949172
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2003    1       4       1       0       1       33      33      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.015847998     0.348397818     0       0.005683071     0       0
        0       0.113011522     0       0.003826117     0       0       0       0
        0.513233474     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2003    1       4       1       0       1       34      34      3.6     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       4       1       0       1       35      35      0.8     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       4       1       0       1       36      36      0.4     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       4       2       0       1       13      13      0.4     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       4       2       0       1       14      14      0.8     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       4       2       0       1       16      16      0.8     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       4       2       0       1       17      17      4.2     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.012327489
        0.831726137     0.155946374     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2003    1       4       2       0       1       18      18      8.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.005606495
        0.815548663     0.178844842     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2003    1       4       2       0       1       19      19      7.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.792886829
        0.207113171     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2003    1       4       2       0       1       20      20      4.8     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0.161191626
        0.650360042       0.188448332       0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0
2003    1         4         2         0         1         21        21        8.1       0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0.169471087
        0.756778372       0.036752637       0         0.036997904       0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0
2003    1         4         2         0         1         22        22        9.5       0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0.017824367
        0.567418934       0.358750509       0.05600619        0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0
2003    1         4         2         0         1         23        23        9.1       0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0
        0.678045057       0.195376509       0.023562212       0.103016222       0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0
2003    1         4         2         0         1         24        24        9.1       0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0.132904829
        0.644800031       0.086953516       0.006233986       0.04303588        0.04303588        0         0
        0.04303588        0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
2003    1         4         2         0         1         25        25        4         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0.33795271        0.496432007       0.086739145       0.078876138       0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0
2003    1         4         2         0         1         26        26        4.4       0         0         0
        0         0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0.177017796       0.08225928        0.740722925       0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0
2003    1         4         2         0         1         27        27        4         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0.016601088       0.273203944       0.123325523       0.400389053       0         0.186480393
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0
2003    1         4         2         0         1         28        28        13.1      0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0.005885364       0.027151368       0.358929411       0.473567845       0.035174449
        0.00288406        0.003818979       0.012786466       0.066111406       0.003062013       0
        0         0         0.001357606       0.009271032       0         0         0         0         0
        0         0         0         0         0         0         0
2003    1         4         2         0         1         29        29        9.5       0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0.015412305       0.312557301       0.395787675       0.065646092       0
        0.030445877       0.030445877       0         0.035476351       0         0         0
        0.026668384       0.060891755       0         0         0.026668384       0         0         0
        0         0         0         0         0
2003    1         4         2         0         1         30        30        1.6       0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0.041597828       0.01520158        0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0.116001063       0.827199529       0         0         0
2003    1         4         2         0         1         31        31        2         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
```

	0	0	0	0	0	0	0	0	0	0	
	0.024704903		0	0	0.059974129		0	0	0	0	0
	0	0	0	0	0	0	0.915320967				
2003	1	4	2	0	1	32	32	0.4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1							
2003	1	4	2	0	1	34	34	0.4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1							
2003	1	4	2	0	1	35	35	0.4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1							
2004	1	4	1	0	1	14	14	0.3	0	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2004	1	4	1	0	1	16	16	0.5	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2004	1	4	1	0	1	18	18	0.5	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2004	1	4	1	0	1	19	19	0.5	0	0	0
	0.943697958		0	0.056302042		0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2004	1	4	1	0	1	20	20	2	0	0	0
	0.04539174		0.876011182		0.078597078		0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0				
2004	1	4	1	0	1	21	21	1.9	0	0	0
	0.09860085		0.247040797		0.654358352		0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0				
2004	1	4	1	0	1	22	22	5.6	0	0	0
	0.020110928		0.587097342		0.39279173		0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0				
2004	1	4	1	0	1	23	23	3.3	0	0	0
	0	0.661351129		0.338648871		0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					

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2004    1       4       1       0       1       24      24      3.1     0       0       0
        0       0.88868454      0.11131546      0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       1       0       1       25      25      4.4     0       0       0
        0       0.330646891     0.441696203     0.227656906     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       1       0       1       26      26      2.8     0       0       0
        0       0.178160064     0.673145214     0.078727823     0.069966898     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       1       0       1       27      27      3.6     0       0       0
        0       0.105873815     0.894126185     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       1       0       1       28      28      3.3     0       0       0
        0       0       0.551566811     0.157192746     0.291240443     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       1       0       1       29      29      1.3     0       0       0
        0       0       0.358744937     0       0       0.205273816     0.435981247     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       1       0       1       30      30      1       0       0       0
        0       0       0       0       0.133310654     0.27588043      0.314928486     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.27588043      0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2004    1       4       1       0       1       31      31      0.8     0       0       0
        0       0       0       0       0       0.173121908     0       0       0       0
        0       0       0.440764278     0       0.386113814     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       1       0       1       32      32      0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       4       1       0       1       33      33      0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       4       1       0       1       34      34      0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       4       2       0       1       16      16      0.8     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.484255131
```

```
        0.484255131     0.031489739     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2004    1       4       2       0       1       17      17      0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       4       2       0       1       18      18      1.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.87756465
        0.12243535      0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       2       0       1       19      19      3.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.584702019
        0.395644204     0       0       0.019653776     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       20      20      3.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.212153373
        0.610365711     0.177480916     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       21      21      2.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.893073668     0.106926332     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       22      22      3.6     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.92174904      0.07825096      0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       23      23      6.2     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.885632081     0.114367919     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       24      24      5.4     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.870944867     0.129055133     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       25      25      3.8     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.60277404      0.39722596      0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       26      26      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.244230143     0.755769857     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       27      27      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.096206048     0.903793952     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
