Stock Assessment of the Arrowtooth flounder (*Atheresthes stomias*) Population off the West Coast of the United States in 2007

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Executive Summary

Stock

This assessment reports the status of arrowtooth flounder (*Atheresthes stomias*) off the U.S. West Coast. Arrowtooth flounder are primarily found off Washington, Oregon, northern California, and north of the U.S.-Canada border. We assume a single mixed stock, using a model with one area.

Catches

Arrowtooth are commonly caught by trawl fleets off Washington and Oregon, but they are frequently discarded due to low flesh quality. For this reason, the market for arrowtooth has been fairly limited over the last 50 years. We model three components of the arrowtooth fishery:

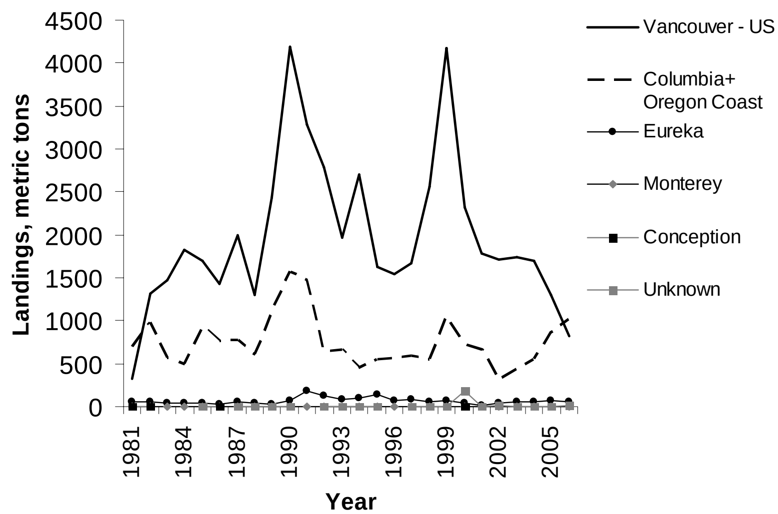
(1) the mink food fishery in the 1950s-70's
(2) a targeted fillet/headed-and-gutted fishery that began around 1981
(3) a "bycatch fleet" that represents West Coast trawl effort with arrowtooth bycatch, but no landings.

We reconstructed landings for the mink food fleet from a variety of historical sources. Landings for the fillet fleet are available from the PacFIN database, with estimates of discard from four observer programs. For the bycatch fleet, we used a simple ratio estimator to predict arrowtooth bycatch from landings of other flatfish. We calculated this ratio from the West Coast Groundfish Observer data for 2001-2006.

Table a. Recent landings of arrowtooth flounder by INPFC area.

	Catch (mt)				
Year	**Vancouver**	**Columbia**	**Eureka**	**Monterey**	**Other**
1996	1545	572	73	1	0
1997	1671	592	79	1	0
1998	2556	555	57	1	0
1999	4174	1045	64	2	1
2000	2326	717	43	0	190
2001	1777	666	20	0	1
2002	1718	317	36	1	13
2003	1746	442	53	5	1
2004	1701	557	61	2	6
2005	1299	865	70	3	2
2006	821	1025	62	2	9

Figure a. Landings of arrowtooth by INPFC area, 1981-2006.



Data and Assessment

This is the first assessment of arrowtooth flounder off the U.S. West Coast since 1993, and the first to use a modern age-structured estimation framework (Stock Synthesis 2).

We modeled both males and females, allowing for different growth between the sexes. We included catch data from 1928-2006. For indices of abundance, we included the NWFSC Shelf-Slope Survey (2003-2006), the NWFSC Slope Survey (1999-2002), the Triennial Shelf Survey (1980-2001), and the AFSC Slope Survey (1997,1999-2001). All but the NWFSC Slope Survey include information on length composition of the catch, as do PacFIN port sampling data (1986-2005). We were able to obtain and incorporate ages (from otolith readings) for a subset of fish from the NWFSC Shelf-Slope Survey and commercial landings from 1986-1991, 1998, and 2003-2005.

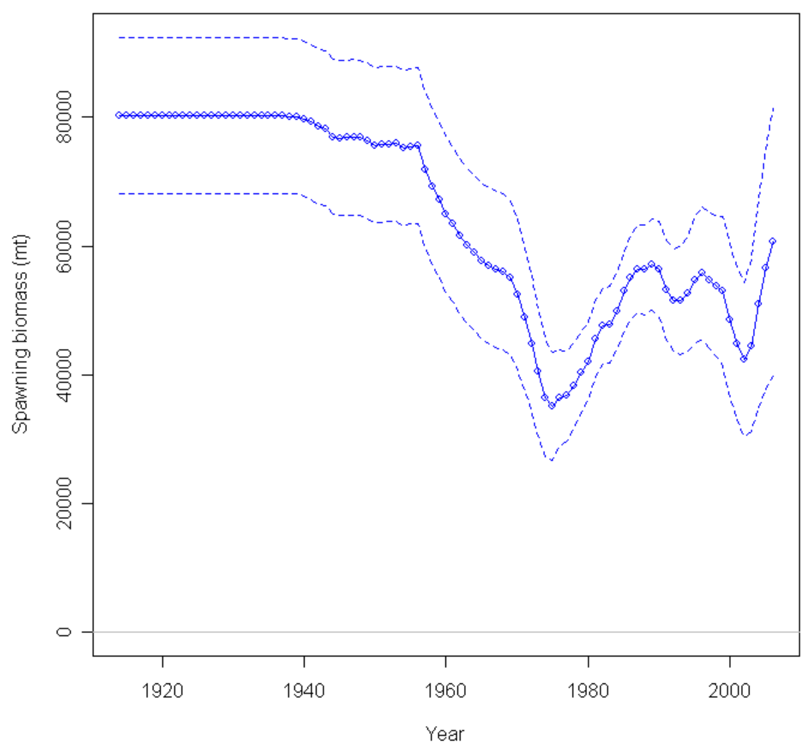
Stock biomass

The base case model shows a period of moderate depletion through the 1950s and 1960s, followed by a rebuilding of the stock beginning in the late 1970's. Recent strong year classes, in particular the 1999 year class, have led to an increase in the stock since the late 1990s. We estimated spawning biomass at the beginning of 2007 to be 63,302 mt (95% CI: 41,027-85,577). This level represents 79% of the estimated unfished spawning biomass (95% CI: 58.1%-99.5%). Total biomass at the start of 2007 was estimated to be 85175 mt.

Table b. Abundance estimates for arrowtooth flounder, 1998-2007

Year	Spawning biomass (mt)	~95% Interval			Relative depletion
1998	53,802	42,819	-	64,785	67.0%
1999	52,962	41,411	-	64,513	65.9%
2000	48,468	36,642	-	60,294	60.3%
2001	44,853	32,986	-	56,720	55.8%
2002	42,330	30,343	-	54,317	52.7%
2003	44,468	31,080	-	57,856	55.4%
2004	51,021	34,823	-	67,219	63.5%
2005	56,486	37,773	-	75,199	70.3%
2006	60,633	39,837	-	81,429	75.5%
2007	63,302	41,027	-	85,577	78.8%

Figure b. Spawning biomass of arrowtooth flounder, 1916-2007. Dashed lines are ~95% confidence intervals.



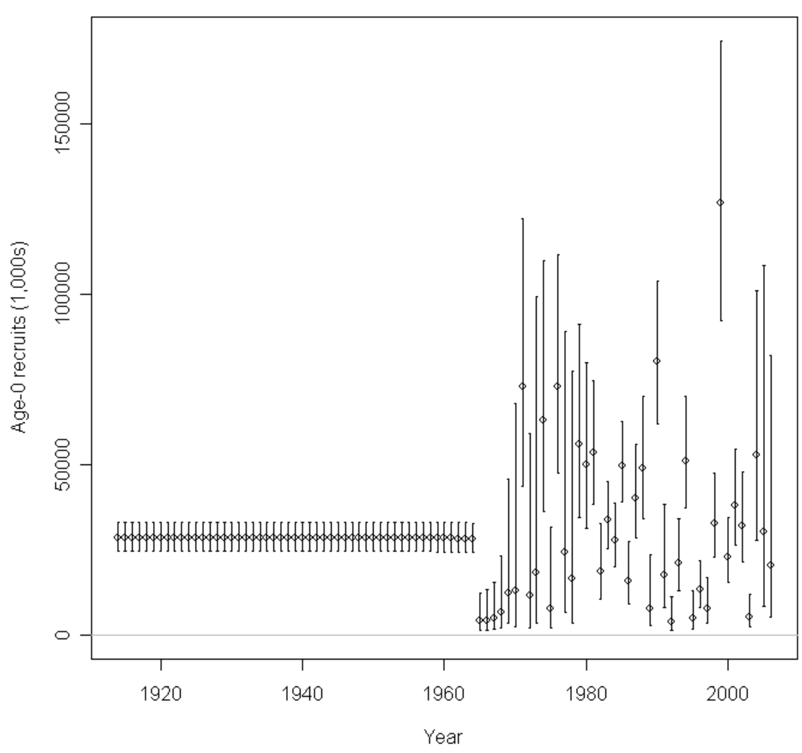
Recruitment

The model predicted that recruitment was low from 1965 to 1970, prior to the availability of age and length data or survey abundance indices. Recent strong year classes, in particular the 1999 year class, have led to an increase in the stock since the late 1990s. Estimated recruitment exceeded 50 million age-0 fish in 1990, 1994, and 1999.

Table c. Estimated recruitment of arrowtooth flounder, 1998-2007.

Year	Age 0 recruits, thousands	~95% Interval		
1998	32,876	22,763	-	47,482
1999	126,750	92,237	-	174,177
2000	22,987	15,281	-	34,578
2001	37,830	26,236	-	54,548
2002	31,901	21,348	-	47,671
2003	5,198	2,256	-	11,974
2004	52,878	27,723	-	100,857
2005	30,337	8,505	-	108,216
2006	20,535	5,147	-	81,934
2007	28,321	7,099	-	113,001

Figure c. Recruitment of age 0 arrowtooth flounder, 1916-2006. Lines are ~95% confidence intervals.



Reference points

We estimated unexploited equilibrium spawning biomass (B0) to be 80,313 mt (95% CI: 68,228-92,398). We estimate that the stock has never fallen below the overfished threshold (i.e. 25% of unfished levels (B0)). The MSY proxy target for flatfish is SPR 40%, which results in an MSY of 5,245mt (4,457 - 6,033) and a spawning stock biomass of 30,780 mt (26,149 - 35,411), or 38% of B0. The MSY proxy target for spawning biomass is SB40% and this target would result in a MSY of 5,148mt. The model estimation of MSY is 5,844mt which results in a spawning stock biomass of 16,593mt or 21% of B0 and a SPR of 0.23.

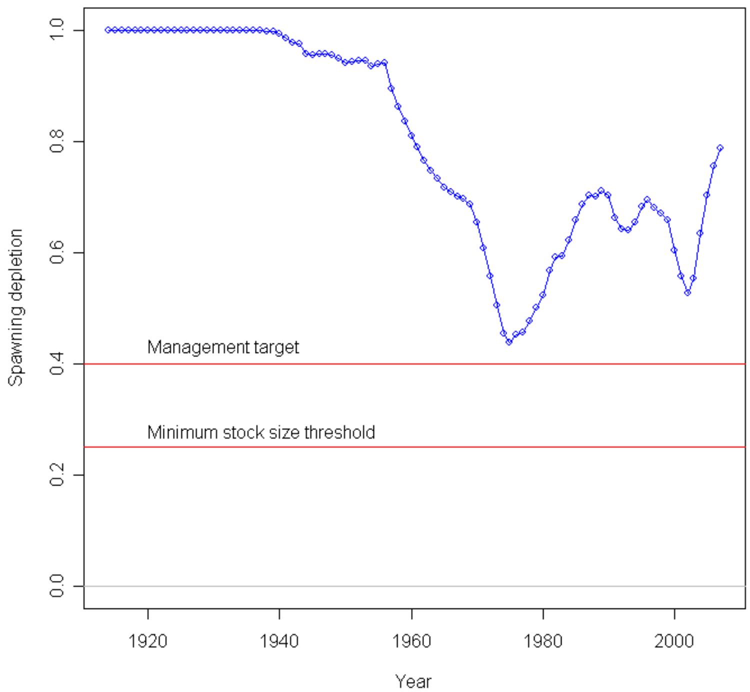
Table d. Reference points

	Point Estimate	Uncertainty in estimates (If Available)
Unfished Spawning Stock Biomass (SB_0) (mt)	80313	6166
Unfished Summary Age 3+ Biomass (mt)	98022	-
Unfished Recruitment (R_0) at age 0	28528	2180
Reference points based on $SB_{40\%}$		
Spawning Stock Biomass (mt) at $SB_{40\%}$	32125	2466
SPR resulting in $SB_{40\%}$ ($SPR_{SB40\%}$)	0.42	0.00000004
Exploitation rate resulting in $SB_{40\%}$	11%	-
Yield with $SPR_{SB40\%}$ at $SB_{40\%}$ (mt)	5148	394
Reference points based on SPR proxy for MSY		
Spawning Stock Biomass at SPR (SB_{SPR})(mt)	30780	2363
$SPR_{MSY\text{-}proxy}$	0.40	
Exploitation rate corresponding to $SPR_{MSY\text{-}proxy}$	11.70%	-
Yield with $SPR_{MSY\text{-}proxy}$ at SB_{SPR} (mt)	5245	402
Reference points based on estimated MSY values		
Spawning Stock Biomass at MSY (SB_{MSY}) (mt)	16593	1294
SPR_{MSY}	0.23	0.0023
Exploitation Rate corresponding to SPR_{MSY}	21%	-
MSY (mt)	5844	449

Table e. Summary of trends for 1998-2007

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Landings (mt)	3168	5285	3276	2464	2085	2247	2327	2240	1918	-
Estimated Discards (mt)	916	1293	1247	1155	1233	1165	990	775	489	-
Estimated Total Catch (mt)	4084	6578	4523	3619	3318	3412	3317	3015	2407	-
ABC (mt)	5800	5800	5800	5800	5800	5800	5800	5800	5800	-
OY * (if different from ABC) (mt)	NA	NA	NA	NA	NA	NA	NA	NA	NA	-
SPR	0.62	0.49	0.57	0.61	0.62	0.62	0.64	0.69	0.75	0.73
Exploitation Rate	0.080	0.136	0.100	0.085	0.079	0.082	0.076	0.062	0.044	-
Summary Age 3+ Biomass (B) (mt)	69704	66501	59802	56890	64932	69707	74817	78961	79822	83301
Spawning Stock Biomass (*SB*) (mt)	53802	52962	48468	44853	42330	44468	51021	56486	60633	63302
Uncertainty in Spawning Stock Biomass estimate (SD)	5603	5894	6034	6055	6116	6831	8265	9548	10610	11365
Recruitment at age 0 (x 1000)	32876	126750	22987	37830	31901	5198	52878	30337	20535	28322
Uncertainty in Recruitment estimate (x1000, SD)	6221	20691	4841	7126	6607	2317	17904	21950	16507	22766
Depletion (SB/SB0)	0.67	0.66	0.60	0.56	0.53	0.55	0.64	0.70	0.75	0.79

Figure d. Time series of estimated depletion, 1916-2007.



Exploitation status

The estimated spawning potential ratio is above the proxy target of 40% for flatfish, as well as the estimated MSY level.

Table f. Estimated spawning potential ratio, 1997-2006

Year	Estimated SPR
1997	0.65
1998	0.62
1999	0.49
2000	0.57
2001	0.61
2002	0.62
2003	0.62
2004	0.64
2005	0.69
2006	0.75

Figure e. Estimated spawning potential ratio (SPR).

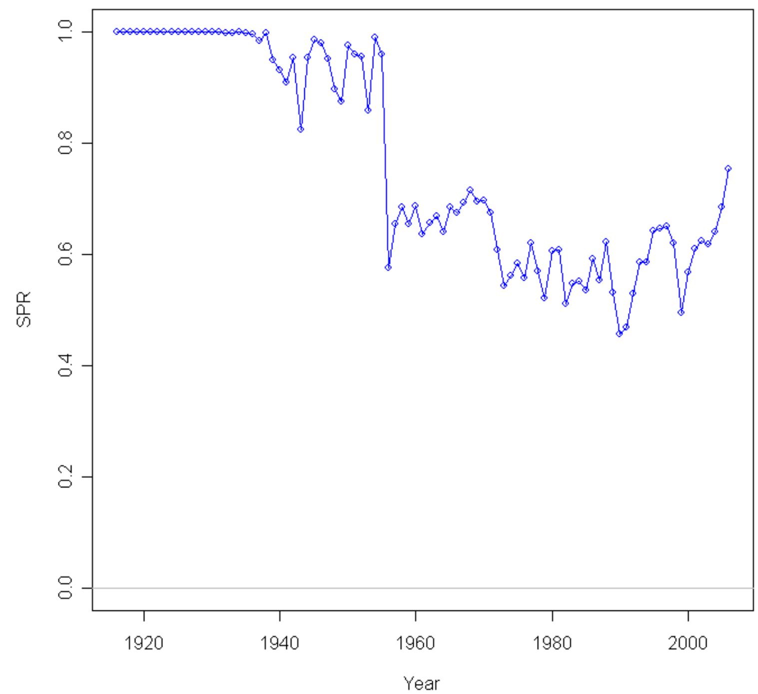
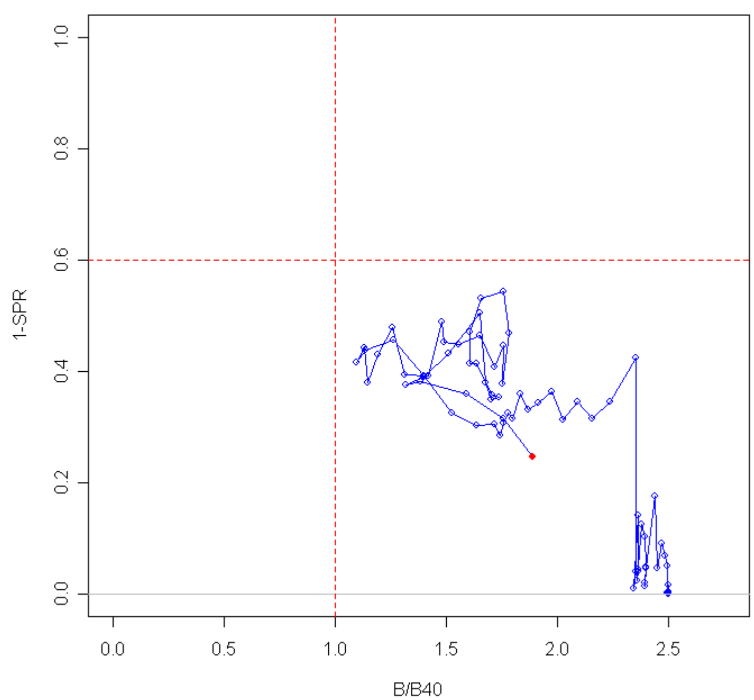


Figure f. Temporal pattern of estimated spawning potential ratio relative to the proxy target of 40% vs. estimated spawning biomass relative to the proxy 40% level.



Management performance

Landings of arrowtooth flounder are currently limited by market and bycatch, and 2006 catches are below the ABC of 5800 mt and MSY_{FSPR} of 5245 mt. Catches exceeded MSY levels in just one year (1999) in the last decade. Our estimates of total catch were based on landings plus discards from both the fillet fishery and bycatch fishery.

Table g. Arrowtooth landings, total catch, and allowable biological catch

Year	Landings (mt)	Estimated total catch (mt)	ABC (mt)
1997	2343	3569	5800
1998	3168	4084	5800
1999	5285	6578	5800
2000	3276	4523	5800
2001	2464	3619	5800
2002	2085	3318	5800
2003	2247	3412	5800
2004	2327	3317	5800
2005	2240	3015	5800
2006	1918	2407	5800

Unresolved problems and major uncertainties

Estimates of historical catch are highly uncertain, particularly for the bycatch fleet (i.e. vessels that don't retain any arrowtooth). To address this, we examined alternative scenarios that included model runs with levels of catch that were either half or twice our best estimate of total catch. This approach suggests that final estimates of depletion are not sensitive to levels of historical catch, but estimates of unfished biomass (B0) are roughly proportional to catches.

We assumed fixed values for natural mortality and steepness of the stock-recruitment relationship. In the base case model, steepness was set at 0.902 based on Dorn's meta-analysis (personal communication). Natural mortality was fixed at 0.166 for females based on Hoenig's method (1983), and 0.274 based on model exploration. Likelihood profiles suggest that the estimates of biomass and depletion are not sensitive to values of steepness. Assumed values of natural mortality have a small effect on estimated depletion, but strongly influence the estimates of absolute biomass.