```

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2004    1       4       2       0       1       28      28      2.6     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.272890341     0.358046478     0.059811184     0       0       0       0
        0.154625999     0       0       0.154625999     0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2004    1       4       2       0       1       29      29      3.8     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.046881482     0.139220567     0.186404763     0       0.335413093     0
        0       0       0       0.119359143     0       0.119359143     0       0       0
        0       0.053361811     0       0       0       0       0       0       0       0
2004    1       4       2       0       1       30      30      3.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.044365577     0       0       0       0       0
        0.112953709     0.050498138     0.158475772     0.112953709     0       0
        0.047813816     0       0       0       0       0.112953709     0.098948552
        0       0.049134757     0.211902261
2004    1       4       2       0       1       31      31      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.405725224     0.20147046      0       0       0       0       0.185743496
        0       0       0       0       0       0       0.20706082
2004    1       4       2       0       1       32      32      0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0       0
2004    1       4       2       0       1       33      33      0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1
2005    1       4       1       0       1       9       9       0.3     0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       1       0       1       13      13      0.9     0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       1       0       1       15      15      0.3     0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       1       0       1       16      16      0.6     0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       1       0       1       17      17      0.9     0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       1       0       1       18      18      0.9     0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       1       0       1       19      19      0.3     0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       1       0       1       20      20      0.9     0       0       0
        0.227802859     0.162528217     0.609668924     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       21      21      2.1     0       0       0
        0       0.563026993     0.436973007     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       22      22      3.6     0       0       0
        0.037602152     0.076910465     0.697691815     0.187795568     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2005    1       4       1       0       1       23      23      4.1     0       0       0
        0       0.102451333     0.622778941     0.274769725     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       24      24      2.4     0       0       0
        0       0.118777533     0.881222467     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       25      25      5.3     0       0       0
        0       0.033482645     0.706230586     0.260286769     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       26      26      3.9     0       0       0
        0       0       0.197655987     0.802344013     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       27      27      3.9     0       0       0
        0       0.011948731     0.122174432     0.851913305     0.013963531     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2005    1       4       1       0       1       28      28      5.3     0       0       0
        0       0       0.006869349     0.973081321     0.02004933      0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       29      29      7.4     0       0       0
        0       0       0.003911794     0.035766967     0.211125756     0.563840711     0
        0.185354772     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
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2005    1       4       1       0       1       30      30      3       0       0       0
        0       0       0       0       0       0.011745258     0.492253363     0.007319419
        0.48868196      0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2005    1       4       1       0       1       31      31      2.1     0       0       0
        0       0       0       0       0       0.482631182     0       0       0.49173332
        0       0       0.004934922     0       0       0       0       0.010350288     0
        0       0       0       0       0.010350288     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2005    1       4       1       0       1       32      32      1.8     0       0       0
        0       0       0       0       0       0       0       0       0       0.158296565
        0.249675577     0       0       0       0       0       0       0       0       0
        0       0       0.264245754     0.06353635      0       0       0       0.264245754
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2005    1       4       1       0       1       33      33      2.4     0       0       0
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        0.104123346     0.103768904     0       0       0.104123346     0       0       0
        0.104123346     0.104123346     0       0.218383743     0       0       0       0
        0       0.104123346     0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0
2005    1       4       1       0       1       34      34      0.9     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.202854183     0.594291633     0.202854183     0       0
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2005    1       4       1       0       1       35      35      0.3     0       0       0
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        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0
2005    1       4       1       0       1       36      36      0.3     0       0       0
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        0       0       0       0
2005    1       4       2       0       1       10      10      0.3     0       0       0
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        0       0       0       0       0       0       0       0       1       0       0
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        0       0       0       0
2005    1       4       2       0       1       11      11      0.6     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       2       0       1       12      12      0.9     0       0       0
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        0       0       0       0
2005    1       4       2       0       1       13      13      0.9     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       2       0       1       14      14      0.9     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0
2005    1       4       2       0       1       15      15      0.6     0       0       0
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        0.399592442     0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0
2005    1       4       2       0       1       16      16      0.6     0       0       0
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        0       0       0       0
2005    1       4       2       0       1       17      17      0.9     0       0       0
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        0       0       0       0       0       0       0       0       0       1       0
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        0       0       0       0
2005    1       4       2       0       1       18      18      0.9     0       0       0
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        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       2       0       1       19      19      1.2     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0
2005    1       4       2       0       1       20      20      0.9     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       2       0       1       21      21      1.5     0       0       0
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        0       0       0       0       0       0       0       0       0       0
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2005    1       4       2       0       1       22      22      4.4     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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2005    1       4       2       0       1       23      23      5       0       0       0
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2005    1       4       2       0       1       24      24      6.2     0       0       0
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2005    1       4       2       0       1       25      25      7.1     0       0       0
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        0       0       0       0       0       0
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2005    1       4       2       0       1       26      26      5.6     0       0       0
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        0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0
2005    1       4       2       0       1       27      27      4.7     0       0       0
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        0       0       0       0       0       0       0
2005    1       4       2       0       1       28      28      5.9     0       0       0
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        0.013132114     0.104874396     0       0       0       0       0       0       0
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        0
2005    1       4       2       0       1       29      29      6.2     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0.006935176     0.77739463      0       0       0.015089423     0.007544711
        0.018797144     0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       2       0       1       30      30      4.7     0       0       0