Forecasts

We generated forecasts of stock size and catch for 2007-2018. Catch for 2007 and 2008 was set equal to the average catch for 2004-2006. Catch for 2009-2018 was fixed at the maximum potential catch removable under the 40:10 harvest control rule, with MSY based on the Council's SPR proxy (F_{SPR}). This forecast estimated that total catch (including discards) could equal 11,267 mt in 2009, falling to 5,804 mt in 2018. Based on West Coast Groundfish Observer estimates of discard rates, landings for 2009 and 2018 would be approximately 8200 and 4100 mt, respectively. Spawning stock biomass would fall from 63,302 mt in 2007 to 34,026 mt in 2018 as a result of fishing and the decline of the large 1999 year class. Depletion would approach target levels, reaching a value of 0.42 in 2018.

Table h. Forecasts of stock size, catch, and depletion for 2007-2018.

Year	Total Catch (mt)	Spawning Biomass	95% CI	Depletion	95% CI
2007	2,913	63,302	41,027 - 85,577	0.79	0.58 - 1.00
2008	2,913	64,214	40,896 - 87,532	0.80	0.58 - 1.02
2009	11,267	65,625	41,066 - 90,184	0.82	0.58 - 1.05
2010	10,112	59,139	37,073 - 81,205	0.74	0.52 - 0.95
2011	9,109	52,993	33,077 - 72,909	0.66	0.46 - 0.86
2012	8,241	47,804	29,517 - 66,091	0.60	0.41 - 0.78
2013	7,518	43,686	26,396 - 60,976	0.54	0.36 - 0.73
2014	6,950	40,517	23,745 - 57,289	0.50	0.32 - 0.69
2015	6,523	38,125	21,597 - 54,653	0.47	0.29 - 0.66
2016	6,207	36,341	19,938 - 52,744	0.45	0.27 - 0.64
2017	5,975	35,015	18,697 - 51,333	0.44	0.25 - 0.62
2018	5,804	34,026	17,785 - 50,267	0.42	0.24 - 0.61

Decision Table

The decision table considers the uncertainty in 'states of nature' regarding natural mortality and past catches. We considered three states of nature: (1) the base model, (2) a high productivity scenario with twice the base historical catch and high natural mortality, and (3) a low productivity scenario with half the base historical catch and low natural mortality. The three options for management action all involved setting 2009-2018 catches equal to the maximum potential catch removable under the 40:10 harvest control rule, with MSY estimated using the SPR proxy. The three management actions differ in that each catch series is based on models that assume alternate states of nature with very different estimates of MSY.

If we calculate our management action (catch) using the base model, but the stock was less productive than assumed, spawning biomass would decline by more than a factor of three by 2011. Complete depletion would occur by 2013 (see Table i, Model A, and the second management action). The decision table gives a timeframe of how rapidly the stock would decline if it truly were as unproductive as in the model with low catch and low natural mortality.

The very high MSY estimated in the productive high historical catch+ high natural mortality model would lead to rapid depletion of the stock, if the true state of nature were actually less productive. However, we feel that given the market and bycatch restraints placed on the arrowtooth fishery, it is unlikely that catches could approach the 40,000-110,000 mt range associated with this scenario.

Table i. Decision table showing the consequences of management actions given three alternate states of nature

			State of Nature					
			Model A Catch = 1/2x Base Model M=0.106 female, 0.214 male		Base Model M=0.166 female, 0.274 male		Model B Catch = 2x Base Model M=0.246 female, 0.354 male	
Management action	Year	Total Catch (mt)	Spawning Biomass	Depletion	Spawning Biomass	Depletion	Spawning Biomass	Depletion
2009-2018 catch = OY estimated from Model A	2007	1,457	21,680	0.65	63,302	0.79	561,030	0.94
	2008	1,457	22,833	0.68	65,462	0.82	547,141	0.92
	2009	2,668	24,091	0.72	68,087	0.85	542,726	0.91
	2010	2,639	23,875	0.71	68,912	0.86	538,509	0.90
	2011	2,574	23,144	0.69	68,694	0.86	533,054	0.89
	2012	2,476	22,163	0.66	68,155	0.85	531,780	0.89
	2013	2,357	21,095	0.63	67,575	0.84	534,153	0.90
	2014	2,233	20,029	0.60	67,028	0.83	538,438	0.90
	2015	2,115	19,023	0.57	66,559	0.83	543,600	0.91
	2016	2,009	18,107	0.54	66,191	0.82	549,022	0.92
	2017	1,915	17,296	0.52	65,928	0.82	554,317	0.93
	2018	1,834	16,590	0.50	65,765	0.82	559,257	0.94
2009-2018 catch = OY estimated from base model	2007	2,913	21,680	0.65	63,302	0.79	561,030	0.94
	2008	2,913	21,549	0.65	64,214	0.80	545,940	0.92
	2009	11,267	21,488	0.64	65,625	0.82	540,449	0.91
	2010	10,112	13,629	0.41	59,139	0.74	529,402	0.89
	2011	9,109	6,454	0.19	52,993	0.66	518,869	0.87
	2012	8,241	455	0.01	47,804	0.60	514,013	0.86
	2013	7,518	997	0.03	43,686	0.54	514,014	0.86
	2014	6,950	0	0.00	40,517	0.50	516,846	0.87
	2015	6,523	0	0.00	38,125	0.47	521,202	0.87
	2016	6,207	0	0.00	36,341	0.45	526,247	0.88
	2017	5,975	0	0.00	35,015	0.44	531,435	0.89
	2018	5,804	0	0.00	34,026	0.42	536,427	0.90
2009-2018 catch = OY estimated from Model B	2007	5,826	21,680	0.65	63,302	0.79	561,030	0.94
	2008	5,826	18,981	0.57	61,716	0.77	543,536	0.91
	2009	142,422	16,310	0.49	60,707	0.76	535,893	0.90
	2010	110,290	0	0.00	0	0.00	417,209	0.70
	2011	89,743	0	0.00	0	0.00	338,487	0.57
	2012	77,015	0	0.00	0	0.00	291,344	0.49
	2013	69,569	0	0.00	0	0.00	265,174	0.44
	2014	65,551	0	0.00	0	0.00	251,268	0.42
	2015	63,486	0	0.00	0	0.00	243,887	0.41
	2016	62,382	0	0.00	0	0.00	239,682	0.40
	2017	61,559	0	0.00	0	0.00	236,952	0.40
	2018	60,936	0	0.00	0	0.00	235,059	0.39

Introduction

1.1 Life history and ecology

Arrowtooth flounder (*Atheresthes stomias*) are an abundant flatfish commonly found in areas from Northern California through the Bering Sea and in depths from 50 to 800 m. They are members of the family *Pleuronectidae*, the right eyed flounders. Arrowtooth reach sizes of nearly 90 cm and can live to 27 years. Female arrowtooth off Oregon reach 50% maturity at 8 years of age, and males at 4 years (Hosie 1976). Rickey (1995) found that the arrowtooth reach 50% maturity at lengths of 36.8 cm for females and 28 cm for males off Washington, and 44 cm for females and 29 cm for males off Oregon. As a comparison, female length at 50% maturity is 47 cm in the Gulf of Alaska(Turnock, Wilderbuer and Brown 2005) and 38 cm in British Columbia (Fargo and Starr 2001).

Arrowtooth are batch spawners (Rickey 1995). They spawn in the deeper continental shelf waters (>200 m) in the late fall through early spring and appear to move inshore during the summer (Zimmerman and Goddard 1996). Eggs are fertilized externally and are about 2.5 mm in diameter. The larvae spend approximately 4 weeks in the upper 100 m of the water column (Fargo and Starr 2001) and settle to the bottom in the late winter and early spring.

Arrowtooth are piscivorous, but they also eat shrimp, worms, and euphausids (Love 1996). Buckley et al. (1999) analyzed 380 arrowtooth stomachs that were collected in 1989 and 1992 from Oregon and Washington and found that hake (*Merluccius productus*) and unidentified gadids dominate their stomach contents (45 and 22% respectively) followed by herring (19%; *Clupea pallasi*), mesopelagics (0.5%), rex sole (1%; *Glyptocephalus zachirus*), slender sole (*Lyopsetta exilis*) and other small flatfish (3%), other arrowtooth (1.5%), other unidentified flatfish (1%), pandalid shrimp (~3%), and euphausiids (3%). Yang (1995) analyzed 1144 stomachs from arrowtooth collected in the Gulf of Alaska, and found that walleye pollock (*Theragra chalcogramma*) composed 66% of the arrowtooth diet, although arrowtooth smaller than 40 cm primarily feed on capelin (*Mallotus villosus*), herring, and shrimp. Gotshall (1969) examined 425 arrowtooth stomachs from Northern California throughout the 1960s and found that pandalid shrimp made up nearly 40% of the prey by volume, along with other shrimps, crabs, euphausiids, sanddabs (*Citharichthys sordidus*), and slender sole. However, Gotshall's samples were taken directly from shrimp beds, so higher concentrations of shrimp would be expected. It is clear that arrowtooth have a broad diet, consuming most of the common fish and invertebrates found on soft bottom substrate and in the water column.

Predators of juvenile arrowtooth include skates, dogfish, shortspine thornyhead, halibut, coastal sharks, orcas, toothed whales, and harbor seals (Field 2004, Field et al. 2006). Adult arrowtooth are likely to be vulnerable only to the largest of these predators.

1.2 Stock structure

To our knowledge, no tagging, genetic work, or otolith microchemistry studies have been done to estimate arrowtooth movement or population connectivity. It is likely that the stock off the U.S. West Coast is linked to the population off British Columbia and, possibly, to the stock in the Gulf of Alaska. However, in this assessment we assume that the U.S. West Coast population is a unit stock.

1.3 Historical and current fishery

Arrowtooth are commonly caught by trawl fleets off Washington and Oregon, but they are frequently discarded due to low flesh quality. The market for arrowtooth has been fairly limited over the last 50 years, and the arrowtooth fishery differs from those fisheries that target other flatfish. Below, we discuss the three main sources of arrowtooth mortality arising from commercial fishing: 1) the historical mink food fishery, 2) the targeted fillet fishery, and 3) a "bycatch fleet" that represents west coast trawl effort with arrowtooth bycatch, but no landings.

1.4.1 Mink food fishery

Large, unselective flatfish fisheries for mink food operated in Oregon and Washington in the 1950's through 1970's (Hosie 1976). Mink ranching began in 1925 in Oregon, and many mink ranches switched to using fish scrap during the 1940's (Jones and Harry 1960). Between 1945 and 1957, mink production increased from 56,000 to 250,000 animals. Beginning in 1953, with the downturn in the fillet market, an increasing number of vessels targeted a range of flatfish species for use as mink food. In the 1950s, three plants devoted to mink food production were built in Astoria, Newport, and Winchester Bay. During that same period, other processors handled mink food in addition to fillets (Jones and Harry 1960). Between 1953 and 1956, arrowtooth flounder comprised 21-41% of landings for mink food by weight (Jones and Harry 1960). Hosie (1976) reported that arrowtooth were landed as mink food at least through 1974. Landings declined throughout the 1970's. In this assessment we assume that all landings of arrowtooth before 1980 were used by the mink food fishery.

The use of arrowtooth and other groundfish scraps for California's animal food production (for mink and household pets) began in 1952 in Fort Bragg, Oakland, and Fields Landing (Best 1959). Sampling at the Fields Landing plant found that 30% of landings in 1956 and 17% of landings in 1957 were arrowtooth (Best 1959). Hake and sablefish made up most of the other landings used for animal food. Species composition at the other plants are not available, but Best (1959) reported that animal food was derived from bycatch in fisheries targeting other fish for fillet markets.

Landings of arrowtooth as mink food are reported in historical sources, many of which have been used in previous West Coast flatfish assessments (Sampson 2005, Stewart 2005, Lai et al. 2005). Most of the early data sources are in approximate agreement with the NMFS Annual Commercial Landings Database (www.st.nmfs.gov/st1/commercial/landings/annual_landings.html). We used landings from this database for all available years through 1980, supplementing them with earlier time series when necessary.

California landings for 1950-1953 were taken from California Department of Fish and Game (1968), and for 1954-1980 from the NMFS Annual Commercial Landings database (Table 1, Figure 1). We did not use data from Fish and Wildlife Service (1942-1964), which closely agreed with data from the NMFS Annual Commercial Landings database for 1958-1960 but which reported lower landings than the NMFS database for 1961-1964. Oregon catches for 1928-1949 were taken from Cleaver (1951), for 1950-1953 from Smith (1956), and for1956-1970 from PSMFC (1981); no data are available for 1954-1955 (Table 1, Figure 2). Landings for 1971-1980 are from the NMFS Annual Commercial Landings database. We did not use data from Hosie (1976), who reported 1956 landings of 1900 mt, much greater than the 1240 mt for that same year reported in PSMFC (1981) and the 1280 mt reported for 1953 in Smith (1956). Washington landings are from PSMFC (1981) for 1956-1972 and from the NMFS Annual Commercial Landings database for 1972-1980 (Table 1, Figure 3).

Coast-wide landings for mink food peaked in 1956 at 3,700 mt with catches exceeding 1000 mt from 1953 to1967. California landings peaked at under 520mt in 1956. As expected, landings were higher in Oregon and Washington given the distribution of arrowtooth. Oregon landings peaked at 1280 mt in 1943 and 1953. Washington landings reached 1900 mt in 1956 and then declined.

1.4.2 Arrowtooth fillet/headed-and-gutted fishery

A targeted arrowtooth fishery developed in the late 1970s, delivering arrowtooth to Bellingham, WA, and became established in 1980-1981 (K. Bornstein, personal communication). Vessels have been targeting arrowtooth for fillets, but more recently they have entered the headed-and-gutted market. While processors in Warrenton can also handle arrowtooth, the demand and the ability to process them is low coast-wide due to flesh quality. Whenever arrowtooth are landed, they are usually from short trips or from tows at the end of longer trips (M. Larkin and K. Smotherman, personal communication). PacFIN data indicate that most of the catch is in the Vancouver and Columbia INPFC areas (Figure 4) using flatfish bottom trawl gear (Figure 5).

Fluctuating market demand is a key characteristic of this fishery. Over the past 25 years, small numbers of vessels have participated in the arrowtooth fishery whenever there has been a market for it (M. Larkin, personal communication) and when regulations allowed. The West Coast Groundfish Observer data further confirms the sporadic nature of the market. Of all observed groundfish trawl trips that have caught arrowtooth, only 63% retained any arrowtooth catch, 54% retained more than one-third the catch, and 51% retained more than one-half the catch (WCGOP 2006).

Regulations as well as markets have led to fluctuation in fishing effort for arrowtooth. In 2001-2004, an exempted fishing permit (EFP) was issued for seven vessels in a targeted arrowtooth fishery operating off northern Washington. This permit is no longer available (Wallace 2002, Eisenhardt 2005). Bycatch of rockfish also limits fishing opportunity for arrowtooth.

Size-at-retention is likely to vary from 12” to 20” (30-51cm), depending on market conditions and catch size composition (M. Larkin and K. Smotherman, personal communication). Currently, one Bellingham processor is only accepting fish larger than 16” (41cm) for the headed-and-gutted market (K. Bornstein personal communication). Discards are a function of both size and market availability. Observations of discard fraction are shown in Figure 6, and discussed further in *Assessment* below.

In this assessment we assumed that all landings beginning in 1981 are from this targeted arrowtooth fishery (“fillet fishery”), which we expect represents less than one-third of groundfish trips in Oregon and Washington. Of all groundfish bottom trawl trips in the Columbia and Vancouver INPFC areas from 1981-2006, only 20% retained >500 kg of arrowtooth, 33% retained >100kg, and 43% retained any arrowtooth (PacFIN 2007).

1.4.3 *Bycatch trawl fishery*

As discussed above, the majority of bottom trawl trips off Washington, Oregon, and northern California do not land arrowtooth flounder, but many of them are likely to encounter it as bycatch. Observer data (WCGOP 2007) suggest that 37% of arrowtooth catch was discarded from 2001 to 2006, probably due to market availability as well as encounter rates.

It is likely that arrowtooth have been unintentionally caught by West Coast flatfish trawlers since the inception of the trawl fisheries. Harry (1961) reported that the Oregon trawl fishery for flatfish began with a series of exploratory ventures between 1908 and and 1934. These attempts failed, primarily due to a lack of markets. In 1937, two vessels in Oregon began catching fish for the San Francisco market. They were followed by other vessels in Newport and Astoria, using a mix of beam trawl, otter trawl, and paranzella nets. The fishery expanded rapidly during World War II when markets for groundfish increased. Hermann and Harry (1963) reported that arrowtooth made up 6-23% of the catch from 41 trips targeting flatfish (for fillet market) from 1950 to1961 off Oregon.

Since arrowtooth co-occur with other flatfish, we assumed a simple ratio estimator to predict arrowtooth discard in relation to landings of other flatfish. An analysis of the 2001-2006 WCGOP trawl data, excluding hauls that retained arrowtooth, suggests that arrowtooth bycatch is 0.13 times the summed coast-wide landings of English sole, petrale, and Dover sole. To estimate bycatch for 1956-1980 (before PacFIN landings data were available), we applied this multiplier to summed coast-wide trawl landings reported in prior flatfish assessments (Stewart 2005, Lai et al. 2005, Sampson 2005). This time period is prior to the fillet fishery. For 1981-2006, we also calculated arrowtooth bycatch using the same multiplier (0.13) of coast-wide Dover, English, and petrale landings. We applied the multiplier to groundfish trips reported in PacFIN. We excluded all trips with any arrowtooth landings to prevent any possible double-counting of trips in the fillet fishery.

The multiplier (0.13) is comparable to values from other bycatch studies. The Enhanced Data Collection Program in Oregon from 1995 to1999 involved 235 trips and 2172 tows.

Excluding trips with arrowtooth retention, arrowtooth bycatch was 9.6% of the landings of English, petrale, and Dover sole. The Pikitch discard study in Oregon included 138 trips and 409 tows from 1984 to1988. On trips without arrowtooth retention, the arrowtooth bycatch was 16.6 % of the amount of English, petrale, and dover soles that were caught.

There is considerable uncertainty about both discards and landings. Sensitivity analysis done on them is described in the results below.

2. Assessment

2.2 Fishery independent data

Survey biomass indices

This assessment used biomass indices from four surveys: the AFSC-NWFSC Triennial Survey, the AFSC Slope Survey, the NWFSC Slope Survey (1998-2002), and the NWFSC Shelf-Slope Survey (2003-2006). Figure 7 provides a summary of the year and depth coverage of these surveys. Because arrowtooth flounder live on both the continental shelf and slope, all four surveys provide relevant information on this species.

The Triennial Shelf Survey was conducted by the Alaska Fisheries Science Center (AFSC) from 1977 to 2001. The AFSC contracted two Alaska-class trawlers every third year for this survey. In 2004, the NWFSC conducted the Triennial Survey using identical sampling protocols and types of vessels. Details of the methodology are in Dark and Wilkins (1994) and Weinberg et al. (2002). For this analysis we did not include data from 1977 due to the high frequency of tows with insufficient bottom contact.

The AFSC Slope Survey was conducted on a yearly basis by the *R/V Miller Freeman*. Towing speed was 2.3 knots with 30 minutes of bottom contact. Net performance and area swept were monitored using SCANMAR and a bottom contact sensor with GPS. The spatial coverage of the AFSC Slope Survey was highly variable over time. We used data for 1997 and 1999-2001, when the AFSC Slope Survey sampled coast-wide (from the Canadian border to Pt. Conception) and up to depths of 1000 m. The AFSC Slope Survey was terminated in 2001. Details about this survey can be found in Lauth et al. (1998).

The Northwest Fisheries Science Center (NWFSC) conducted a slope-only survey from 1998 to 2002, which originally focused on Dover sole, thornyheads, and sablefish (DTS). For this analysis we did not include data from the 1998 pilot year. Target towing speed was 2.2 knots with 15 minutes bottom contact. GPS navigation, a Simrad ITI net mensuration system, and a bottom contact sensor were used to monitor trawl performance and calculate haul distance and net dimensions (Turk et al. 2001, Keller et al. 2005, 2006a, b). The NWFSC consistently covered depths between 183 m and 1280 m in all years, extending as far south as Point Conception (34.5° N. Lat.). The survey was extended to the southern boundary of the Conception area (32.5° N. Lat.) in 2002, but this is well south of the range of arrowtooth flounder. This survey used a fixed transect design.

Since 2003 the NWFSC has conducted a coast-wide shelf-slope survey. This survey included the depths sampled by the previous NWFSC Slope Survey as well as tows in depths as shallow as 50 m. The shelf-slope survey uses a stratified random block design; other than that the methods are similar to the 1998-2002 slope survey. In this assessment we retained the 2003-2006 shelf-slope survey as an independent time series rather than combining it with the 1998-2002 slope survey. The decision not to combine these surveys was based on (1) concerns over differences in methodology, particularly the fixed transect vs. stratified random designs, and (2) the fact that only the NWFSC Shelf-Slope Survey offers complete and ongoing coverage of the full depth range of arrowtooth.

Each of these four surveys (NWFSC Slope, NWFSC Slope-Shelf, AFSC Slope, and Triennial) was used to develop an index of abundance for arrowtooth flounder. To develop the stratification for these indices, we plotted average catch (kg/ha) and average body weight as functions of depth and latitude for each survey (Figures 8-10). These plots show peak arrowtooth abundance depths at around 155-270 m, with no arrowtooth south of 36° N. Lat. Above 43° N. Lat. both catch rates and fish size increase, with catch rates increasing most dramatically north of 47.5 °. This post-stratification procedure was not meant to reduce catch rate variance but rather to characterize geographic variation in biological features (e.g., average body size and density) of the population.