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        0       0.015843003     0       0.005300169     0.008589627     0.017179254     0
        0       0.840058284     0       0       0       0       0       0.035723997     0
        0       0.008589627
2005    1       4       2       0       1       31      31      3       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0.143403546     0.036518096     0.057736918     0.057736918     0       0       0
        0       0.206253152
2005    1       4       2       0       1       32      32      0.3     0       0       0
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2006    1       4       1       0       1       11      11      0.6     0       0       1
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        0       0       0       0
2006    1       4       1       0       1       12      12      0.3     0       0       1
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2006    1       4       1       0       1       13      13      1.8     0       0       1
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2006    1       4       1       0       1       14      14      0.7     0       0       1
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
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2006    1       4       1       0       1       15      15      1.5     0       0
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2006    1       4       1       0       1       16      16      2.7     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       1       0       1       17      17      2.9     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0
2006    1       4       1       0       1       18      18      2.4     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2006    1       4       1       0       1       19      19      2.4     0       0       0
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2006    1       4       1       0       1       20      20      3.8     0       0       0
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2006    1       4       1       0       1       21      21      2.1     0       0       0
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2006    1       4       1       0       1       22      22      1.2     0       0       0
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2006    1       4       1       0       1       23      23      2.7     0       0       0
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2006    1       4       1       0       1       24      24      1.2     0       0       0
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2006    1       4       1       0       1       25      25      7.1     0       0       0
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2006    1       4       1       0       1       26      26      4.7     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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2006    1       4       1       0       1       27      27      5.3     0       0       0
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2006    1       4       1       0       1       28      28      12.7    0       0       0
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2006    1       4       1       0       1       29      29      7.1     0       0       0
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2006    1       4       1       0       1       30      30      4.1     0       0       0
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2006    1       4       1       0       1       31      31      2.4     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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2006    1       4       1       0       1       32      32      0.6     0       0       0
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        0.522839506     0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0
2006    1       4       1       0       1       33      33      0.3     0       0       0
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        0       0       0       0
2006    1       4       1       0       1       34      34      0.3     0       0       0
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        0       0       0       0
2006    1       4       2       0       1       13      13      1.8     0       0       0
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        0       0       0       0       0       0       0       0       0.727969689
        0.272030311     0       0       0       0       0       0       0       0       0
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2006    1       4       2       0       1       14      14      1.3     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0
2006    1       4       2       0       1       15      15      1.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.437521414
        0.562478586     0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0
```

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2006    1       4       2       0       1       16      16      0.9     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       2       0       1       17      17      2.9     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       2       0       1       18      18      2.7     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0.872553462
        0.127446538     0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0
2006    1       4       2       0       1       19      19      2.1     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.441803291
        0.558196709     0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0
2006    1       4       2       0       1       20      20      1.2     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.45723264
        0.54276736      0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0
2006    1       4       2       0       1       21      21      1.8     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       2       0       1       22      22      4.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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2006    1       4       2       0       1       23      23      3.5     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
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2006    1       4       2       0       1       24      24      4.7     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0
2006    1       4       2       0       1       25      25      5.3     0       0       0
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2006    1       4       2       0       1       26      26      5.9     0       0       0
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        0       0       0       0       0       0
2006    1       4       2       0       1       27      27      4.4     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
```

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        0       0.6272312       0.354399028     0.018369772     0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2006    1       4       2       0       1       28      28      15.9    0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0.06201666      0.280363386     0.594659306     0.032168199     0.012394501
        0.018397949     0       0       0       0       0       0       0       0       0
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2006    1       4       2       0       1       29      29      9.4     0       0       0
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        0.336938222     0.050457703     0       0.043122959     0       0       0
        0.016221997     0       0.029051474     0       0       0       0       0       0
        0       0       0
2006    1       4       2       0       1       30      30      3.2     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0.01413057      0.304215796     0       0       0       0       0.032505895     0
        0       0       0.015768897     0       0       0       0.015768897     0       0
        0
2006    1       4       2       0       1       31      31      0.6     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0.051834575     0       0       0
2006    1       4       2       0       1       32      32      0.3     0       0       0
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        0       0       0       1
2007    1       4       1       0       1       12      12      0.3     0       0       1
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0
2007    1       4       1       0       1       13      13      0.5     0       0       0
        1       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0
2007    1       4       1       0       1       14      14      0.3     0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       1       0       1       15      15      0.8     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       1       0       1       16      16      2.2     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       1       0       1       17      17      3.5     0       0       0
        0.75089841      0.24910159      0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       1       0       1       18      18      2.4     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       1       0       1       19      19      1.6     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       1       0       1       20      20      2.2     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       1       0       1       21      21      2.2     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       1       0       1       22      22      3.2     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       1       0       1       23      23      1.6     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       1       0       1       24      24      3.2     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2007    1       4       1       0       1       25      25      3.2     0       0       0
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2007    1       4       1       0       1       26      26      5.1     0       0       0
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2007    1       4       1       0       1       27      27      4.9     0       0       0
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2007    1       4       1       0       1       28      28      10.8    0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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2007    1       4       1       0       1       29      29      6.5     0       0       0
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        0.031056663     0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2007    1       4       1       0       1       30      30      4.1     0       0       0
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        0.044232494     0.202449739     0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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2007    1       4       1       0       1       31      31      2.4     0       0       0
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        0.071520626     0.063549201     0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2007    1       4       1       0       1       32      32      2.2     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
2007    1       4       1       0       1       34      34      0.5     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       1       0       1       35      35      0.5     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0
2007    1       4       2       0       1       12      12      0.3     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       2       0       1       13      13      0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       2       0       1       14      14      0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2007    1       4       2       0       1       15      15      1.4     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.63437245
        0.266770034     0.098857516     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2007    1       4       2       0       1       16      16      3.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.753569797
        0.246430203     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       2       0       1       17      17      1.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.488951441
        0.511048559     0       0       0       0       0       0       0       0       0
```

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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       2       0       1       18      18      2.4     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.135357383
        0.731770773     0.132871844     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       2       0       1       19      19      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.078257538
        0.809931319     0.111811142     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       2       0       1       20      20      3.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.085305518
        0.530811773     0.383882709     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       2       0       1       21      21      3.2     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.434083394     0.465319784     0.100596822     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       2       0       1       22      22      1.6     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       2       0       1       23      23      1.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.139057086     0.230411815     0       0.630531099     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       2       0       1       24      24      4.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.055892881     0.275209458     0.225574196     0.443323465     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2007    1       4       2       0       1       25      25      3.8     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.109634909     0.074954616     0.296691992     0.518718483     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2007    1       4       2       0       1       26      26      5.7     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.412007795     0.427028414     0.16096379      0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       2       0       1       27      27      6.2     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.028593585     0.712106525     0.146344116     0.084504045     0.028451729
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2007    1       4       2       0       1       28      28      14.9    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.065566277     0.327034147     0.460931035     0.0261756       0.007250961
        0.036695668     0.038173156     0.038173156     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
```

```
2007    1       4       2       0       1       29      29      7.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.01154262      0.077120536     0.075125558     0.080229841     0.061455427
        0.118031529     0.266706194     0.009852818     0.193577358     0       0.106358119
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       4       2       0       1       30      30      4.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.176228447     0.020717844     0.063821464     0.181525623
        0.210608478     0.025049757     0       0.02013108      0.046631449     0.063821464
        0       0       0.127642929     0       0       0       0       0.063821464     0
        0       0       0       0
2007    1       4       2       0       1       31      31      2.2     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.084948392     0       0.025974605     0       0.106579045     0.261684117
        0.261684117     0       0       0       0.217175317     0       0       0
        0.041954407
2007    1       4       2       0       1       32      32      0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1
2008    1       4       1       0       1       14      14      0.3     0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       1       0       1       15      15      4.6     0       0       0
        0.961749541     0.038250459     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       4       1       0       1       16      16      5.1     0       0       0
        0.927687181     0.072312819     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       4       1       0       1       17      17      3.1     0       0       0
        0.72906087      0.27093913      0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       4       1       0       1       18      18      4       0       0       0
        0.096454307     0.807091386     0.096454307     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       19      19      2.9     0       0       0
        0       0.930142625     0.069857375     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       20      20      4.3     0       0       0
        0       0.920896895     0.079103105     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
```

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2008    1       4       1       0       1       21      21      3.4     0       0       0
        0       0.251362987     0.702659872     0.045977141     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       22      22      2.3     0       0       0
        0       0.279856221     0.555330149     0.164813629     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       23      23      2.6     0       0       0
        0       0.048866523     0.569593397     0.38154008      0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       24      24      1.4     0       0       0
        0       0       0.83431748      0.16568252      0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       25      25      1.1     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       26      26      2.3     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       27      27      2.3     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       28      28      10.6    0       0       0
        0       0       0       0       0.233011594     0.424928929     0.326335848
        0.015723629     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2008    1       4       1       0       1       29      29      4.6     0       0       0
        0       0       0       0       0.047305471     0.168563294     0.264968708
        0.18801213      0.331150397     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2008    1       4       1       0       1       30      30      4.3     0       0       0
        0       0       0       0       0.027433561     0.031028056     0.093043323
        0.047770034     0.189349263     0.419289781     0.130137091     0       0       0
        0       0       0       0       0       0.061948891     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0
2008    1       4       1       0       1       31      31      3.1     0       0       0
        0       0       0       0       0       0.04713119      0       0.198632163     0
        0.16696138      0       0       0       0       0       0       0.305121131     0
        0.167050826     0.08348069      0.03162262      0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2008    1       4       1       0       1       32      32      1.4     0       0       0
        0       0       0       0       0       0       0       0       0       0.126426528
        0.102289177     0       0       0.37502104      0       0       0       0
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```
        0.396263255     0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2008    1       4       1       0       1       33      33      2.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.067606913     0       0       0       0       0       0.047492622
        0.219895185     0.219895185     0       0       0.219895185     0.119876432
        0.045360784     0       0.059977695     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       4       1       0       1       34      34      0.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.546749125     0       0       0       0       0.453250875     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       4       1       0       1       35      35      0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       2       0       1       11      11      0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       2       0       1       14      14      0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       2       0       1       15      15      3.1     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       2       0       1       16      16      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.817636959