We based the stratification for each of the surveys on these distributional patterns as well as on the necessity of having sufficient sample sizes within each stratum. For the Triennial Survey and NWFSC Shelf-Slope Survey, latitudinal strata consisting of the INPFC areas were adequate (Vancouver, Columbia, and Eureka+Monterey). Due to the small number of northern hauls in the AFSC and NWFSC Slope Surveys, we shifted the boundary between the northernmost two strata from 47.5 to 46°N. Final post-stratification definitions are shown in Table 2 along with sample sizes and basic statistics of central tendency and dispersion.

A Delta-GLM was applied to each survey to derive indices of population biomass (Table 3 and Figures 11-12). The delta distribution (Aitchison and Brown, 1957) was used to model the survey data because there were many zero catches. This error model is based on the premise that it is possible to treat separately the question of whether a catch rate is zero from the size of the catch given that it is non-zero (Pennington 1983, Stefansson 1996). As such, two separate GLMs were applied to each of the four surveys. The first GLM estimated the probability of a positive haul, assumed to arise from a Bernoulli process, and the data on zero/non-zero hauls were modeled using a binomial error model. The second GLM estimated the positive catch rate for each stratum with an assumed error structure. The gamma error model was selected as the most appropriate among competing models of the exponential family based on the Akaike Information Criterion (AIC) (Akaike 1974), as specified by Dick (2005). Also, in the case where the NWFSC Shelf-Slope Survey uses four vessels chartered at random from the West Coast groundfish trawl fleet, a generalized linear mixed model (GLMM) was applied to account for the extra variance components due to vessel effects. Details of applying the GLMM to the multi-vessel survey can be found in Helser et al. (2004).

To fit the model to the data, a sampling-based Bayesian analysis was conducted to obtain a pseudo-random sample from the joint posterior density of the variance components and other parameters in the mixed model (Tierney 1994; Wolfinger and Kass 2000). Details on the algorithm applied to variance component and mixed models and simulations on its efficiency can be found in Wolfinger and Kass (2000). Bayesian results were also compared to restricted maximum likelihood estimates (REML, Littell et al. 1996; Wolfinger and O'Connell 1993) for parsimony. Model results of the marginal posterior of parameter estimates were evaluated relative to using both a uniform prior density for the variance components and an uninformative reference version of Jeffreys' prior (product of inverse gamma densities). In either case, the resulting marginal posterior distributions are very similar, suggesting that the results are relatively insensitive to choice of priors.

Results of the GLMs are shown in Table 3 and Figures 11-13. Estimates of strata-specific arrowtooth flounder density from the GLMs indicate that densities are higher in the northern deeper strata (Table 3). This is consistent across all four trawl surveys and reflects the empirical pattern in the raw catch rate data. While coefficients of variation (CV) are quite high in some strata, sometimes in excess of 0.7, CVs are quite reasonable on an annual basis, ranging from 0.2 to 0.5. In general, the Delta-GLMs fit the proportion and positive catch data reasonably well. Figure 11 shows a close correspondence along a 1:1 line between the predicted proportion positive and the observed proportion positive based on the binomial error model. Goodness-of-fit for the positive catch rate GLMs was evaluated by plotting the value of the deviance residual (McCulloch and Nelder 1989; p. 39), generated from the appropriate deviance function and inverse link of the linear predictor, as a function of the linear predictors. We also plotted standardized normal Q-Q plots from the NWFSC-AFSC GLMMs, which were the most parameterized. As in the case of traditional linear models, measures of goodness-of-fit are seen as uniformly distributed deviance residuals above and below a zero reference line when plotted against the linear predictors and deviance residuals, which are well approximated by a standard normal distribution (Figure 12).

Additionally, convergence to a stationary distribution was generally achieved from an MCMC sample of 20,000 draws, the first 10,000 of which were discarded and the remaining 10,000 thinned to one draw for every 10th sample. In some cases longer chains were required, up to a maximum of 50,000 draws with correspondingly larger burn-in and thinning intervals. MCMC convergence diagnostics are illustrated in Figure 13 from the NWFSC Shelf-Slope Survey and suggest no evidence of non-convergence. Diagnostic plots for the other surveys are qualitatively similar and are not shown.

Model results are summarized in all cases based on 1,000 MCMC samples and presented in a series of tables that provide medians of the marginal posterior distributions and labeled as "Predicted" quantities. (CVs for each of the predicted values are given relative to the posterior median values).

For each GLM, convergence was obtained using restricted maximum likelihood. Although the sampling-based Bayesian algorithm was used to quantify the marginal posterior median estimates of biomass and their uncertainty, comparison with the maximum likelihood estimator revealed that the two are essentially equal. The Bayesian approach provided an efficient method for propagating uncertainty and integrating the results of both the proportion positive and catch rate GLM analyses. In a purely maximum likelihood approach, this last step would require post-analysis Monte Carlo simulation where biomass is generated as the product of two multi-variate normal distributions using the vector of linear predictors and variance-covariance matrices estimated from the GLMs or GLMMs.

Results of the Delta-GLM applied to the surveys are given in detail in Table 3 and in figures within *Base run results* below. Table 3 provides the predicted proportion positive, the predicted catch rate (given a positive haul), and predicted biomass for each stratum. Overall, the abundance indices show an increase in abundance in recent years in the Triennial Survey (beginning in 1998) and the AFSC Slope Survey (beginning in 1999). NWFSC slope and slope-shelf surveys show little trend in abundance.

Survey length composition

Samples of length frequency data were available from the 2003-2006 NWFSC Shelf-Slope Survey (n=170-219 tows/year), the 1997 and 1999-2001 AFSC Slope Survey (37-43 tows/year), and the 1980-2004 Triennial Shelf Survey (Table 4). The Triennial Shelf Survey for 1980 and 1983 had very low sample sizes of just 15 and 2 tows, respectively, with arrowtooth length information, but later sample sizes ranged from 136 to 321 tows (Table 4). No length composition data were recorded for arrowtooth during the NWFSC Slope Survey (1998-2002). We generated annual length frequencies by sex, using the same stratification as in the GLM (Table 2). Lengths were binned into 35 two-cm bins ranging from 12 to 80 cm. Observed length frequencies were expanded into annual estimates by first expanding each tow's length composition based on the proportion of fish sampled within that tow, and then expanding by swept area of each tow to derive stratum-level estimates. Length frequencies were then summed over strata to yield annual length compositions.

Age composition data

Age-frequency data are from the NWFSC Shelf-Slope Survey (2003-2006) and the PacFIN commercial data (see the *Fishery dependent data* section below). Sample sizes are shown in Table 4. Ages for the NWFSC Shelf-Slope Survey were determined from otoliths by the Cooperative Aging Lab in Newport, Oregon. These were compiled as conditional age-at-length distributions by sex and year. This is akin to entering each row of the age-length key as a separate observation, instead of the sum to the age margin. This approach has several benefits for analysis above the standard use of marginal age compositions. First, age structures are generally collected as a subset of the fish that have been measured. If the ages are to be used to create an external age-length key to transform the lengths to ages, then the uncertainty due to sampling and missing data in the key are not included in the resulting age-compositions. If the marginal age compositions are used with the length compositions, then there is the problem of double-counting sex-ratio and year-class strength information, as the same fish contribute to total likelihood components that are assumed to be independent. Using conditional age-distributions at length captures just the additional information from the limited age data (compared to the more numerous length observations), thus eliminating double-counting in the total likelihood. The other benefit of using conditional age-composition observations is that, in addition to being able to estimate the basic growth parameters ($L_{age\text{-}1}$, $L_{age\text{-}20}$, K) inside the assessment model, the distribution of lengths at a given age are reliably estimated. This distribution is usually governed by two parameters, the CV of length at some young age and the CV at an older age. This information could only be derived from marginal age-composition observations in the case of very strong and well-separated cohorts that have been accurately aged and measured—rare conditions at best. By fully estimating the growth specifications within the stock assessment model, we were able to include this major source of uncertainty in the assessment results. Therefore, conditional age-at-length compositions were developed for the NWFSC Slope-Shelf Survey age-data and the PacFIN commercial age-data in order to retain objective weighting of the length and age data and to fully include the uncertainty in growth parameters (and thereby avoid potential bias due to external estimation where size-based selectivity is operating).

Age distributions included 30 bins from ages 1 to 30. It is often useful for interpretation purposes to compute the marginal age-compositions and to include these in the assessment model for comparing the 'implied' fit to the margin of the age-length key. Likelihood contributions of marginal age-compositions are turned off so as not to affect model fit in any way. The marginal age-compositions allow for easier visual tracking of strong cohorts and are more familiar to those accustomed to diagnosing model fit based on marginal age-composition data. Age information is still imparted to the model using conditional age-at-length observations.

No within-method comparisons (cross-reads) were available to estimate the standard deviation of aging error. Since age data from the NWFSC slope-shelf survey used current break-and-burn aging methods, we assumed no bias in the data. The standard deviation of aging error was taken from English sole (Stewart 2007).

Fishery dependent data

Commercial landings time series are described above (see *Historical and current fishery*). For the fillet fishery, we expanded the landings data by a time-varying discard fraction to calculate total catch, which we input to the model. Observations of discard proportion for the fillet fishery are available for 1985-1987 from the Pikitch discard study (Pikitch 1998), for 1996-1998 from Oregon's Enhanced Data Collection Program (EDCP), for 2001 from the Bellingham Exempted Fishery Permit data (Wallace 2001), and for 2001-2006 from the West Coast Groundfish Observer Program (WCGOP 2006). For these estimates of discard, we included only trips that retained arrowtooth; other trips were included under the "bycatch" fleet. These observations of discard fraction and the smoothed value we used to represent them are shown in Figure 6.

For the fillet fishery, we used length-composition data for 1986-2006 from PacFIN (2007) commercial landings (Table 4). These data included sex-specific length frequencies at the trip and gear level. We expanded the data to estimate the corresponding statistic from the entire landed catch for each stratum and each year that sampling occurred. The analytic steps are summarized as follows:

1) Extract biological observations by sex, gear type (trawl only) and INPFC region
2) Count lengths in each size bin and for each sex within trip as the "raw" frequency data
3) Expand the raw frequencies from the trip level to account for the landings in each trip
4) Sum frequencies within INPFC area
5) Expand the summed frequencies to account for the total landings
6) Calculate sample sizes (number of samples and number of fish within sample) and normalize to proportions that sum to unity over both sexes within each year.

To complete step 3, it was necessary to derive a multiplicative expansion factor for the observed raw length frequencies of the sample. This expansion factor was calculated for each sample as the ratio of the total landed weight of the species in a trip divided by the total weight of all clusters in the sample from that trip. In cases where there was not an estimated sample weight, a predicted weight of the sample was computed by applying the length-weight relationship used in the assessment to each length in the sample, then summing these weights. Each expansion factor was computed and anomalies created by very small samples (number of fish lengths) from very large landings were avoided by limiting the expansion factor to a maximum of 500. The expanded lengths (N at each length X the expansion factor for the sample) were then summed within each gear and INPFC area and then weighted a second time by the relative proportion of landings for each gear within INPFC areas. Finally, the INPFC-expanded length frequencies were summed over INPFC areas and normalized so that the sum of all lengths and sexes for each gear in a single year was equal to unity.

We also included discard length compositions from the West Coast Groundfish Observer Program for the "bycatch" fleet. These lengths were taken from trips in which arrowtooth were not retained (n=142 trips). Similar to the survey data, we binned length data into 2-cm intervals from 12 to 80 cm.

We have no specific information on length composition of arrowtooth in the mink food fishery.

For the fillet fishery, we included age data available from PacFIN for 1986-1991, 1998, and 2003-2005. Otoliths from 1998 to present were read using current break-and-burn techniques, while the 1986-1991 otoliths were previously surface read. Applying the modern methodology to 99 otoliths from 1989 suggested a slight bias in the surface reads such that break-and-burn age = 0.9506*surface age + 0.5659. We applied this bias adjustment within SS2, treating break-and-burn age as the true age. Since no within-method comparison was available to estimate precision, the standard deviation of aging error was taken from English sole (Stewart 2007).

2.3 History of modeling approaches used for this stock

The only previous assessment for arrowtooth flounder off the U.S. West Coast was conducted in 1993 with catch data for 1981-1992, biological and logbook data from 1986-1992, and survey biomass estimates from 1971-1991 (Rickey 1993). That assessment assumed a unit stock off the U.S. West Coast, from the INPFC Monterey area to U.S. Vancouver. Rickey (1993) used a dynamic pool model to estimate equilibrium yield per recruit. The model assumed asymptotic (logistic) selectivity and constant recruitment. Rickey (1993) varied selectivity and natural mortality parameters to get a range of fishing mortalities at $F_{0.1}$, $F_{35\%,}$ and $F_{45\%}$. Length frequency data from surveys suggested strong recruitment in 1991 and weak recruitment in 1988 and 1990. Survey indices were highly variable (Figure 14). The assessment author suggested that a decline in 1992 abundance may have been due to El Nino's effect on fish behavior and movement rather than a true change in stock abundance. The assessment stated that "it is difficult to draw definite conclusions about the status of coastal arrowtooth flounder given the lack of age data and any absolute estimate of biomass."

To our knowledge, no tagging, genetic work, or otolith microchemistry studies have been done to estimate arrowtooth movement or connectivity of stocks off the U.S. West Coast, Canada, or in the Gulf of Alaska. However, Turnock, Wilderbuer, and Brown (2005) assessed the Gulf of Alaska stock, and Fargo and Starr (2001) assessed the Canadian stock. These assessments may provide useful comparisons.

In the Gulf of Alaska, arrowtooth flounder catch is limited by halibut bycatch caps and market availability. Turnock, Wilderbuer, and Brown (2005) reported 57% retention rates for 2004, although the total fishing mortality rate (F) was 0.01. The authors used an age-structured model to assess Gulf of Alaska arrowtooth. Similar to Stock Synthesis 2 (Methot 2006), their model followed equations from Fournier and Archibald (1982), with parameters estimated using AD Model Builder (Fournier 2002). The authors fixed the parameters for natural mortality, von Bertalanffy growth, and survey catchability. They estimated 2,109,700 mt of arrowtooth in the Gulf of Alaska. Their data included fishery catch, NMFS Triennial Survey and exploratory surveys (including age and length composition), the International Pacific Halibut Commission Trawl Survey, and fishery size compositions. Figure 15 shows the biomass trend from their analysis.

Fargo and Starr (2001) found no trend in biomass in their assessment of the Canadian arrowtooth stock, but there was some evidence of cyclic patterns with abundance peaks in 1989 and 2000 (Figure 16). Catch curve analysis of survey data and port samples using Ricker's methods (1975) showed no change in total mortality rate or age structure between 1980, 1998, and 2000. The authors concluded that arrowtooth catch rates were at or below sustainable levels.

2.4 Model description

This assessment used Stock Synthesis 2.0g (Methot 2007). SS2 is an age-structured model following the methods of Fournier and Archibald (1982). Parameters are estimated using AD Model Builder (Fournier 2002). Table 5 describes the parameterization and assumptions of the model.

In the model we assumed a unit stock for the U.S. West Coast, completely separate from the Canadian stock. We included both sexes, with an accumulator age of 35 years old. We modeled the period from 1916-2006, with the stock beginning at *Bo* (unfished biomass) in 1916. Below we describe the modeling approach for the biology and fisheries.

Growth is modeled separately for each sex following the von Bertalanffy growth function. We estimated length-at-age-30 and *k* using SS2's parameterization of the von Bertalanffy growth function (Figure 17). Although we attempted to estimate the CVs of length at youngest and oldest ages in SS2, we were forced to fix these parameters in the final base model to achieve a better maximum gradient component. We estimated the length-weight parameters external to the SS2 model using data from the 2003-2006 NWFSC Slope-Shelf survey:

$$Weight = a*Length^{b}$$

For females, we estimated $a = 3.785*10^{-6}$ for females, and $b= 3.246$. For males, we estimated $a = 3.485*10^{-6}$ and $b = 3.256$ (Figure 18).

Female maturity was modeled as a length-based logistic function:

$$Proportion\ Mature = 1/(1+exp(slope*(length-inflection)))$$

We lacked maturity data in this assessment, so we fixed the inflection point at 37.3 cm, estimated by Rickey (1993). We assumed a slope of 0.5, which meant that 5% of 31 cm fish are mature, 50% of 37 cm fish are mature, and 95% of 43cm fish are mature (Figure 19). We did not model male maturity.

We fixed natural mortality at values of 0.166 for females following Hoenig (1983):

$$M = exp(1.44 + -0.982* ln(tmax))$$

where M is natural mortality and tmax is maximum observed age. Maximum observed age from the data used here is 27 years for females. The previous assessment for West Coast arrowtooth (Rickey 1993) used a natural mortality of 0.2 for a female-only model. For males, applying Hoenig's method to the maximum observed age of 19 results in a male natural mortality of 0.234. However, model exploration during the STAR panel led to the discovery that higher male natural mortality improved the model fit to age data. The base model used a fixed male natural mortality of 0.274. The natural mortality rates used here imply that in an unexploited population, approximately 1.6% of male recruits and 8% of female recruits would survive to age 15, and 0.4% of males and 4% of females would live to age 20.

Recruitment was modeled following the Beverton-Holt relationship, with steepness fixed at 0.902. Dorn (personal communication) performed a meta-analysis of West Coast flatfish stocks and suggested a prior mean of 0.902 and standard deviation of 0.082. The analysis was based on a Bayesian hierarchical meta-analysis, which included the 2005 base-case assessment models for Dover sole, petrale sole, English sole, and the northern and southern stocks of starry flounder (Sampson 2005, Lai et al. 2005, Stewart 2005, Ralston 2005). The standard deviation of the recruitment deviations in log-space (σR) was set at 0.8, in agreement with the root mean squared error of the recruitment residuals. We estimated initial recruitment (ln(Ro)) within SS2. We estimated recruitment deviations from the stock recruit curve beginning in 1965. In exploratory model runs for the STAR panel we attempted to estimate recruitment deviations prior to 1965, but found that the asymptotic standard error of the recruit deviations did not fall below σR until approximately 1965.

We modeled three fisheries, as described in section 1.3 above: the mink food fishery, which began in 1928; the fillet fishery in 1981, and the bycatch trawl fleet in 1956. All fisheries have asymptotic length-based selectivity, parameterized as a double normal in SS2.

The mink food fishery lacked length-composition samples and selectivity could not be estimated. We therefore fixed selectivity at the maximum likelihood estimates for the Triennial Shelf Survey. Both the fishery and Triennial Survey operated on the shelf using small-mesh trawl gear. Given the nonselective nature of the mink food fishery, full retention for the fishery was assumed.

For the fillet fishery, we estimated the peak and ascending variance parameters for an asymptotic selectivity function. We also allowed for sex-specific selectivity and assumed full retention for the fillet fishery, adding bycatch to landings (see *Fishery dependent data* above).

Although the bycatch fleet was modeled on a catch time series with full retention, the bycatch fleet is strictly a discard fishery. We estimated the peak and ascending variance parameters of asymptotic selectivity for this fleet. Lacking sex-specific length observations, we did not estimate sex-specific selectivity parameters.

We estimated the peak and ascending variance parameters of asymptotic selectivity for all surveys except for the 1999-2002 NWFSC Slope Survey, which did not have length composition data. For the NWFSC survey, we mirrored the selectivity of the AFSC Slope Survey. All surveys had sex-specific selectivity and a time-invariant catchability. We solved for catchability analytically rather than estimating it as a parameter.

The base case model used weighting factors for the likelihood components (lambdas) equal to one. No parameters used time-varying blocks. All input sample sizes for survey length- and age-composition data were based on the number of tows; for commercial data, the number of trips. We assumed that all surveys and fisheries operated in mid-July.

2.5 Priors

We did not use priors for any parameters.

2.6 Model selection and evaluation

We explored a large number of models with varying levels of complexity, culminating in the base model and sensitivity results presented below. As a guide to this fitting process, we used the likelihood components and overall likelihood as well as visual comparisons of the model fit and residuals.

Some of the salient characteristics in the suite of models that were fitted are higher depletion levels in the early years (1960's and 1970's) and subsequent stock recovery. The early depletion levels are not entirely driven by catches since catch continued to increase through the 1980s. Instead, the early depletion is caused by the fact that the model consistently estimated low recruitment before 1970, with higher recruitment during the recent period of high catch. This pattern persisted even when we (1) removed the constraint that recruitment deviations sum to one, or (2) estimated recruitment deviations for years prior to 1965. Given the lack of age-composition data before 1986 and length and abundance data before 1980, we view the early depletion as uncertain but consistent across models.

Throughout the model-fitting process, attempts to estimate asymptotic selectivity for the fillet fleet consistently led the peak parameter to hit the upper bound (80 cm). Length-composition data for this fleet deteriorated when we fixed the peak of asymptotic selectivity at values of 75 cm or less. Allowing the model to estimate dome-shaped selectivity did not ameliorate this problem, but instead led to the original asymptotic selectivity curve with the peak at the upper bound. We attempted to use an informative prior on the selectivity peak based on the estimated selectivity for the bycatch fleet, but this did not prevent selectivity from hitting the upper bound. The base model fixed selectivity for the fillet fleet at 60 cm.

Most models that we explored easily fitted the NWFSC Slope and NWFSC Shelf-Slope Survey indices. These indices did not show much of a trend. A strong signal from the 1999 year class in the length-composition data was enough to allow the model to track the increase in abundance seen in the AFSC Slope Survey beginning in 1999 and the Triennial Survey beginning in 1998. No models estimated abundance as high as the GLM prediction for 2004 from the Triennial Survey.

The models were able to fit length-composition data for the NWFSC Shelf-Slope Survey, the AFSC Slope Survey, and the fillet fishery in most cases. All of these sources are marked by a strong 1999 year class. Fits to the Triennial data were generally worse than fits to the other surveys. Length-composition fits to the 1980 and 1983 Triennial Survey data were poor due to very low sample sizes (15 and 2 tows, respectively, for length-composition data).

Catchabilities for the surveys were consistently calculated to be quite low, typically ranging from 0.04 to 0.35. In general, the NWFSC Shelf-Slope Survey, which covers the entire depth range of arrowtooth, had the highest catchability. It is possible that the arrowtooth's large size and swimming ability could have resulted in higher levels of escapement from trawl gear than what is usually observed in other flatfish. That could account for the low catchabilities estimated here.

2.7 Base run results

The base case model shows a period of moderate depletion through the 1960's and 1970s, followed by a rebounding of the stock beginning in the late 1970's (Figure 20-22 and Tables 6-8). Estimated stock size has not fallen below the minimum stock-size threshold (Figure 22). The model predicted that recruitment was low in the late 1960's, a period prior to the earliest available length data and survey indices. Recent strong year classes, in particular the 1999 year class, have led to a large stock increase since the late 1990s (Figures 23-25). Recruitment exceeded 50 million age 0 fish in 1990, 1994, and 1999. We estimated spawning biomass at the beginning of 2007 to be 63302 mt (95% CI: 41,027-85,577). This level represents 79% of the estimated unfished spawning biomass (95% CI: 58.1-99.5). Total biomass at the start of 2007 is estimated to be 85,175mt.

For the base case, the total exploitation rate for 2006 is 4.4% (Figure 26) and includes 1918 mt landed by the fillet fishery, 94 mt discarded by the fillet fishery, and 395 mt caught by the discard fleet (Figures 26-27).

Both the NWFSC Shelf-Slope and NWFSC Slope time series contain only four years of data without a pronounced trend (Figures 28-29). The AFSC Slope data (Figures 30) show an increase in abundance between 2000 and 2001, but the model did not capture this trend. The same is true for the Triennial data (Figures 31), which show an increasing biomass trend between 1992 and 2001, and a very strong increase in 2004. The model did not capture the 1989 increase in abundance seen in the Triennial Survey.

Selectivity for fisheries and surveys was modeled assuming an asymptotic selectivity pattern. Since arrowtooth are flatfish that inhabit soft bottom substrate, there may be little justification for assuming dome-shaped selectivity, particularly for surveys that cover all or most of their depth range. Peak selectivity for the surveys and for the discard fleet ranged from 31 cm to 38 cm (Figures 32-39). As described in *Model selection* above, for the fillet fishery we fixed the peak of asymptotic selectivity at 60 cm (Figure 39). We fixed selectivity for the mink food fleet at the maximum likelihood estimates for the Triennial survey, and we mirrored selectivity for the NWFSC Slope Survey to the selectivity for the AFSC Slope Survey. Despite the flexibility to estimate sex-specific selectivity, the model found no difference between sexes for the fillet fleet. For the surveys, the model estimated no difference in selectivity between the sexes at 30 cm, but lower, dome shaped selectivity for males at maximum size.

Length-composition fits were generally best for the fillet fishery fleet and the NWFSC Shelf-Slope Survey, but noisier for the AFSC Slope and Triennial surveys. Generally, for the fillet fishery, the model fitted the modes of the length compositions as well as some of the bimodal structure for recent years (Figures 40-45). Model fits to both male and female arrowtooth length compositions for the fillet fishery showed little residual pattern that would suggest systematic lack of fit. Input sample sizes tuned commensurately to the model expectation of the fit, as shown in Figures 42 and 45. For the bycatch fleet, the model fit 2006 length-composition data (Figures 46-48), matching the strong mode resulting from the 1999 year class.

The model predictions closely matched the NWFSC shelf-slope length compositions, which primarily show evidence of a strong 1999 year class moving through the population (Figures 49-54). The model did not capture the female modes at 60 cm in 2003 and 70 cm in 2006. The model predictions for the Triennial length-composition data were less than observed for ~60cm females in 1995 and 2004. Poor fits in 1980 and 1983 are due to very small sample sizes (Figure 55-60). The model fit to the AFSC Slope Survey (Figures 61-66) missed a 30 cm peak for males and a 30-40 cm peak for females in 1997.

Interpretation of model fits to the conditional age-at-length data can be difficult. Figures 67 and 68 are examples of the conditional age-at-length results. For simplicity, here we show plots of the implied age compositions that would be expected if the model were explicitly fitted to the margin of the whole age composition. The implied model fits are given in Figures 69-76. The model predicted that the age structure in the late 1980s was dominated by the 1980 year class, with the 1985 year class apparent beginning in 1990. The fillet fishery age data support this result. The model managed to catch most of the modes in the data, though in some instances at a lesser magnitude.

The model predicted that the 1999 year class would dominate the age structure for 2003-2005, with some additional peaks due to the 1990 and 1994 age classes. Both the NWFSC Shelf-Slope Survey (Figures 73-76) and fillet fishery exhibited this strong year class. For the fillet fishery, the model did not capture observations of high abundance of age 8 and age13 females in 2004, and predictions are less than the high observations of 15 year olds in 2005 (from the 1990 year class). The strength of the 1994 age class in the fillet fishery data seems to differ by sex and year: strong in males in 2004 but weaker in males in 2003 and females in 2003 and 2004. The model predicted an intermediate abundance between these observations.

In summary, the key aspects of the base model include: (1) current spawning stock biomass of 79% of unfished (0.79*$B0$), influenced strongly by large recent recruitments; (2) lower stock abundance in the 1970s (3) high recruitment in recent years, including 1990,1994, and the large 1999 year class; (4) better model fits to composition data from the fillet fishery and the NWFSC Shelf-Slope Survey than to the AFSC slope or Triennial survey, and (5) low levels of current exploitation (4.4%).

2.8 Uncertainty and sensitivity analysis

For the base case above, we have reported uncertainty in parameters and derived quantities based on the asymptotic variance estimates. Particularly since this is a new assessment with uncertain historical catches, we also explored three additional aspects of model behavior and sensitivity:

1) Profiling across fixed values of natural mortality
2) Profiling across fixed values of steepness of the stock-recruit relationship
3) Sensitivity to alternate catch scenarios for the bycatch fleet

Steepness was fixed at 0.902 based on Dorn's meta-analysis (personal communication). Natural mortality was fixed at 0.166 for females based on Hoenig's method (1983), and 0.274 for males based on model exploration during the STAR panel. We tested the assumptions for steepness (*h*) by fixing it at a range of values from 0.5 to 0.99 and re-estimating the model. The results (Table 9a, Figure 77-80) suggest a fairly flat likelihood surface from h=0.5-0.99, with a slightly better model fit at the highest values. The age composition data exert the greatest influence on this pattern. Steepness does not have a large effect on estimates of B0 or depletion: with a steepness of 0.99, the model predicted 2007 depletion of 0.80 and initial spawning stock biomass of 79639 mt, compared to 0.79 and 80313 mt for the base case.

Similarly, we profiled across male natural mortality (M), ranging from 0.214 to 0.354. This range included the base case value (0.274) and the natural mortality rate used in the Gulf of Alaska assessment (0.35; Turnock, Wilderbuer and Brown 2005). Female natural mortality was set to be 0.108 less than male, as in the base case. The results (Tables 9b and Figures 81-84) suggest slightly better model fit with higher rates of natural mortality. Fits to the male length and age data from the fillet fishery are driving this trend, since that fishery sees very few old, large males. Assumed rates of natural mortality have a strong effect on estimates of B0, which increases five fold when we increase male M from 0.214 to 0.354. Depletion varies less across the range of M, from 0.65 to 0.94.

Due to the high degree of uncertainty in removals of this species, we considered scenarios with catch equal to 2x and ½x the base model's catch (Figure 85). Results from these models are presented in Figure 86 and Table 10. The qualitative pattern for each model is quite similar, as are the estimates of depletion. However, the higher catch scenario increased stock size estimates, with B0 equal to 160,626mt in the 2x scenario vs. 40,155mt in the ½ catch scenario.

To bound the estimates of depletion and stock size, we combined the 2x catch scenario with high natural mortality (0.354 for male and 0.246 for females), and the ½ x catch scenario with low natural mortality (0.214 for male and 0.106 for female) (Table 6). The results suggest that M and catch have a large impact on estimates of absolute stock size, and less of an impact on estimates of depletion. Estimates of depletion and 2007 biomass are 0.65 and 33,402 mt for the low catch/M scenario, and 0.94 and 596,607 mt for high catch/M scenario. Similar to B0, MSY and BMSY also scale strongly with catch and M.

The conclusion that 2007 biomass is well above target level (SB40%) is robust to uncertainties in M and catch.

3. Additional STAR panel recommendations

The STAR panel provided a rigorous review of the model, leading to several major changes to the Pre-STAR base model. These changes are incorporated in the base case model described in *Base run results* above. Table 6 contains a summary of parameter estimates and management quantities estimated for the base case, the Pre-STAR panel model, and models O and P. Many models were explored during the STAR panel and are described in the STAR panel report, but intermediate models O and P, which fall between the Pre-STAR and the final base case model, represent key milestones.

In the Pre-STAR model we estimated recruitment deviations beginning in 1916, and we estimated catchability. Estimates of 2007 depletion were 1.71, with B0 of 79,299 mt. STAR panel members voiced concerns regarding (1) the appropriateness of estimating recruitment deviations so many decades prior to the availability of length and age data in the 1980's; (2) the estimation of catchability (Q) as a parameter when, instead, it could be solved for analytically; and (3) the use of uninformative priors rather than turning off all priors.

In Model O we estimated recruitment deviations beginning in 1970 (about ten years prior to length data available in 1980), used the analytical solution for Q, and used no priors. We also added a relatively small amount (<850mt/year) of catch to the mink food historical removals, equal to ½ the "sole" and "scrapfish" reported by Cleaver (1951) for 1928-1949. Smith (1956) reported that ½ of "mink feed" was arrowtooth. These changes resulted in a large decline in 2007 relative depletion, down to 0.79, with B0 of 62,189 mt (Table 6). Model exploration revealed that the choice of year in which to begin estimating recruitment deviations was responsible for most of this change.

Model P was identical to O, but we estimated split-sex selectivity for the fillet fishery and the three surveys containing length-composition data (NWFSC Shelf-Slope, Triennial, and AFSC Slope Surveys). The STAR panel recommended split-sex selectivity to account for potential differential behavioral and distribution patterns between the sexes, and to attempt to estimate the peak of fillet fleet selectivity, which was consistently hitting the upper bound (80 cm). We hoped that split-sex selectivity could provide an alternative explanation for the NWFSC slope-shelf length-composition data, rather than relying on the high (63 cm) peak selectivity estimated in some earlier models (e.g. the Pre-STAR base). The results from model P (Table 6) did not eliminate the problem with fillet fleet selectivity but did improve model fit to fillet fleet age-composition data and length-composition data from the NWFSC Slope-Shelf and Triennial Surveys.

The final base case model retained the main elements of Model P but incorporated two major simplifications to the fillet fleet: we fixed peak selectivity at 60 cm and assumed full retention for this fleet. Previous models had estimated retention; we simplified the model by adding bycatch (Figure 6) to landings, and inputting this as total catch into SS2.

These changes were based on the STAR panel and STAT team's concerns that (1) we were unable to reliably estimate retention since estimated discard rates were typically half the observed rates, and (2) that estimates of peak selectivity at 80 cm (the upper bound) were unreasonable. Model exploration revealed that 60 cm was a reasonable value for peak selectivity, providing acceptable fits to fillet fleet length compositions. The final setup for the fillet fleet selectivity reflects the need for simplicity in a new assessment and a fishery with fluctuating strategies and markets.

In the final base case we estimated recruitment deviations beginning in 1965, based on plots of the recruitment deviance over time. We also fixed male natural mortality at 0.274 based on likelihood profiling, and left female natural mortality at 0.166 based on Hoenig (1983).

The final base case model showed reasonable fits to fillet fleet length compositions, as a result of the selectivity and retention assumptions for that fleet. Fits to age composition data improved due to the higher rates of male natural mortality (Table 6). Final estimates of depletion are 0.79, relative to 0.67 for Model P, with the start year of the recruitment residuals primarily driving this difference (Table 6). In the final base case, we estimate no difference in selectivity between the sexes for the fillet fleet. For the surveys, we estimate no difference in selectivity at 30 cm, but sex-specific selectivity for sizes greater than 30 cm.

4. Rebuilding parameters

Since this stock is not overfished we have not reported any rebuilding parameters.

5. Reference points (biomass and exploitation rate)

We estimated unexploited equilibrium spawning biomass (B0) to be 80,313 mt (95% CI: 68,228-92,398). We estimate that the stock has never fallen below the overfished threshold (i.e. 25% of unfished levels (B0)). Spawning potential ratio was estimated to be 0.75 in 2006 and 0.73 in 2007.

The MSY proxy target for flatfish is SPR 40%, which results in an MSY of 5,245mt (4,457 - 6,033) and a spawning stock biomass of 30,780 mt (26,149 - 35,411), or 38% of B0. The MSY proxy target for spawning biomass is SB40% and this target would result in an MSY of 5,148mt. The model estimation of MSY is 5,844mt which results in a spawning stock biomass of 16,593mt, or 21% of B0 and a SPR of 0.23.

6. Harvest projections and decision tables

We generated forecasts of stock size and catch for 2007-2018 (Table 11). Catch for 2007 and 2008 was set equal to the average catch for 2004-2006. Catch for 2009-2018 was fixed at the maximum potential catch removable under the 40:10 harvest control rule, with MSY based on the Council's SPR proxy (F_{SPR}). We assumed that 85%

of the catch would derive from the fillet fleet and 15% from the bycatch fishery, based on the average of our estimates from 2004-2006. This forecast estimated that total catch (including discards) could equal 11,267 mt in 2009, falling to 5,804 mt in 2018. Based on West Coast Groundfish Observer estimates of discard rates, these total catches equate to approximately 8200 and 4100 mt of landings for 2009 and 2018, respectively. Spawning stock biomass would fall from 63,302 mt in 2007 to 34,026 mt in 2018 as a result of fishing and the decline in the large 1999 year class. Depletion would approach target levels, to a value of 0.42 in 2018.

The decision table (Table 12) considers the uncertainty in 'states of nature' regarding natural mortality and past catches. The states of nature we consider are the same as those previously presented in Table 6: 1) the base model, 2) a high productivity scenario with high historical catch and high natural mortality, and 3) a low productivity scenario with low historical catch and low natural mortality. As described in *Sensitivity Analyses* above, historical catch and natural mortality strongly affect estimates of depletion, stock size, and MSY. The three options for management action all involve 2009-2018 catches equal to the maximum potential catch removable under the 40:10 harvest control rule, with MSY estimated using the SPR proxy. The three management actions differ, in that each catch series is based on models that assume alternate states of nature, with very different estimates of MSY.

In the decision table, as we move from left to right the columns represent an increasingly productive stock. As we move down the rows of management actions we confront these productivity levels with increasing catch. Full results are shown in the Table 12. It is important to note that if we calculate our management action (MSY harvest) from the base model, but the stock is less productive than assumed, the spawning biomass will decline by more than a factor of three by 2011, with complete depletion by 2013 (see the second management action and the first state of nature in the table). Although the model likelihoods suggest this unproductive state of nature is less probable than the base case (Table 6), the decision table gives a timeframe of how rapidly the stock would decline if it truly were as unproductive as in the low catch, low M model.

The productive high historical catch+ high natural mortality model estimates a very high MSY. Harvesting this amount would lead to rapid depletion of the stock if the true state of nature were actually less productive. However, we feel that given the market and bycatch restraints placed on the arrowtooth fishery, it is unlikely that catches could approach the 40,000-110,000 mt associated with this management scenario.

7. Research needs

We recommend an additional study on length at maturity since the values we used are from Rickey (1993). We also acknowledge that our quantification of aging error is crude: we assumed that break-and burn ages are unbiased, our estimate of bias for surface-read ages is from ninety-nine fish taken from a single year, and our estimate of precision is from English sole. Further comparative aging studies are warranted.

Additional historical research and modeling could reduce the uncertainty in the early catch and bycatch reconstructions. We encourage ongoing efforts to standardize historical landings reconstructions for all West Coast groundfish. For the bycatch fleet, we propose a GLM analysis of observer data that would relate arrowtooth bycatch to latitude, depth, season, and landings of other species.

This assessment should be compared to assessments from the Gulf of Alaska and British Columbia in order to identify different modeling assumptions and solve common problems. Collaboration with Canadian scientists is needed since arrowtooth are likely a trans-boundary stock.

8. Acknowledgements

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Figures

Figure 1. California landings for the mink food fishery. NMFS ACL is the NMFS Annual Commercial Landings Database.

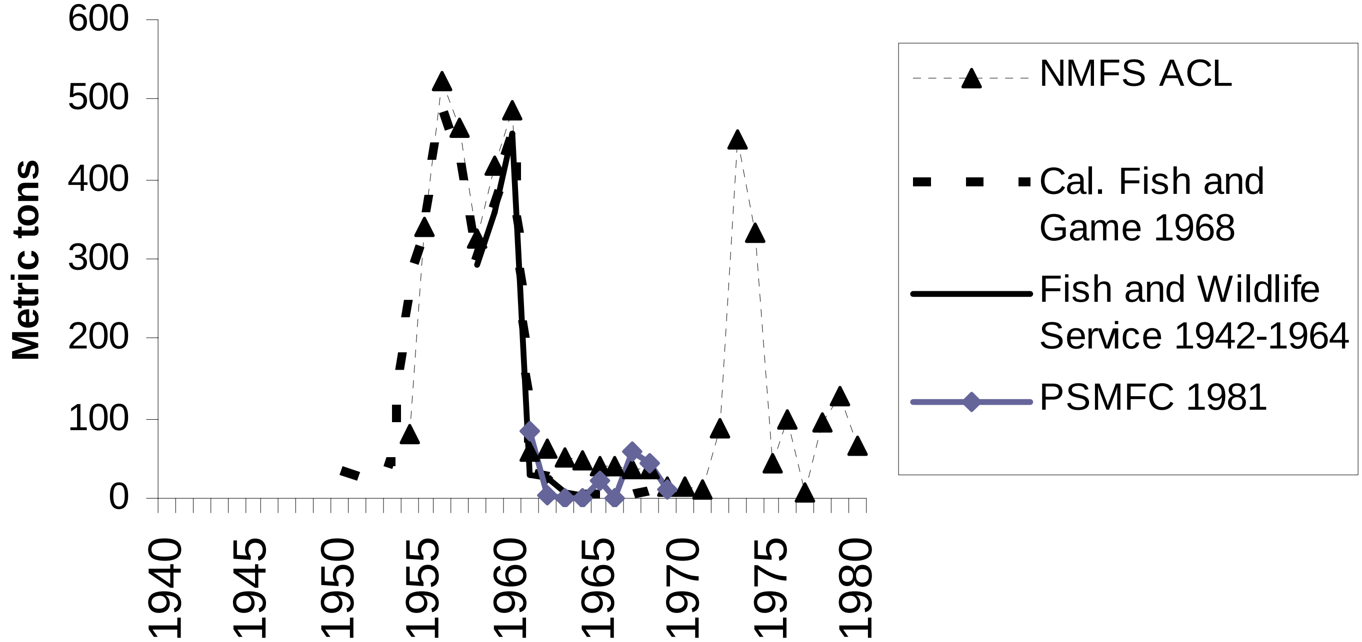


Figure 2. Oregon landings for the mink food fishery. NMFS ACL is the NMFS Annual Commercial Landings Database.