        0.182363041     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       4       2       0       1       17      17      2.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.749387896
        0.250612104     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       4       2       0       1       18      18      5.4     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0.98603178      0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0
2008    1       4       2       0       1       19      19      6.6     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.027523985
        0.803827095     0.168648921     0       0       0       0       0       0       0
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        0       0       0       0       0       0
2008    1       4       2       0       1       20      20      5.4     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.887675236     0.076638008     0       0.035686756     0       0       0       0
```

```
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        0       0       0       0       0       0       0       0
2008    1       4       2       0       1       21      21      4       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0.326368262     0.673631738     0       0       0       0       0       0       0
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2008    1       4       2       0       1       22      22      1.4     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0.104474836     0.796233153     0.099292011     0       0       0       0       0
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2008    1       4       2       0       1       23      23      2       0       0       0
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2008    1       4       2       0       1       24      24      2.6     0       0       0
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2008    1       4       2       0       1       25      25      2.6     0       0       0
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        0.65757661      0.113055364     0.134450767     0.094917259     0       0       0
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2008    1       4       2       0       1       26      26      2.9     0       0       0
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2008    1       4       2       0       1       27      27      5.1     0       0       0
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        0.037650324     0       0       0       0       0       0       0       0       0
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2008    1       4       2       0       1       28      28      9.4     0       0       0
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2008    1       4       2       0       1       29      29      9.4     0       0       0
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        0       0       0.124632201     0       0       0.035112941     0.192503049
```

```
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        0       0       0       0
2003    1       5       1       0       1       9       9       0.6     0       1       0
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        0       0       0       0
2003    1       5       1       0       1       10      10      0.3     0       0       1
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0
2003    1       5       1       0       1       12      12      1       0       0       1
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        0       0       0       0
2003    1       5       1       0       1       13      13      0.6     0       0       1
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        0       0       0       0
2003    1       5       1       0       1       14      14      0.9     0       0
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2003    1       5       1       0       1       15      15      1.1     0       0       1
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        0       0       0       0
2003    1       5       1       0       1       16      16      1.1     0       0
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2003    1       5       1       0       1       17      17      5.7     0       0
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        0       0       0       0       0       0       0       0       0       0       0
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2003    1       5       1       0       1       18      18      6       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2003    1       5       1       0       1       19      19      6.9     0       0       0
        0.654699297     0.345300703     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
```

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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2003	1	5	1	0	1	20	20	4	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2003	1	5	1	0	1	21	21	1.4	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2003	1	5	1	0	1	22	22	1.1	0	0	0
	0	0.806101973		0.193898027		0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2003	1	5	1	0	1	23	23	1.4	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2003	1	5	1	0	1	24	24	0.9	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2003	1	5	1	0	1	25	25	0.6	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2003	1	5	1	0	1	26	26	0.9	0	0	0
	0	0.669091241		0.16545438		0.16545438		0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2003	1	5	1	0	1	27	27	1.1	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0				
2003	1	5	1	0	1	28	28	0.3	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2003	1	5	2	0	1	9	9	0.3	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2003	1	5	2	0	1	10	10	0.9	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							

```
2003    1       5       2       0       1       11      11      1.1     0       0       0
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2003    1       5       2       0       1       12      12      1       0       0       0
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2003    1       5       2       0       1       13      13      2.6     0       0       0
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2003    1       5       2       0       1       14      14      2       0       0       0
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        0       0       0       0       0       0       0       0       0.677697437
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        0       0       0       0       0       0       0
2003    1       5       2       0       1       15      15      1.7     0       0       0
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2003    1       5       2       0       1       16      16      3.4     0       0       0
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2003    1       5       2       0       1       17      17      3.4     0       0       0
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2003    1       5       2       0       1       18      18      5.4     0       0       0
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2003    1       5       2       0       1       19      19      6.6     0       0       0
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2003    1       5       2       0       1       20      20      3.4     0       0       0
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2003    1       5       2       0       1       21      21      2.3     0       0       0
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2003    1       5       2       0       1       22      22      2       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.363164091
```

	0.393009194	0.243826715	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0			
2003	1	5	2	0	1	23	23	2.3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	
	0.857597396	0	0.142402604	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0				
2003	1	5	2	0	1	24	24	4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0.100786817	
	0.633246855	0.122251048	0.14371528	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0			
2003	1	5	2	0	1	25	25	0.6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0.5
	0	0.5	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2003	1	5	2	0	1	26	26	0.3	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2003	1	5	2	0	1	28	28	0.6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0.17557503	0	0	0.82442497	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2004	1	5	1	0	1	3	3	0.2	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2004	1	5	1	0	1	5	5	0.8	0	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2004	1	5	1	0	1	6	6	0.5	0	1	0
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	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2004	1	5	1	0	1	7	7	0.3	0	1	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2004	1	5	1	0	1	8	8	1.9	0	1	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2004	1	5	1	0	1	9	9	1.9	0	1	0
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	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							

```
2004    1       5       1       0       1       10      10      1.6     0       1       0
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        0       0       0       0
2004    1       5       1       0       1       11      11      1.4     0       0.796583585
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        0       0       0       0       0       0
2004    1       5       1       0       1       12      12      0.9     0       0       1
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0
2004    1       5       1       0       1       13      13      2.5     0       0       1
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        0       0       0       0
2004    1       5       1       0       1       14      14      2.2     0       0       1
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        0       0       0       0
2004    1       5       1       0       1       15      15      1.9     0       0       1
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        0       0       0       0
2004    1       5       1       0       1       16      16      0.9     0       0
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2004    1       5       1       0       1       17      17      0.9     0       0       0
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2004    1       5       1       0       1       18      18      0.3     0       0       0
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        0       0       0       0
2004    1       5       1       0       1       19      19      1.3     0       0       0
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2004    1       5       1       0       1       20      20      1.9     0       0       0
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2004    1       5       1       0       1       21      21      3.8     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0
2004    1       5       1       0       1       22      22      2.8     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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2004    1       5       1       0       1       23      23      0.9     0       0       0
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        0       0       0       0
2004    1       5       1       0       1       24      24      0.3     0       0       0
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        0       0       0       0
2004    1       5       1       0       1       25      25      1.6     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       5       1       0       1       26      26      0.3     0       0       0
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        0       0       0       0
2004    1       5       1       0       1       27      27      0.3     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0
2004    1       5       1       0       1       28      28      0.3     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       5       2       0       1       3       3       0.2     0       0       0
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2004    1       5       2       0       1       4       4       0.3     0       0       0
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        0       0       0       0
2004    1       5       2       0       1       5       5       0.8     0       0       0
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2004    1       5       2       0       1       6       6       0.2     0       0       0
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2004    1       5       2       0       1       7       7       0.3     0       0       0
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2004    1       5       2       0       1       8       8       2.5     0       0       0
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2004    1       5       2       0       1       9       9       2.2     0       0       0
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        0       0       0       0
2004    1       5       2       0       1       10      10      2.8     0       0       0
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        0       0       0       0
2004    1       5       2       0       1       11      11      0.8     0       0       0
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        0       0       0       0
2004    1       5       2       0       1       12      12      1.3     0       0       0
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2004    1       5       2       0       1       13      13      2.5     0       0       0
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2004    1       5       2       0       1       14      14      4.7     0       0       0
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2004    1       5       2       0       1       15      15      0.9     0       0       0
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2004    1       5       2       0       1       16      16      0.9     0       0       0
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2004    1       5       2       0       1       17      17      1.9     0       0       0
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2004    1       5       2       0       1       18      18      0.9     0       0       0
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        0       0       0       0       0       0       0       0       0       0.39355359
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         0.60644641      0       0       0       0       0       0       0       0       0
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2004     1       5       2       0       1       19      19      0.9     0       0       0
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         0       0       0       0       0       0
2004     1       5       2       0       1       20      20      2.8     0       0       0
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2004     1       5       2       0       1       21      21      4.7     0       0       0
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2004     1       5       2       0       1       22      22      4.1     0       0       0
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         0       0       0       0       0       0       0       0       0       0       0
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         0.357958153     0.642041847     0       0       0       0       0       0       0
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         0       0       0       0       0       0       0
2004     1       5       2       0       1       23      23      1.9     0       0       0
         0       0       0       0       0       0       0       0       0       0       0
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         0       0       0       0       0       0       0       0       0       0
         0.820050088     0.179949912     0       0       0       0       0       0       0
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         0       0       0       0       0       0       0
2004     1       5       2       0       1       24      24      1.3     0       0       0
         0       0       0       0       0       0       0       0       0       0       0
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         0       0       0       0       0       0       0       0       0       0
         0.325410397     0       0.674589603     0       0       0       0       0       0
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         0       0       0       0       0       0       0
2004     1       5       2       0       1       25      25      0.6     0       0       0
         0       0       0       0       0       0       0       0       0       0       0
         0       0       0       0       0       0       0       0       0       0       0
         0       0       0       0       0       0       0       0       0       0       1
         0       0       0       0       0       0       0       0       0       0       0
         0       0       0       0       0       0       0       0       0       0       0
         0       0       0       0
2005     1       5       1       0       1       2       2       0.3     1       0       0
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         0       0       0       0       0       0       0       0       0       0       0
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         0       0       0       0       0       0       0       0       0       0       0
         0       0       0       0
2005     1       5       1       0       1       4       4       0.2     1       0       0
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         0       0       0       0
2005     1       5       1       0       1       6       6       1.1     0.208089945
         0.791910055     0       0       0       0       0       0       0       0       0
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         0       0       0       0       0       0       0
2005     1       5       1       0       1       7       7       1.6     0       1       0
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         0       0       0       0       0       0       0       0       0       0       0
         0       0       0       0       0       0       0       0       0       0       0
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         0       0       0       0       0       0       0       0       0       0       0
         0       0       0       0
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2005    1       5       1       0       1       8       8       4.2     0.312375124
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        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       5       1       0       1       9       9       5       0       1       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0
2005    1       5       1       0       1       10      10      2.7     0       0.728713208
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       5       1       0       1       11      11      1.8     0       0.059423841
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       5       1       0       1       12      12      4.5     0       0.031502524
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2005    1       5       1       0       1       13      13      7.7     0       0
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2005    1       5       1       0       1       14      14      4.5     0       0       1
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2005    1       5       1       0       1       16      16      2.9     0       0
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2005    1       5       1       0       1       17      17      3.8     0       0       0
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2005    1       5       1       0       1       18      18      1.3     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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2005    1       5       1       0       1       21      21      0.6     0       0       0
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2005    1       5       1       0       1       22      22      2.6     0       0       0
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2005    1       5       1       0       1       24      24      3.2     0       0       0
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2005    1       5       1       0       1       25      25      2.6     0       0       0
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2005    1       5       1       0       1       27      27      0.6     0       0       0