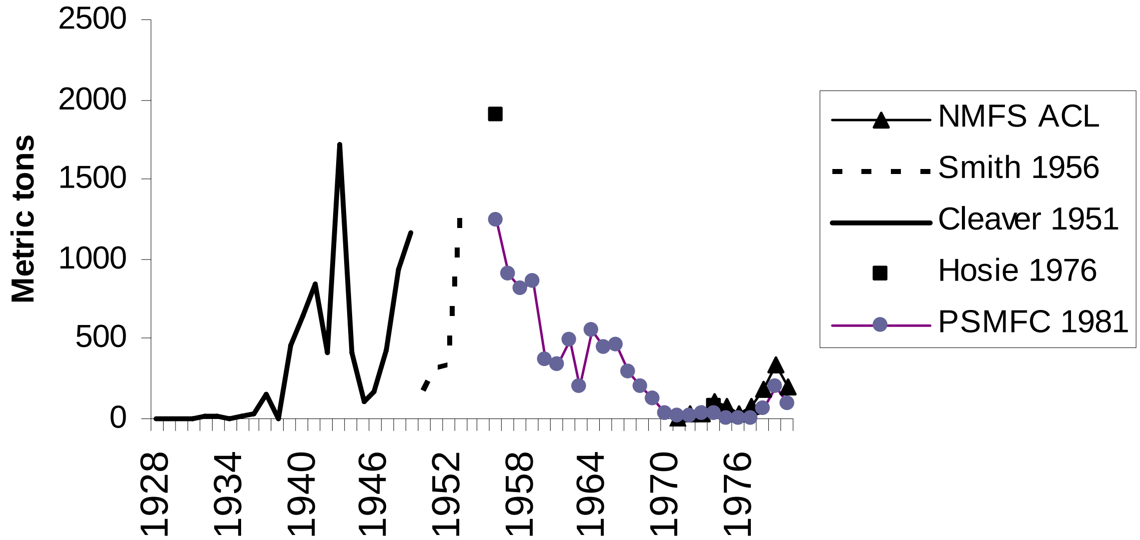


Figure 3. Washington landings for the mink food fishery. NMFS ACL is the NMFS Annual Commercial Landings Database.

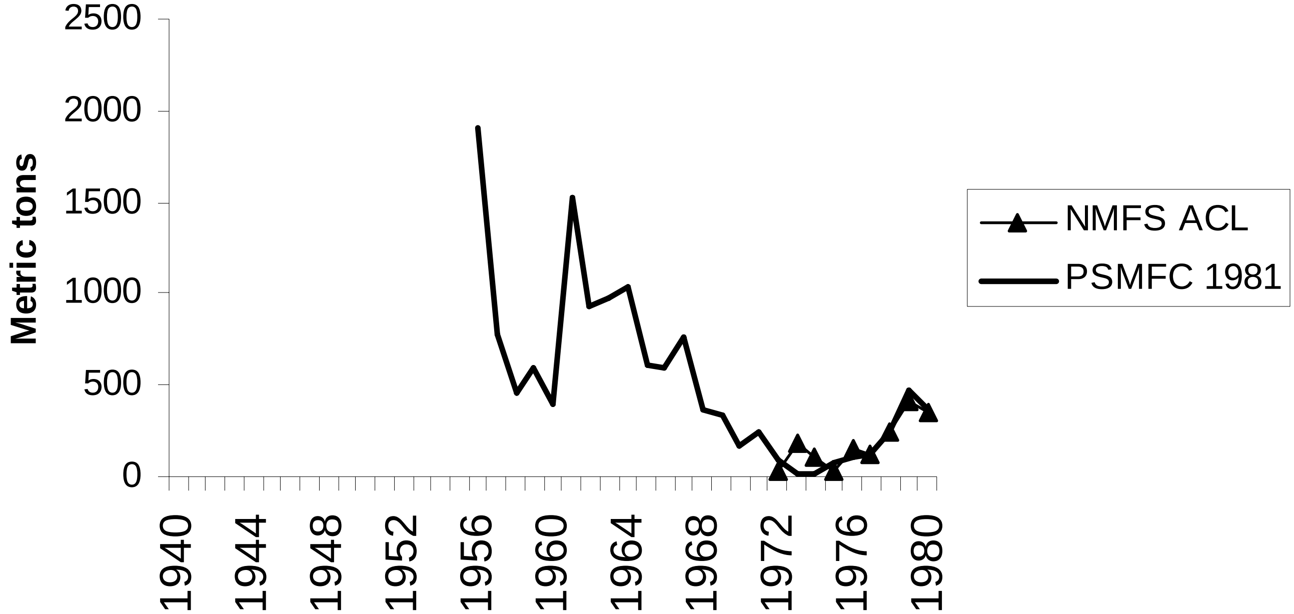


Figure 4. Landings in metric tons, 1981-2006, from the PacFIN database. The Vancouver-US INPFC area is 47° 30’ N to 50° 30’ N, US catch only. The Columbia INPFC area is 43° N to 47° N. The Oregon Coast area was nominally used by WDFW, spans 42° N to 46° 16 N, and landings account for only 0.01% of coastwide catch. The Eureka area spans 40° 30’ N to 43° N. The Monterey area spans 36° N to 40° 30’ N. The Conception area spans 32° 30’ N to 36° N. ‘Unknown’ indicates an unspecified Pacific Council INPFC area.

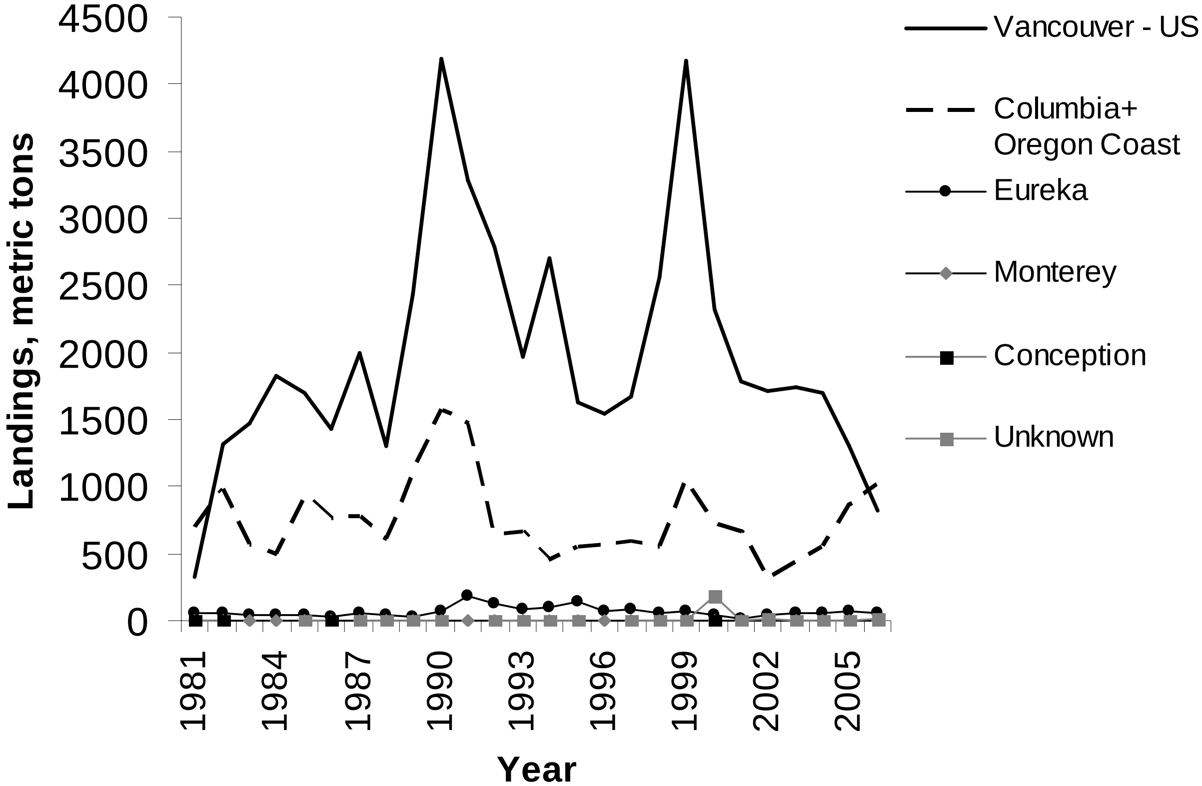


Figure 5. Landings by trawl gear from 1981-2006, from the PacFIN database. Non-trawl landings account for <1%, and are not shown here. Our “other trawl” category includes “bottom trawl”, which accounts for 56% of the total landings in 1981.

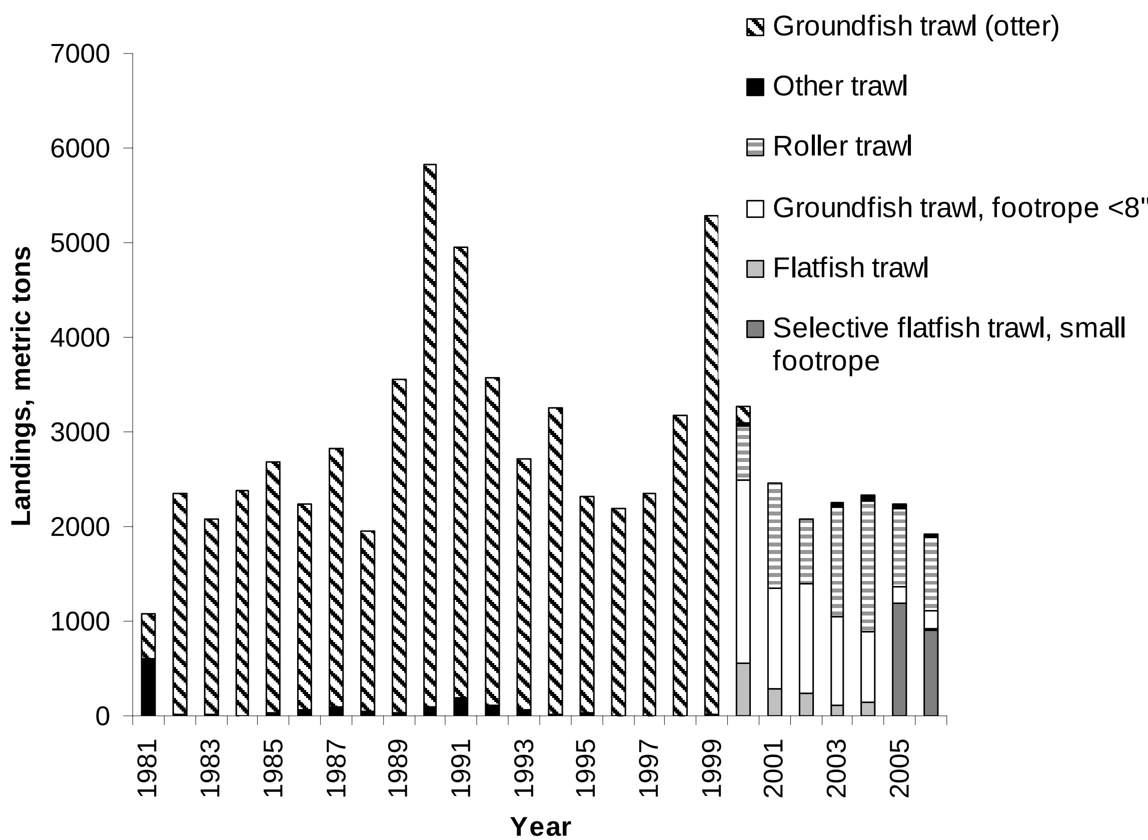


Figure 6. Observed discard fraction from the fillet fleet (points). The line represents values from a loess smoother, used to inflate landings into total catch, which was used as the model input. Trips that did not retain arrowtooth were excluded from these data. “Pikitch” is Pikitch et al. 1998, “EDCP” is the Enhanced Data Collection Program in Oregon, “EFP” is the Exempted Fishing Permit reported in Wallace 2002, and “Observer” is the NMFS West Coast Groundfish Observer Program.

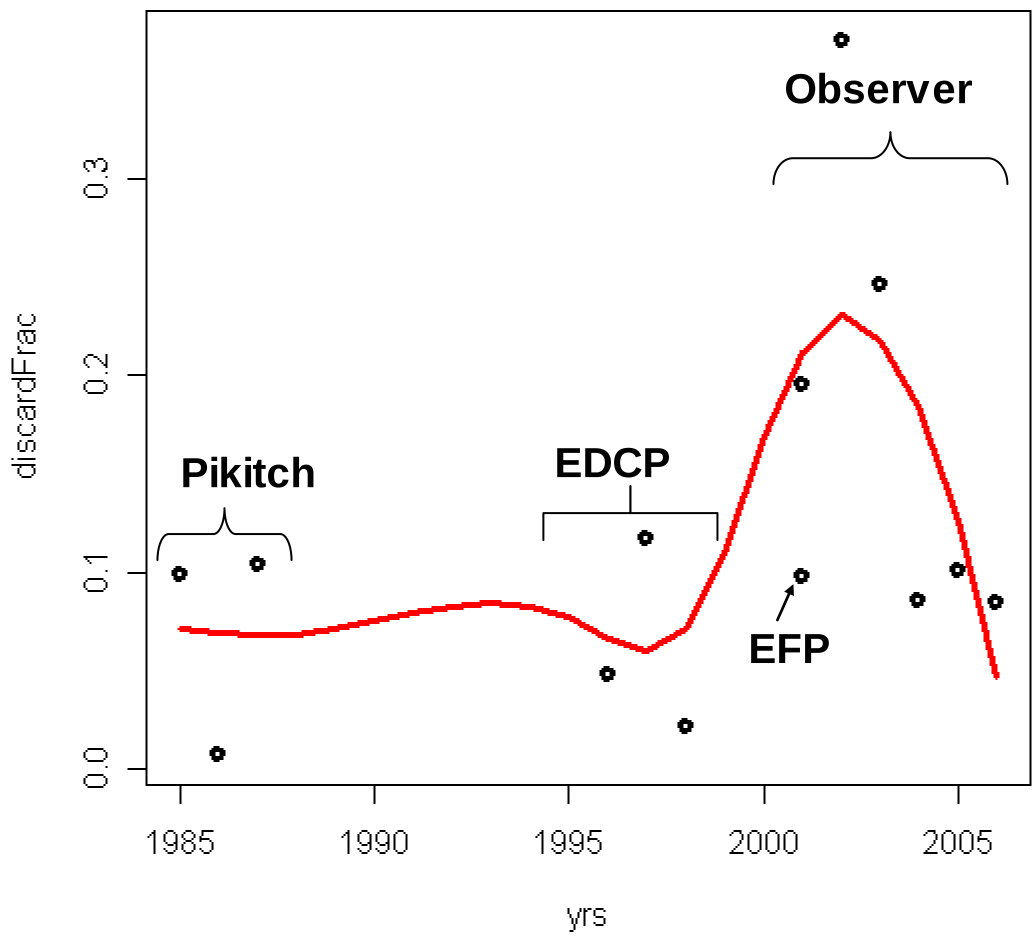


Figure 7. Year and depth coverage of the four surveys used in this analysis. The dashed vertical line in the lower plot is the approximate maximum depth limit of arrowtooth flounder in the surveys, during late spring through early fall.

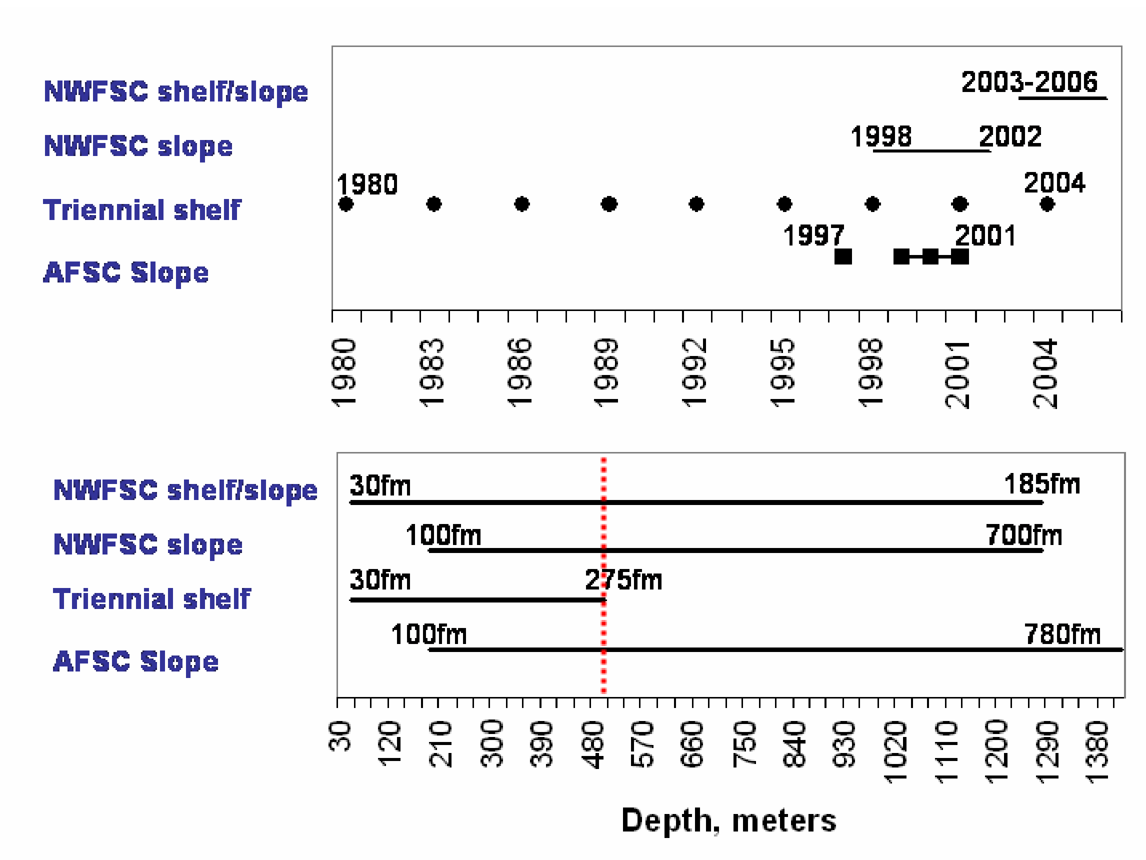
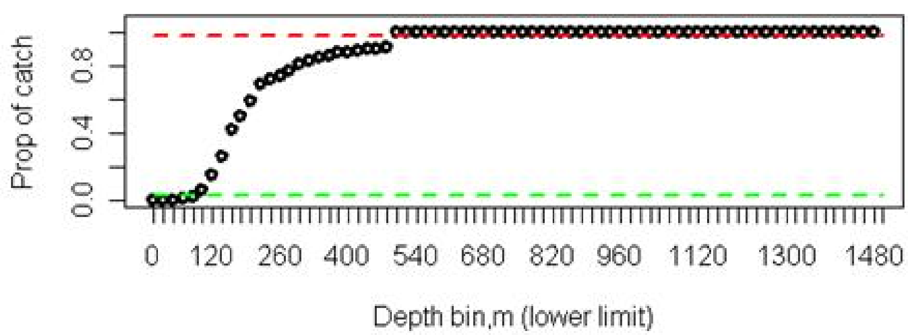


Figure 8. NWFSC Slope/Shelf survey data showing cumulative distribution of catch, by depth and latitude. Dashed lines represent 5% and 95% of cumulative catch.



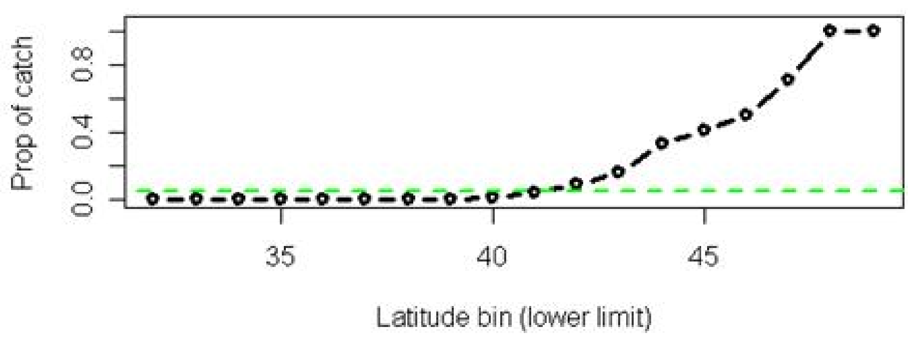


Figure 9. Average arrowtooth catch rate and body size, by depth and latitude. The Triennial Survey (dashed line) and NWFSC Slope/Shelf survey (solid line) are shown. Points represent average values per 20m depth bin or 0.25° latitude bin. Lines are from a loess smoother, weighted by sample size.

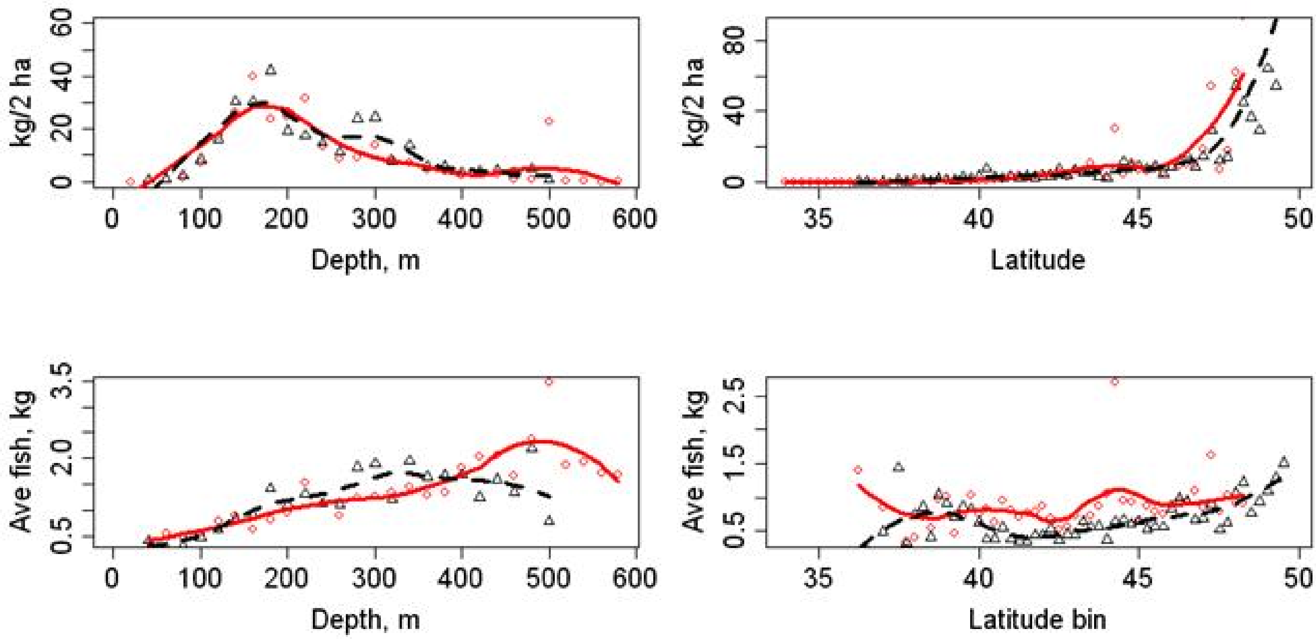


Figure 10. Average arrowtooth catch rate and body size by depth and latitude, for the AFSC Slope Survey, 1997 and 1999-2001. Points represent average values per 20m depth bin or 0.25° latitude bin. Lines are from a loess smoother, weighted by sample size.

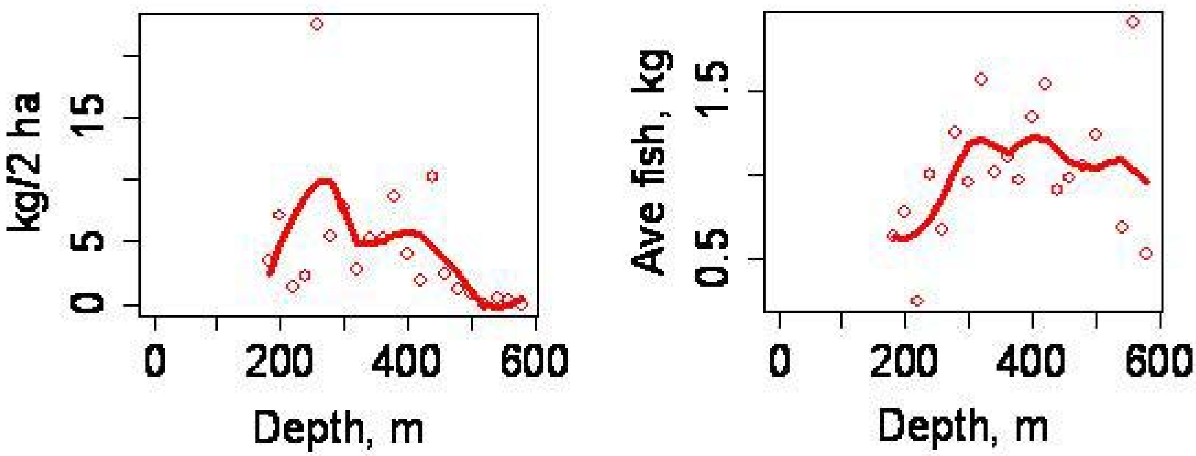


Figure 11. Delta-GLM model fits to NWFSC Shelf/Slope and Triennial Shelf Surveys showing predicted proportion positive vs. observed proportion positive.

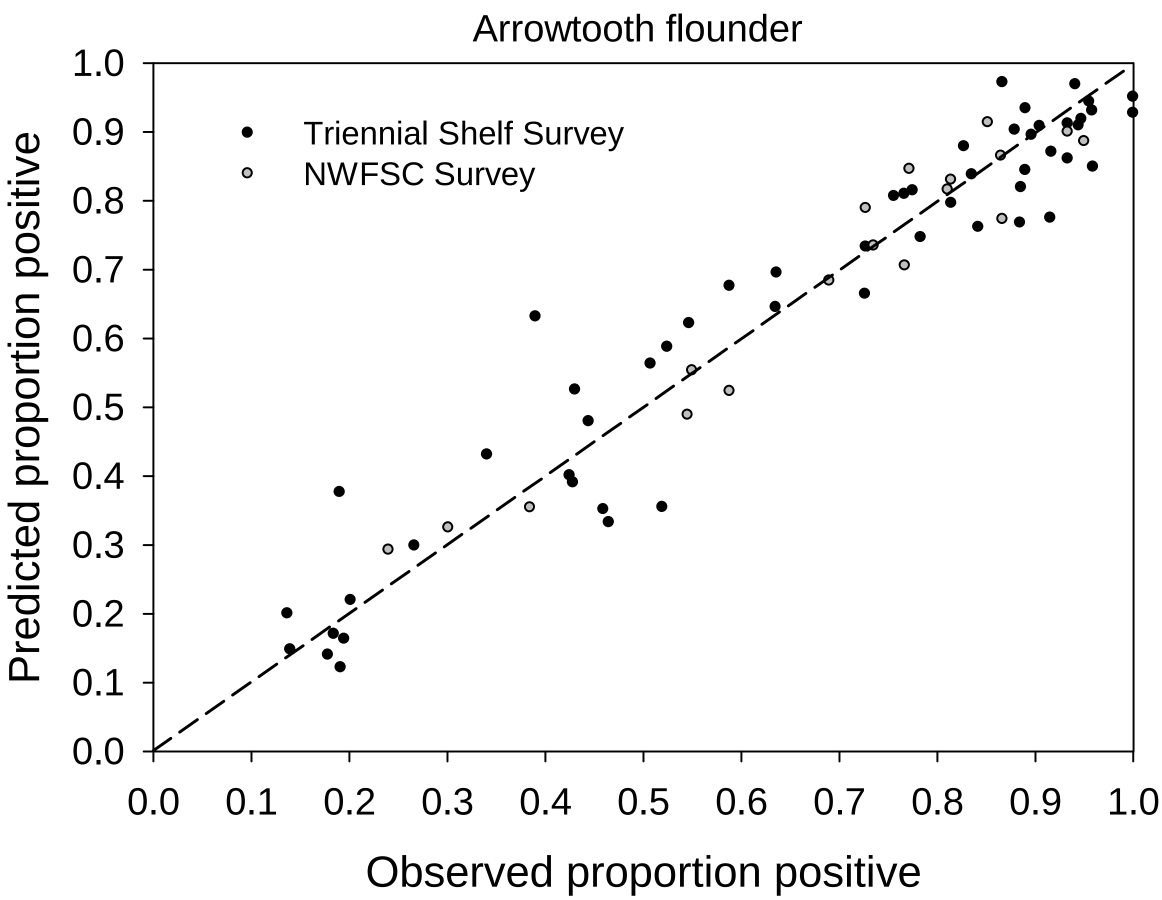


Figure 12. Delta-GLM model diagnostics to positive catch rates models (gamma error models) to NWFSC Shelf/Slope and Triennial Shelf Surveys showing residual deviance.

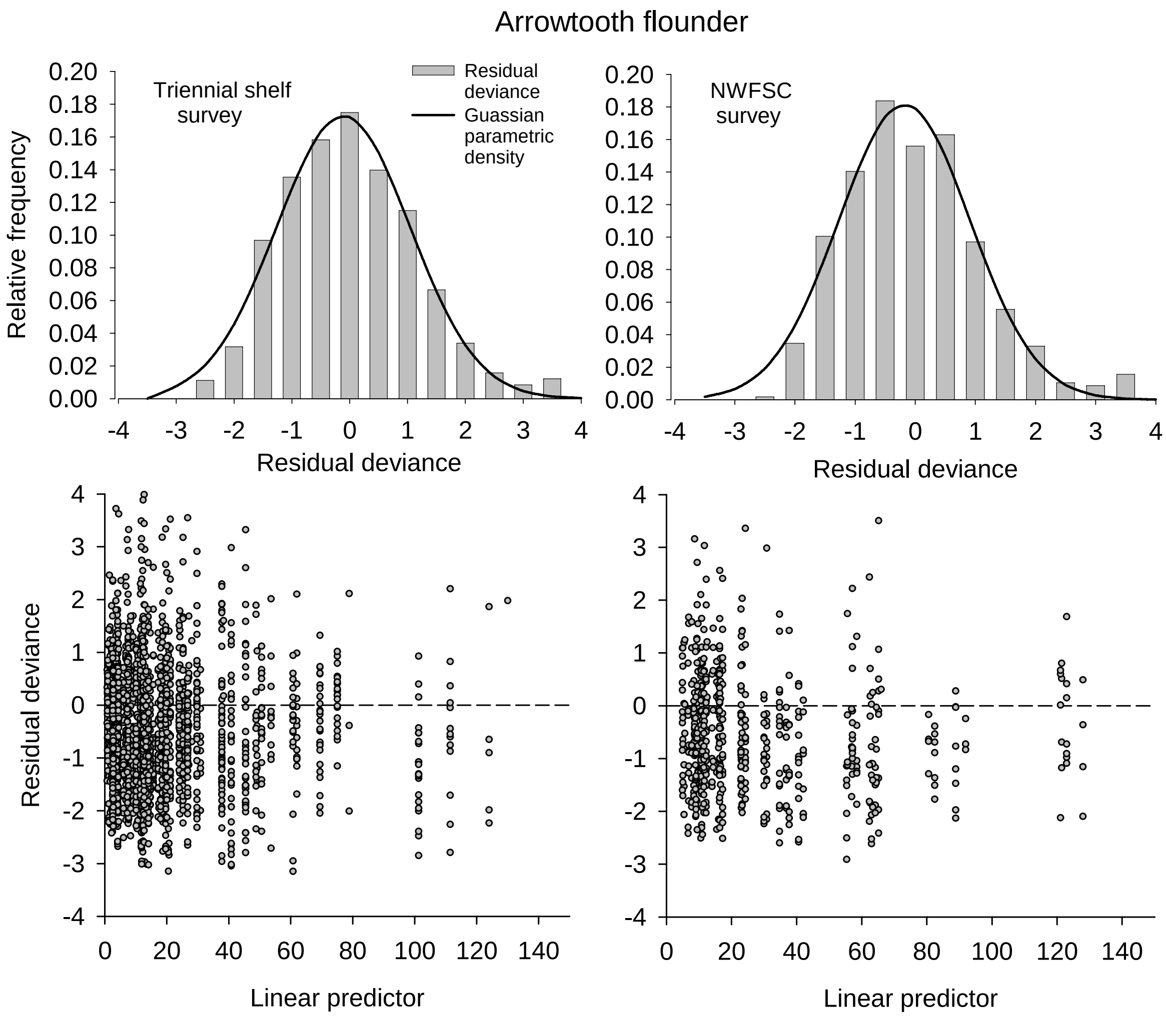


Figure 13. MCMC convergence diagnostics of the Delta-GLM model fit to NWFSC Shelf-Slope Survey data.

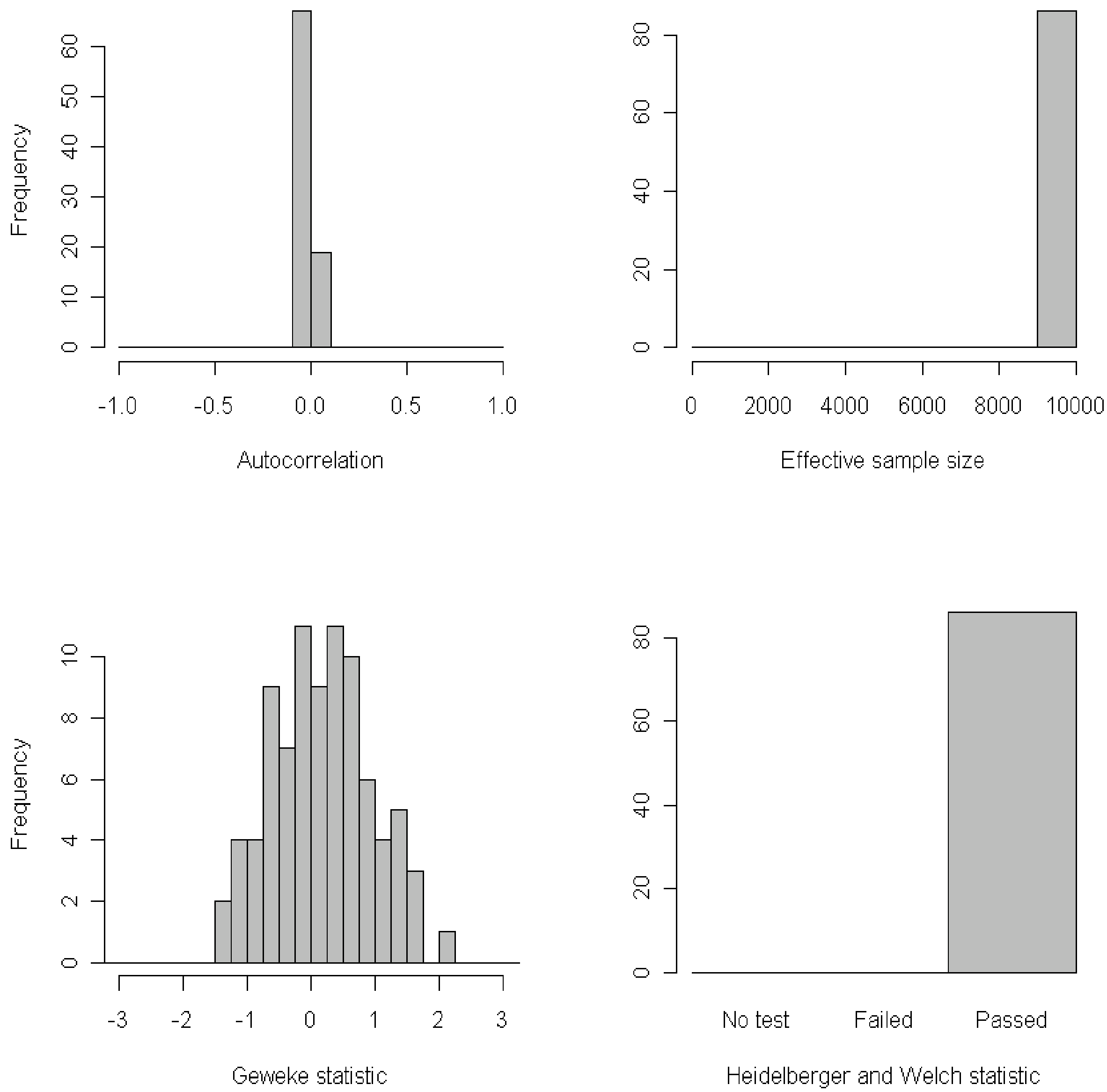


Figure 14. Taken from Rickey (1993): *“Arrowtooth abundance from the 1977-1992 Alaska Fisheries Science Center Triennia Shelf Survey.”*

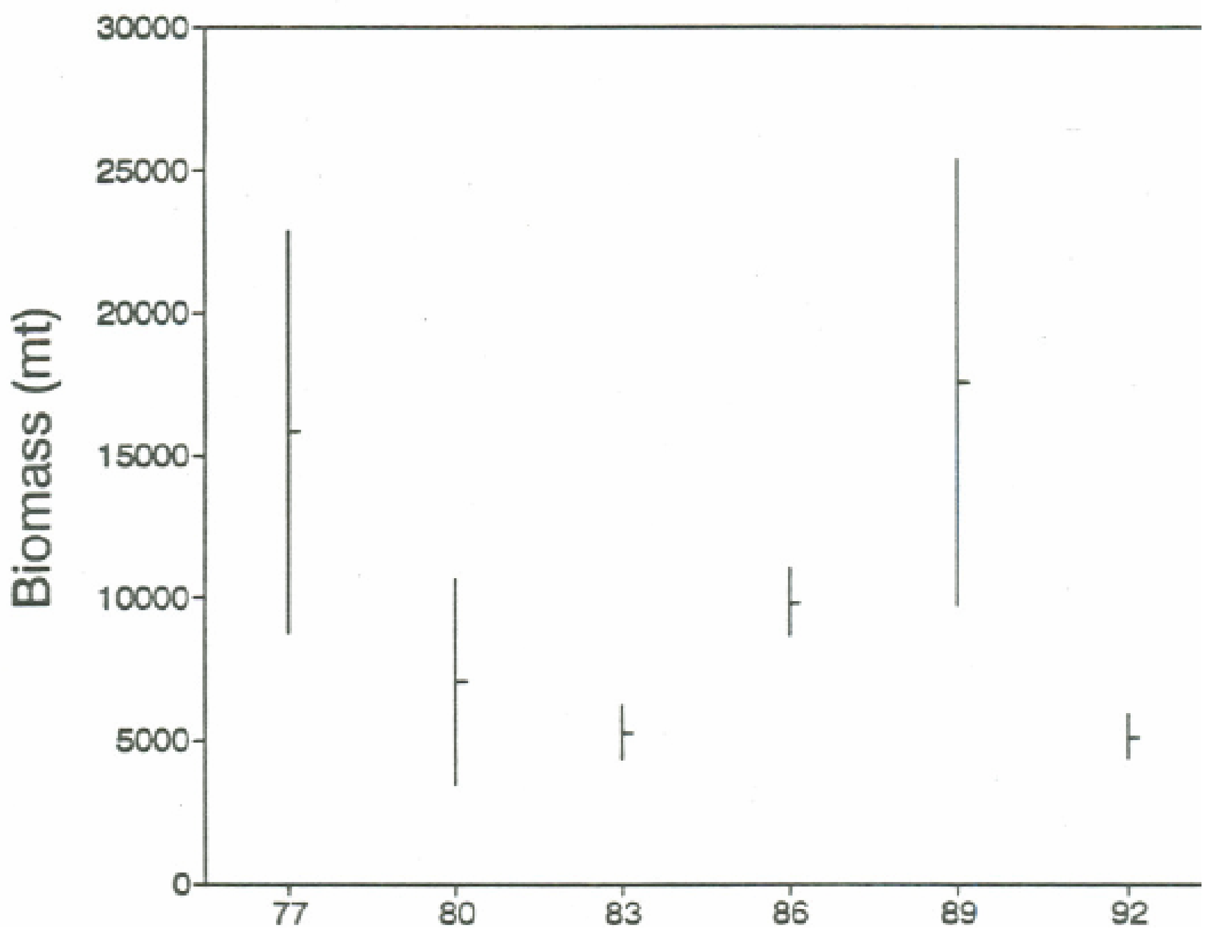


Figure 15. From Turnock, Wilderbuer, and Brown (2005): *"Age 3+ arrowtooth flounder biomass in the Gulf of Alaska (solid line) and female spawning biomass (line with +) from 1961 to 2005. The approximate lognormal 95% confidence intervals shown underestimate the uncertainty because variance in natural mortality and survey Q as well as other fixed parameters are not accounted for."*

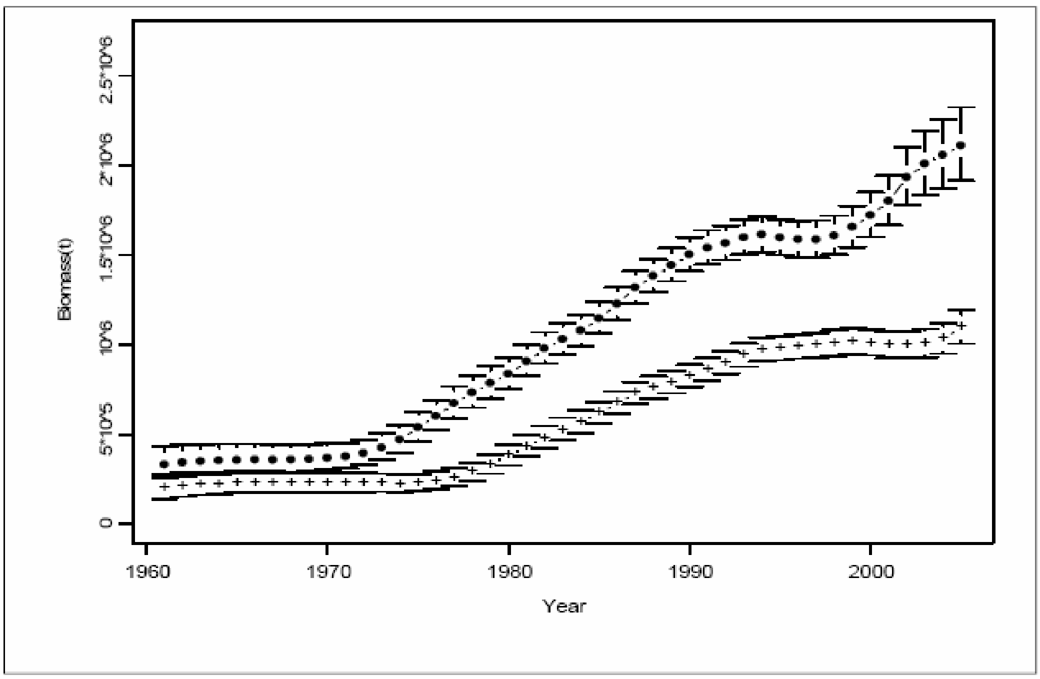


Figure 16. From Fargo and Starr (2001). *“Mean CPUE and 90% confidence interval for arrowtooth flounder from the Hecate Strait multispecies survey, 1984-2000.”* Note that this is only a portion of the arrowtooth in British Columbia, and may be a separate stock from areas such as Queen Charlotte Sound and west Vancouver Island.