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2005    1       5       2       0       1       4       4       0.2     0       0       0
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2005    1       5       2       0       1       7       7       3.2     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
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2005    1       5       2       0       1       8       8       7.4     0       0       0
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2005    1       5       2       0       1       12      12      5.1     0       0       0
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2005    1       5       2       0       1       13      13      8       0       0       0
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        0       0       0       0
2005    1       5       2       0       1       14      14      6.7     0       0       0
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        0       0       0       0
2005    1       5       2       0       1       15      15      3.8     0       0       0
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        0       0       0       0       0       0       0       0       0.629300599
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2005    1       5       2       0       1       16      16      2.2     0       0       0
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2005    1       5       2       0       1       17      17      4.5     0       0       0
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2005    1       5       2       0       1       18      18      2.2     0       0       0
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2005    1       5       2       0       1       19      19      1.6     0       0       0
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	0	0	0	0							
2005	1	5	2	0	1	21	21	0.6	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2005	1	5	2	0	1	22	22	3.2	0	0	0
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2005	1	5	2	0	1	23	23	3.8	0	0	0
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	0	0	0	0	0	0	0	0	0	0	
	0.177494615	0.822505385	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0				
2005	1	5	2	0	1	24	24	1.6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2005	1	5	2	0	1	26	26	0.3	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0							
2005	1	5	2	0	1	27	27	0.3	0	0	0
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	0	0	0	0							
2006	1	5	1	0	1	2	2	0.1	1	0	0
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	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2006	1	5	1	0	1	4	4	0.1	1	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2006	1	5	1	0	1	6	6	0.3	0	1	0
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	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							
2006	1	5	1	0	1	7	7	2.9	0	1	0
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	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0							

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2006    1       5       1       0       1       8       8       2.8     0       1       0
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2006    1       5       1       0       1       9       9       2.7     0       1       0
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        0       0       0       0
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2006    1       5       1       0       1       11      11      2.7     0       0       1
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2006    1       5       1       0       1       13      13      9.1     0       0       1
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2006    1       5       1       0       1       18      18      2.7     0       0       0
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2006    1       5       1       0       1       23      23      0.8     0       0       0
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2006    1       5       1       0       1       24      24      0.3     0       0       0
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2006    1       5       1       0       1       25      25      0.8     0       0       0
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2006    1       5       1       0       1       28      28      0.5     0       0       0
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2006    1       5       2       0       1       8       8       2.5     0       0       0
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2006    1       5       2       0       1       10      10      2.9     0       0       0
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2006    1       5       2       0       1       11      11      1.9     0       0       0
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2006    1       5       2       0       1       12      12      3.2     0       0       0
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2006    1       5       2       0       1       16      16      4.3     0       0       0
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2006    1       5       2       0       1       19      19      1.6     0       0       0
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2006    1       5       2       0       1       21      21      0.5     0       0       0
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2006    1       5       2       0       1       22      22      0.5     0       0       0
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2006    1       5       2       0       1       25      25      0.5     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       5       1       0       1       7       7       1.9     0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       5       1       0       1       8       8       1.9     0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       5       1       0       1       9       9       1.8     0       0.618013746
        0.381986254     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       5       1       0       1       10      10      0.3     0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       5       1       0       1       11      11      7.3     0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       5       1       0       1       12      12      3.8     0       0
        0.943232118     0       0.056767882     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       5       1       0       1       13      13      12.6    0       0
        0.980306961     0.019693039     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       5       1       0       1       14      14      6.2     0       0
        0.544611151     0.418230646     0.037158203     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2007    1       5       1       0       1       15      15      4.7     0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       5       1       0       1       16      16      6.6     0       0       0
        0.963005111     0.036994889     0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       5       1       0       1       17      17      5.3     0       0       0
        0.851671716     0.148328284     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       5       1       0       1       18      18      4.7     0       0       0
        0.55363984      0.356379197     0.089980963     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       5       1       0       1       19      19      3.2     0       0       0
        0.400911304     0.568962051     0.030126644     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       5       1       0       1       20      20      2.1     0       0       0
        0       0.915842374     0.084157626     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       5       1       0       1       21      21      2.9     0       0       0
        0       0.354044513     0.487857476     0.158098011     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       5       1       0       1       22      22      0.9     0       0       0
        0       0.145823832     0.228855646     0.625320523     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       5       1       0       1       24      24      0.3     0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       5       1       0       1       26      26      0.3     0       0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       5       1       0       1       27      27      0.9     0       0       0
        0       0       0       0.422657601     0.577342399     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       5       1       0       1       28      28      0.9     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       5       2       0       1       4       4       0.1     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       5       2       0       1       7       7       1.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
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2007    1       5       2       0       1       8       8       1.9     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       5       2       0       1       9       9       0.9     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       5       2       0       1       10      10      0.6     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       5       2       0       1       11      11      6.7     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       5       2       0       1       12      12      7       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       5       2       0       1       13      13      11.7    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.896573758
        0.086082978     0       0.017343263     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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2007    1       5       2       0       1       14      14      3.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.82247468
        0.17752532      0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       5       2       0       1       15      15      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.184659106
        0.815340894     0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0
2007    1       5       2       0       1       16      16      6       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.066586327
        0.933413673     0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0
2007    1       5       2       0       1       17      17      5.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.641490882
        0.358509118     0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0
2007    1       5       2       0       1       18      18      4.7     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.370589524
        0.551703169     0.077707307     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       5       2       0       1       19      19      2.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.295544643
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        0.26823337      0.436221988     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       5       2       0       1       20      20      1.8     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.762302011     0.237697989     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       5       2       0       1       21      21      2.6     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.042213658     0
        0.493551425     0.464234916     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       5       2       0       1       22      22      1.8     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.213320138     0.619284843     0.167395019     0       0       0       0       0
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        0       0       0       0       0       0       0       0
2007    1       5       2       0       1       23      23      0.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0.056174409     0.178477951     0.76534764      0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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2007    1       5       2       0       1       24      24      0.6     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.5     0.5     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       5       2       0       1       25      25      0.6     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.189100563     0       0.810899437     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       5       2       0       1       26      26      0.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.422657601     0.154684797     0.422657601     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       5       1       0       1       3       3       0.5     1       0       0
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        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       5       1       0       1       4       4       0.3     1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       5       1       0       1       5       5       0.3     0.453030416
        0.546969584     0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       5       1       0       1       6       6       0.7     0       1       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
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2008    1       5       1       0       1       7       7       0.7     0       0.521835222
        0.478164778     0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       5       1       0       1       8       8       0.3     0       0       1
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       5       1       0       1       9       9       2.1     0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       5       1       0       1       10      10      3.7     0       0.084104491
        0.915895509     0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       5       1       0       1       11      11      3.6     0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       5       1       0       1       12      12      2.9     0       0
        0.096144252     0.903855748     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       5       1       0       1       13      13      3.6     0       0
        0.917554369     0.082445631     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       5       1       0       1       14      14      2.4     0       0
        0.116889439     0.883110561     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       5       1       0       1       15      15      4.6     0       0
        0.041134694     0.958865306     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       5       1       0       1       16      16      3.6     0       0       0
        0.953616111     0.046383889     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       5       1       0       1       17      17      3.6     0       0       0
        0.644414267     0.355585733     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       5       1       0       1       18      18      2.3     0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       5       1       0       1       19      19      2.3     0       0       0
        0       0.995426394     0.004573606     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       5       1       0       1       20      20      1       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       5       1       0       1       21      21      0.7     0       0       0
        0       0.032493548     0.967506452     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       5       2       0       1       3       3       0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       5       2       0       1       4       4       0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       5       2       0       1       5       5       0.7     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0.198930201     0.801069799     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       5       2       0       1       7       7       0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       5       2       0       1       8       8       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0.288669752     0.711330248
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       5       2       0       1       9       9       2.8     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0.527659909     0.472340091
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       5       2       0       1       10      10      5.7     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0.116737386     0.883262614
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       5       2       0       1       11      11      5.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
```

```
2008    1       5       2       0       1       12      12      3.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       5       2       0       1       13      13      3.6     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.833784736
        0.166215264     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       5       2       0       1       14      14      4.4     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.318260704
        0.681739296     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       5       2       0       1       15      15      4.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.151438786
        0.848561214     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       5       2       0       1       16      16      4.6     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.036425982
        0.881670634     0.081903384     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2008    1       5       2       0       1       17      17      2.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.990664876
        0.009335124     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       5       2       0       1       18      18      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.030398379
        0.969601621     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       5       2       0       1       19      19      1.6     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       5       2       0       1       20      20      2.9     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.534329254     0.465670746     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       5       2       0       1       21      21      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0.354995326     0.645004674     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       5       2       0       1       22      22      0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       5       2       0       1       28      28      0.3     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
```

```
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
0   # Mean Size at Age Observations
0       # Total number of environmental variables
0       # Total number of environmental observations
0       # No Weight frequency data
0       # No tagging data
0       # No morph composition data

999 # End data file
```

Forecast File:

```
# Forecast specifications
# darkblotched SS v3.x

1      # Forecast: 0=none; 1=F(SPR); 2=F(MSY) 3=F(Btgt); 4=F(endyr); 5=Ave F (enter yrs); 6=read Fmult
2008   # First year for averaging selex to use in forecast (e.g. 2004; or use -x to be rel endyr)
2008   # Last year for averaging selex to use in forecast
1      # Benchmarks:0=skip, 1=calc Fspr, Fbtgt, Fmsy
1      # MSY: 0=none,1=F(SPR),2=calc F(MSY),3=F(Btgt),4=set to F(endyr)
0.5    # SPR target (e.g. 0.40)
0.5    # Biomass target (e.g. 0.40)
10     # Number of forecast years
1      # Read advanced options add indents below if 1
0      # Puntalyzer output: 0=no,1=yes
-1     # Rebuilder:  first year catch could have been set to zero (Ydecl)
-1     # Rebuilder:  year for current age structure (Yinit)
1      # Control rule method (1=west coast adjust catch; 2=adjust F)
0.4    # Control rule Biomass level for constant F (as frac of Bzero, e.g. 0.40)
0.1    # Control rule Biomass level for no F (as frac of Bzero, e.g. 0.10)
1      # Control rule fraction of Flimit (e.g. 0.75)
-1     # maximum annual catch during forecast (not coded yet)
0      # 0= no implementation error; 1=use implementation error in forecast (not coded yet)
0.1    # stddev of log(realized F/target F) in forecast (not coded yet)
1      # fleet allocation (in terms of F) (1=use endyr pattern, no read; 2=read below)
10     # Number of manual forecast catches to input
2      # basis for forecatch:  1=retained catch; 2=total dead catch (if line above > 0)
# Year Seas Fleet Catch
2009 1 1 273
2010 1 1 283
2011 1 1 292
2012 1 1 299
2013 1 1 306
2014 1 1 313
2015 1 1 321
2016 1 1 328
2017 1 1 335
2018 1 1 342

999 # end of forecast file
```