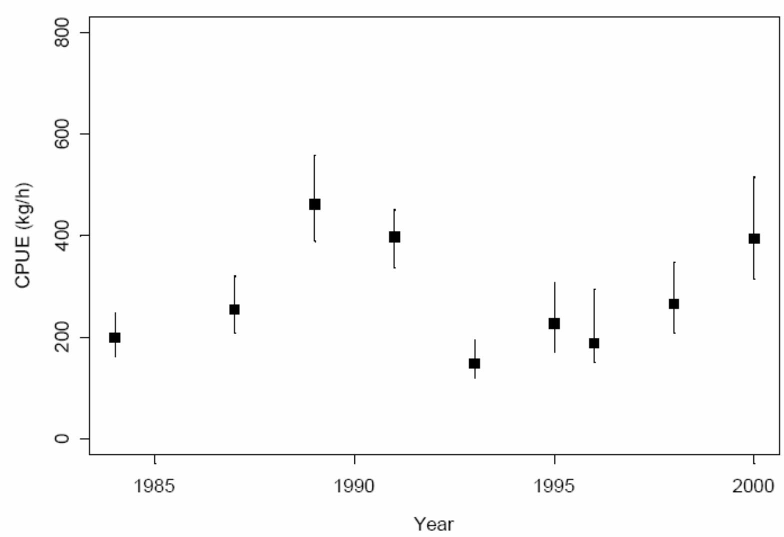


Figure 17. von Bertalanffy growth relationships estimated within SS2 (base case)

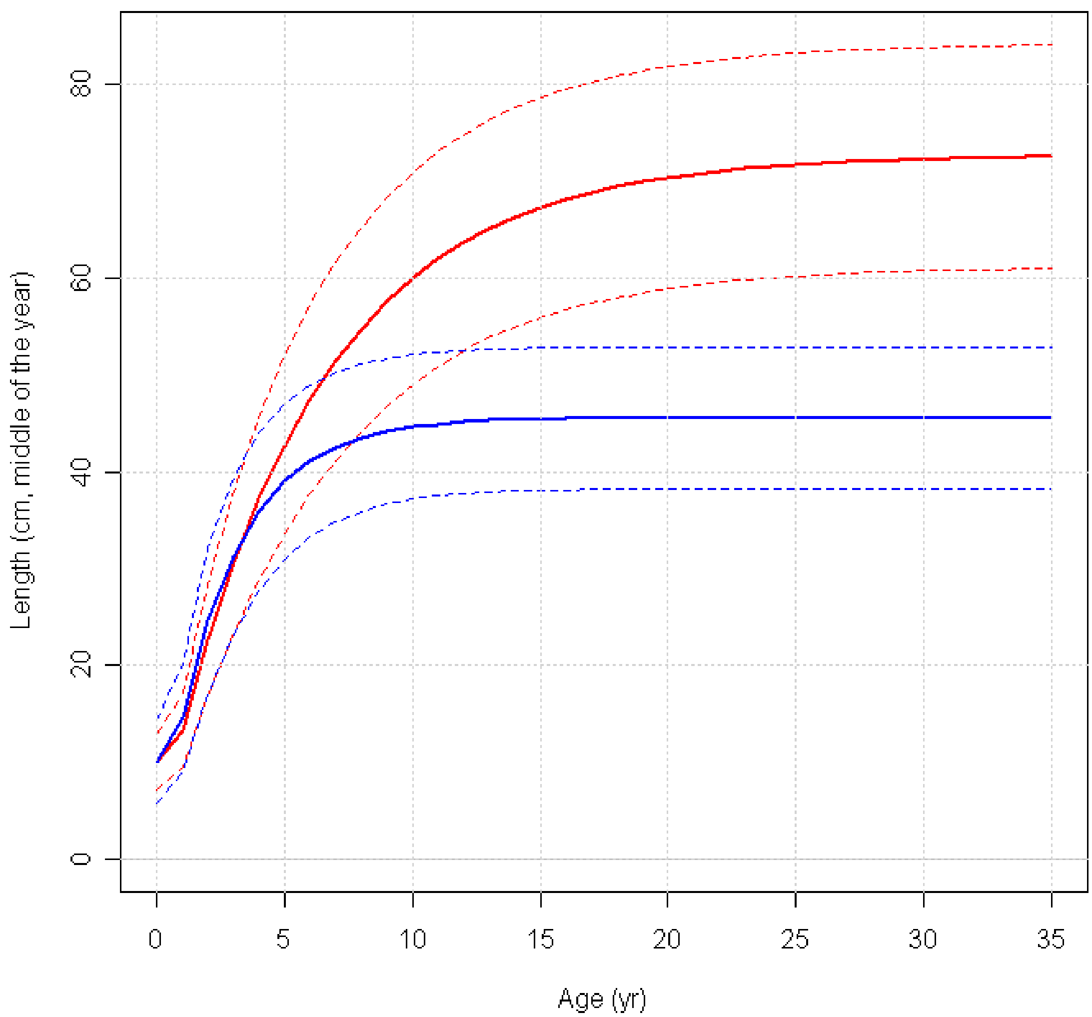


Figure 18. Length weight relationships used as input into SS2.

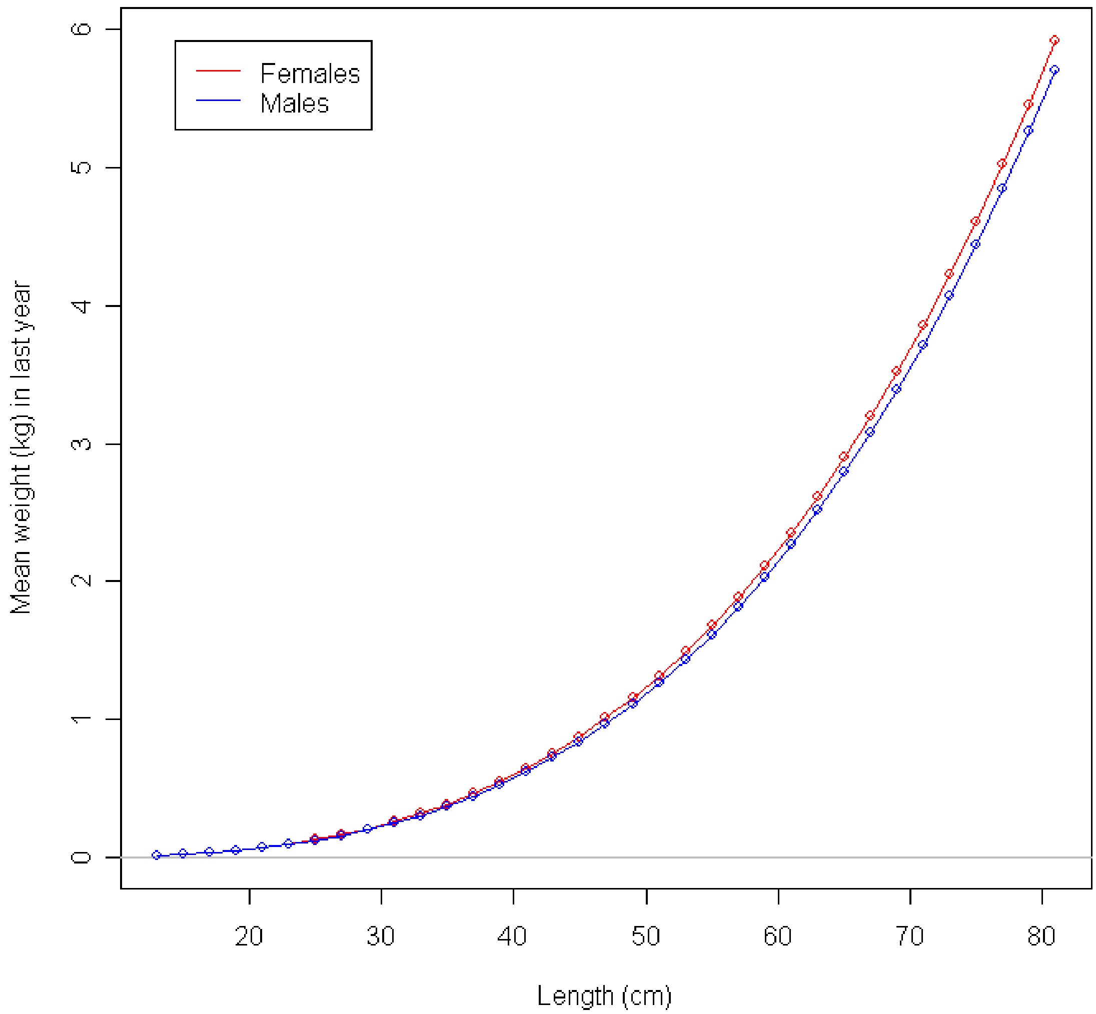


Figure 19. Female maturity relationship (from Rickey 1993).

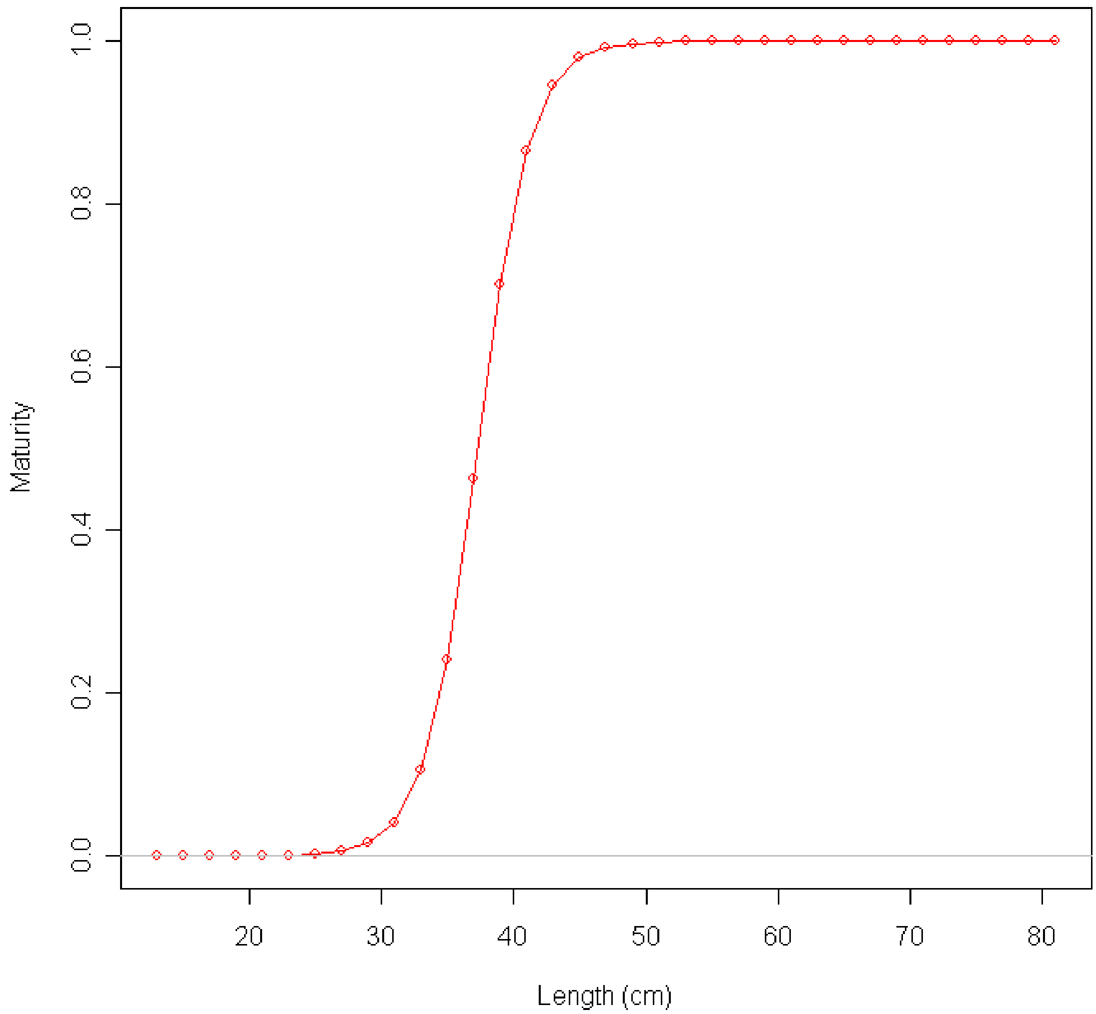


Figure 20. Estimated time series of arrowtooth spawning biomass in the base case model

- -

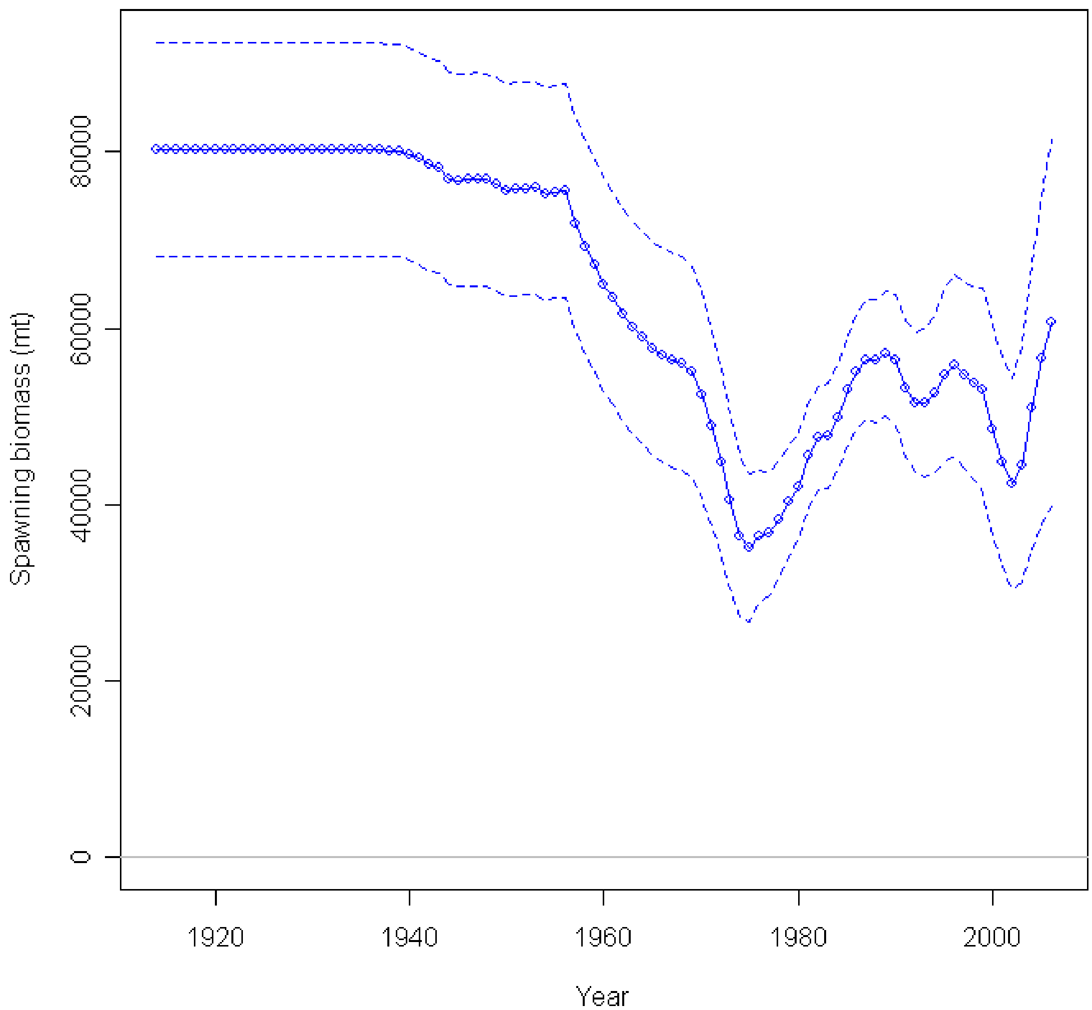


Figure 21. Predicted total arrowtooth biomass time series, base case model.

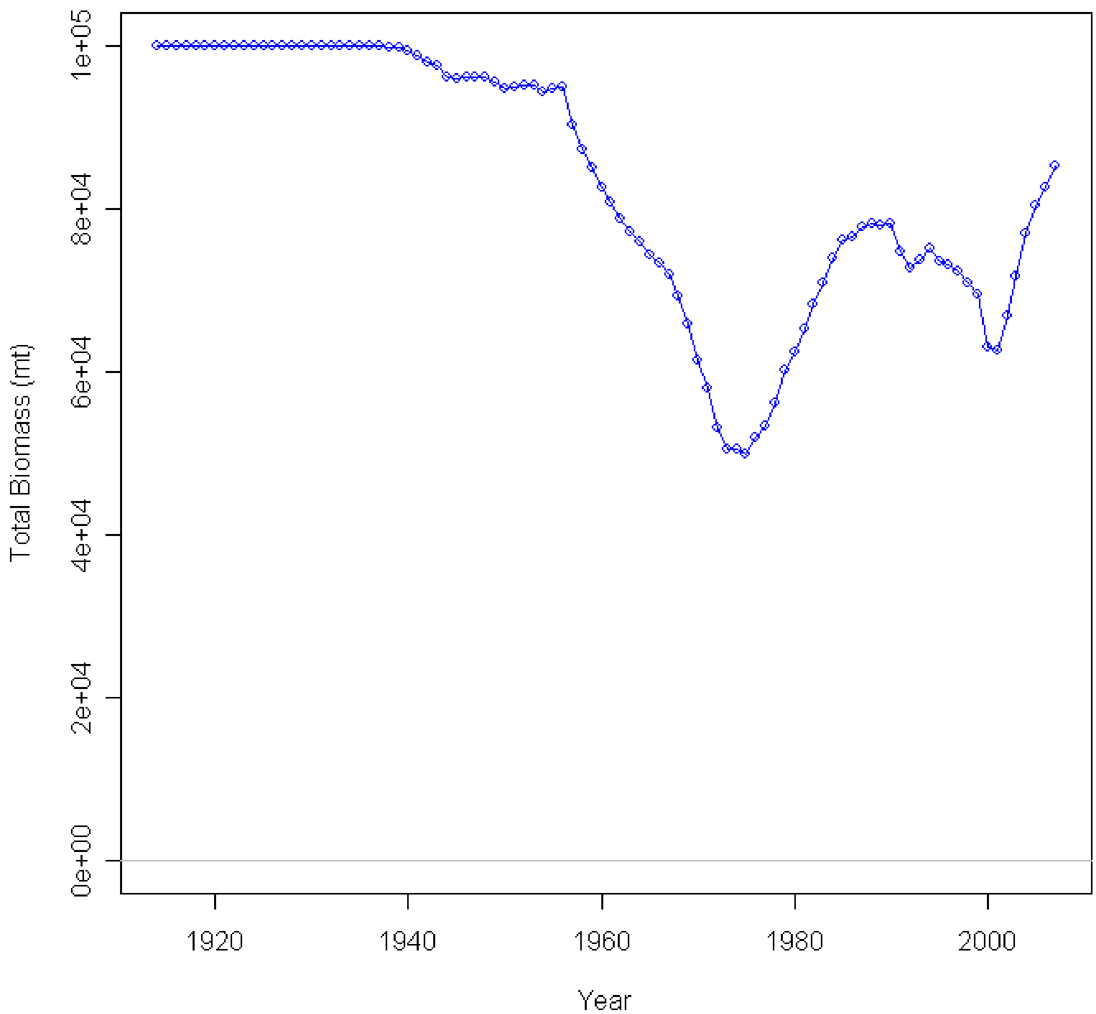


Figure 22. Arrowtooth spawning biomass relative to management targets.

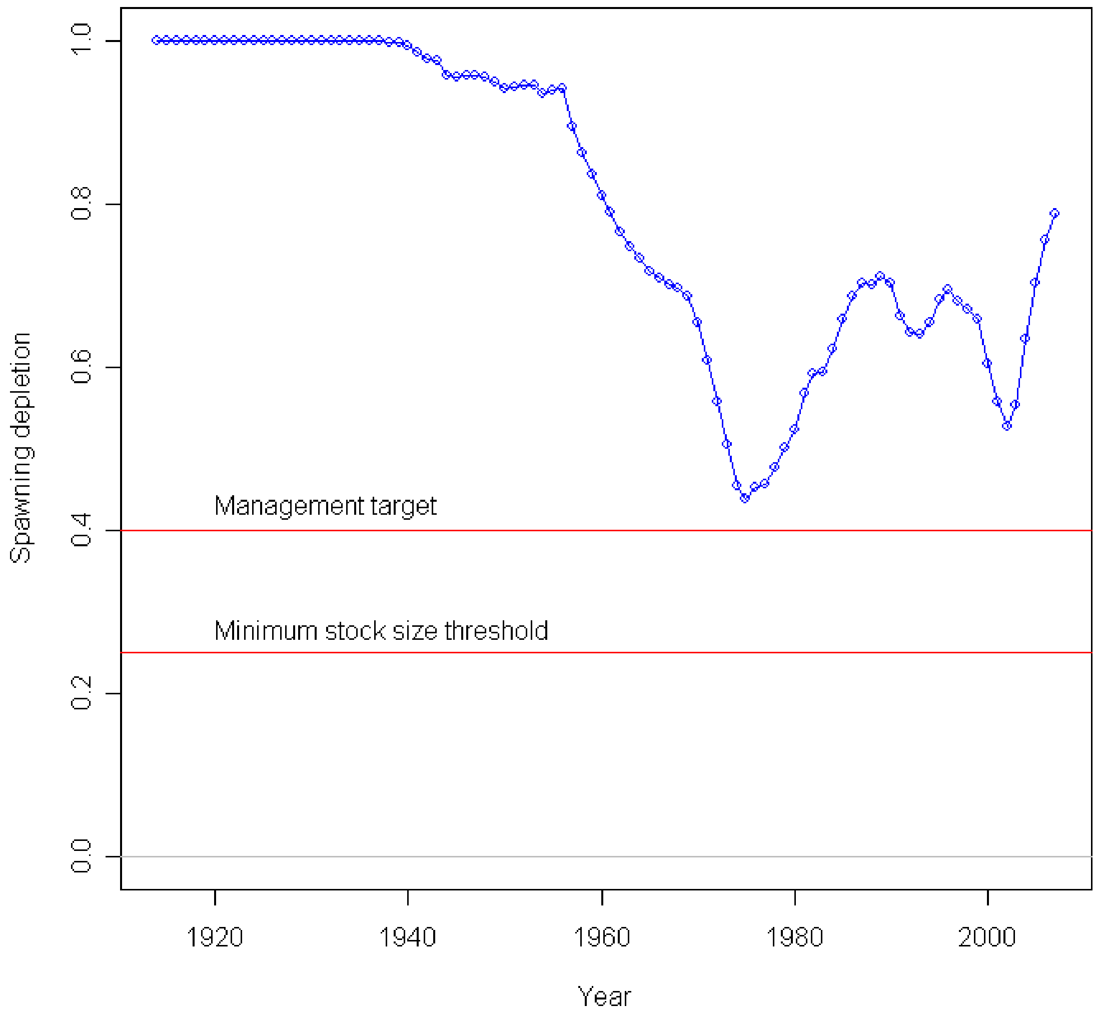


Figure 23. Estimated arrowtooth recruitment and ~95% confidence intervals.

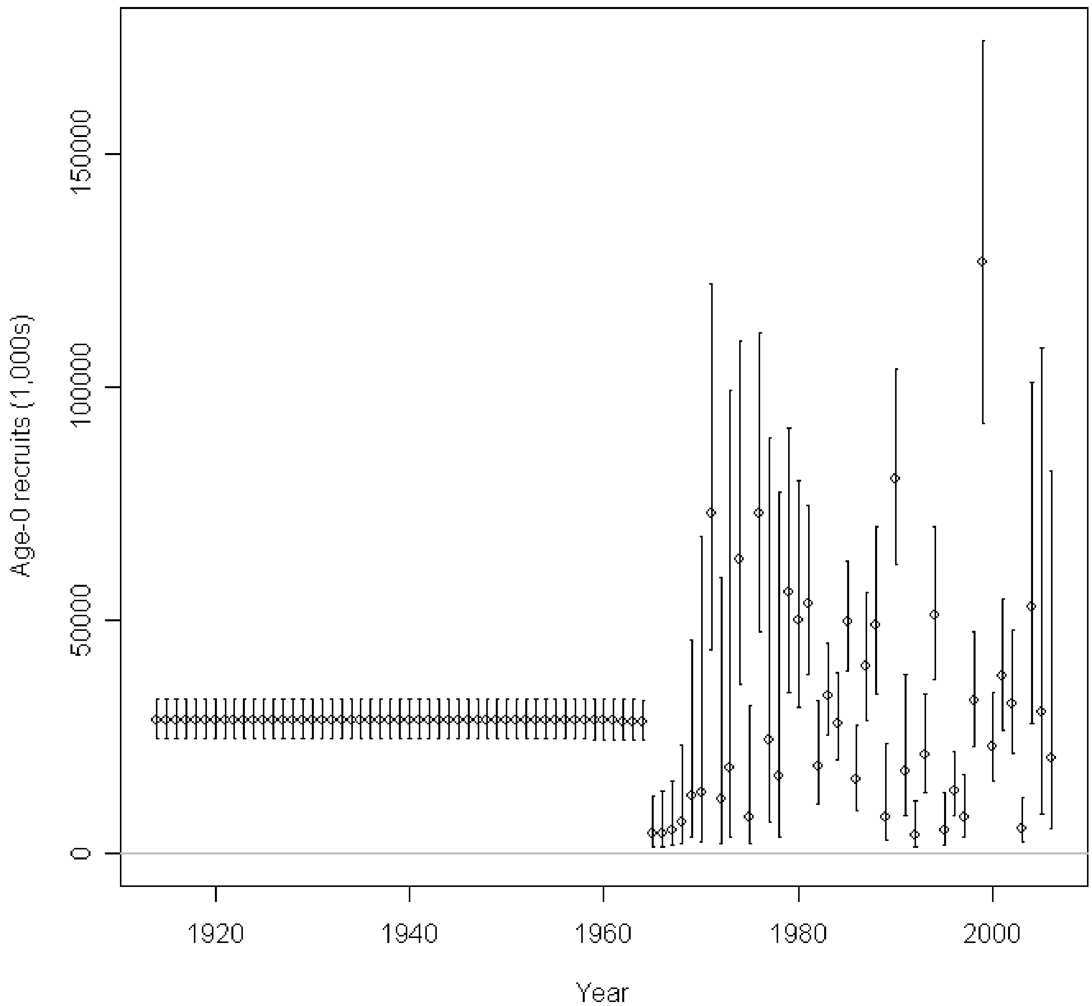


Figure 24. Natural logarithm of recruitment deviations

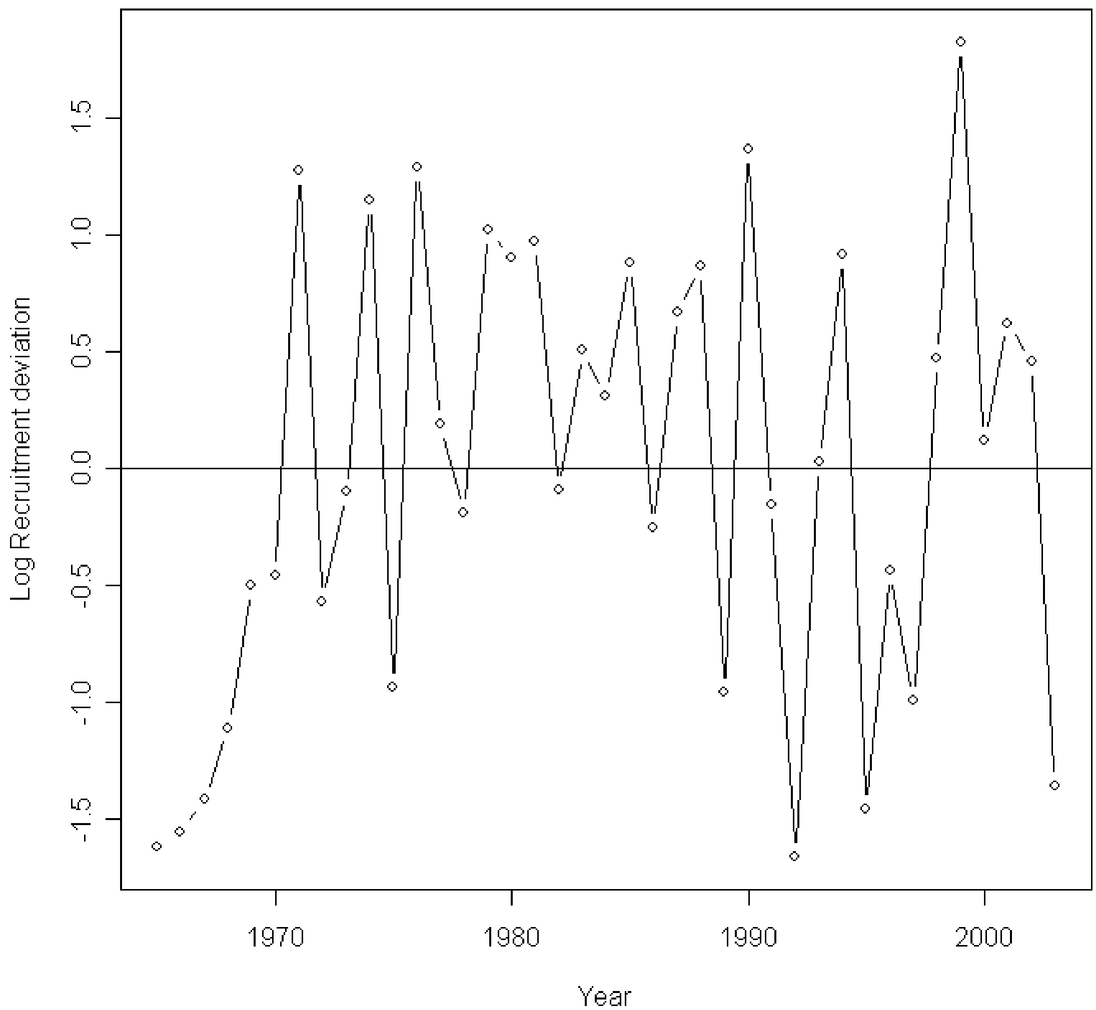


Figure 25. Stock recruitment plot for arrowtooth

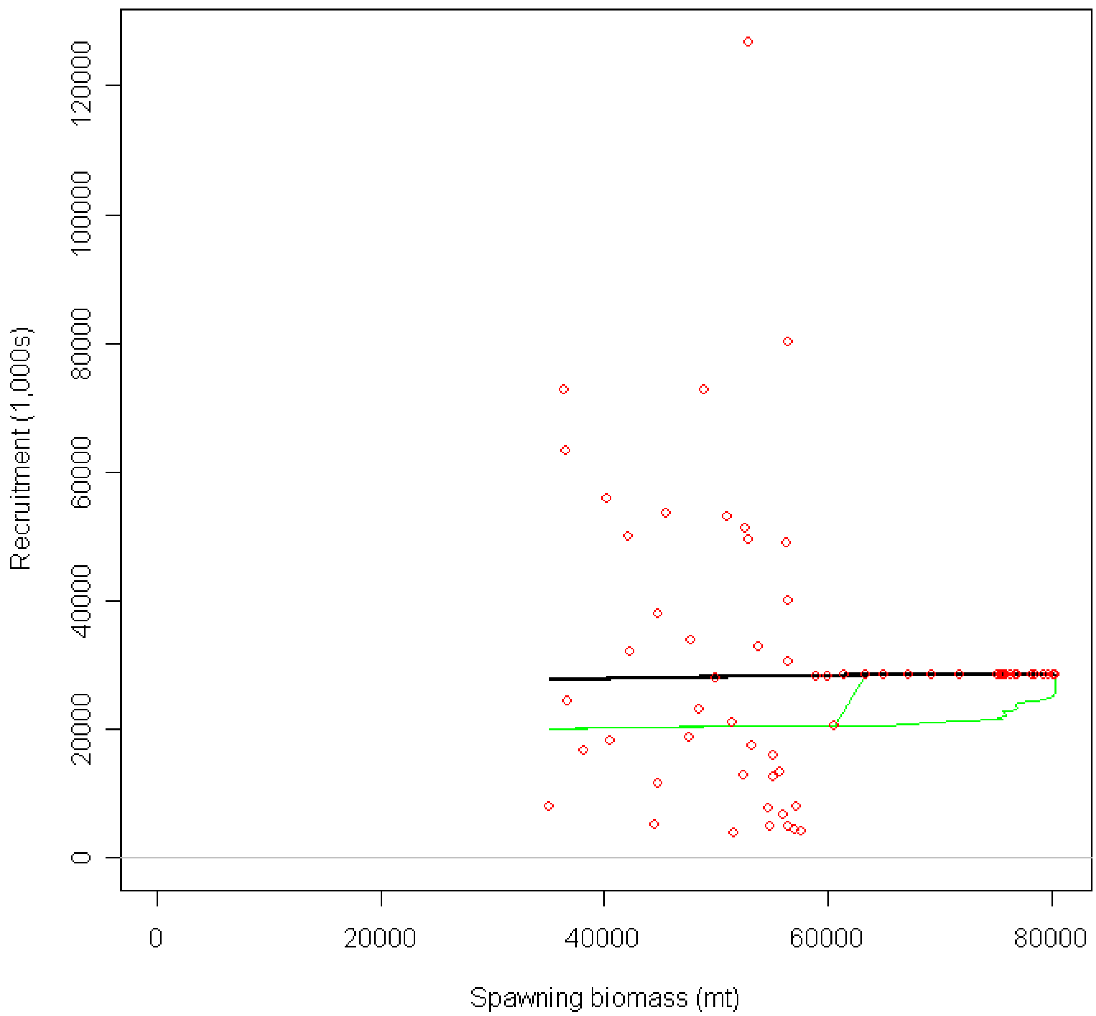


Figure 26. Harvest rate of arrowtooth by the mink food fishery (red line beginning in 1928), the bycatch fleet (green line beginning in 1956), and the fillet fleet (yellow line beginning in 1981).

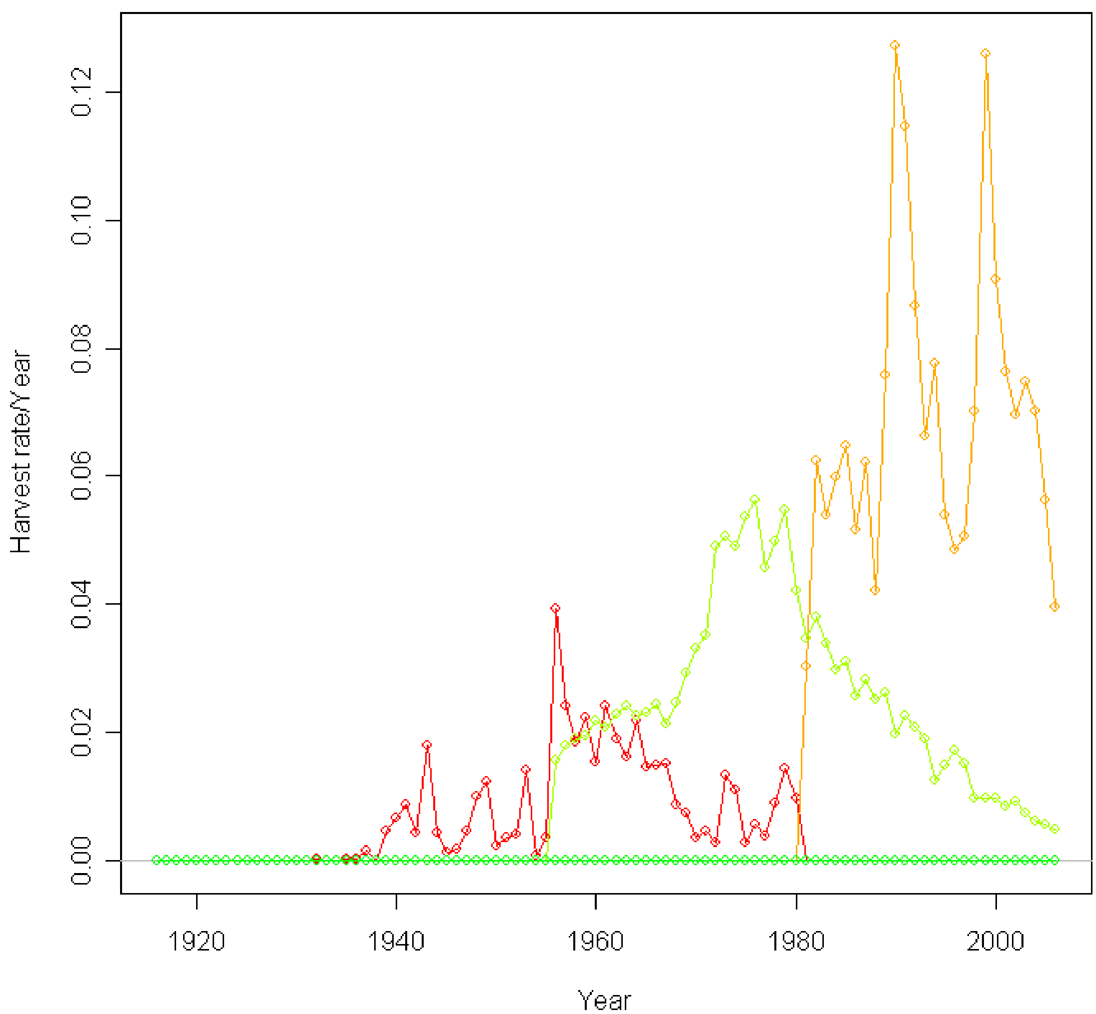


Figure 27. Total catch, in metric tons, of arrowtooth by the mink food fishery (red line beginning in 1928), the bycatch fleet (green line beginning in 1956), and the fillet fleet (yellow line beginning in 1981). The black line is summed catch over all fleets.

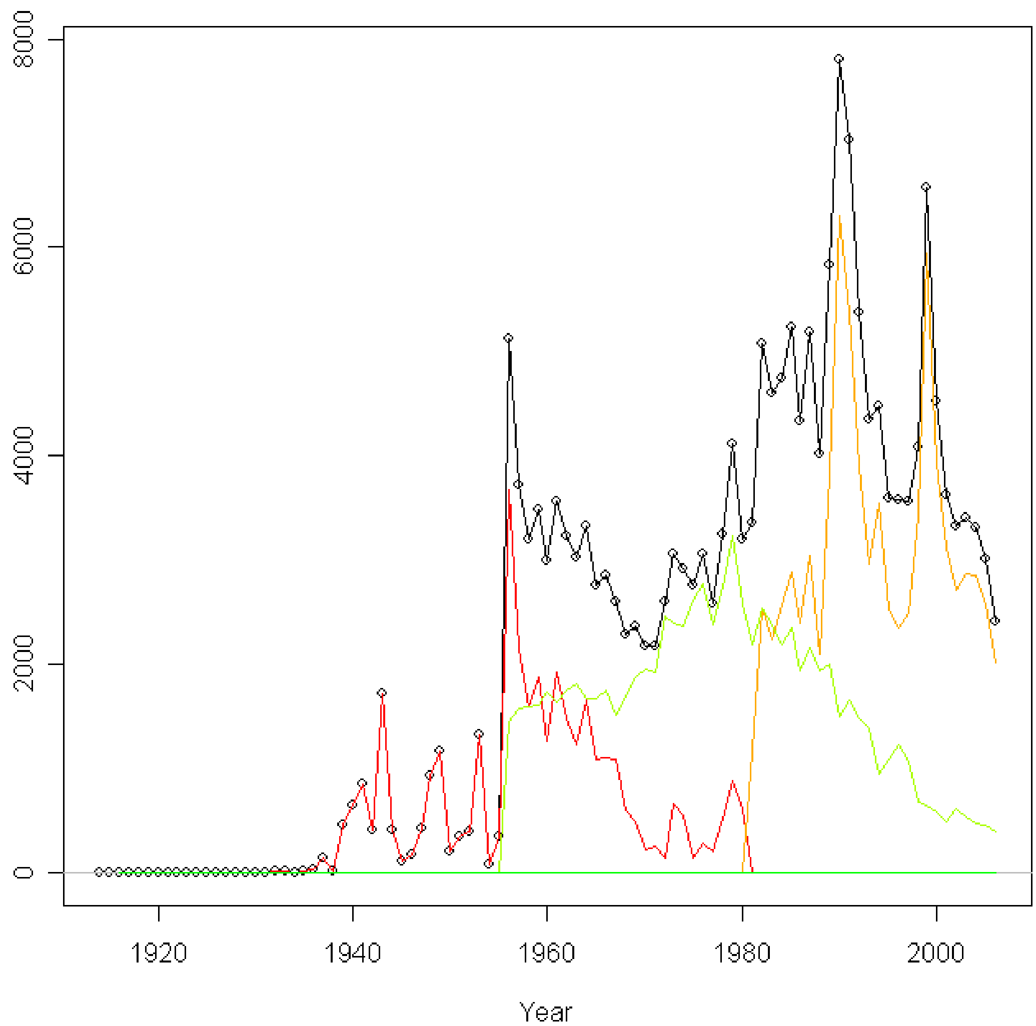


Figure 28. Base model fit to the NWFSC Slope Survey.

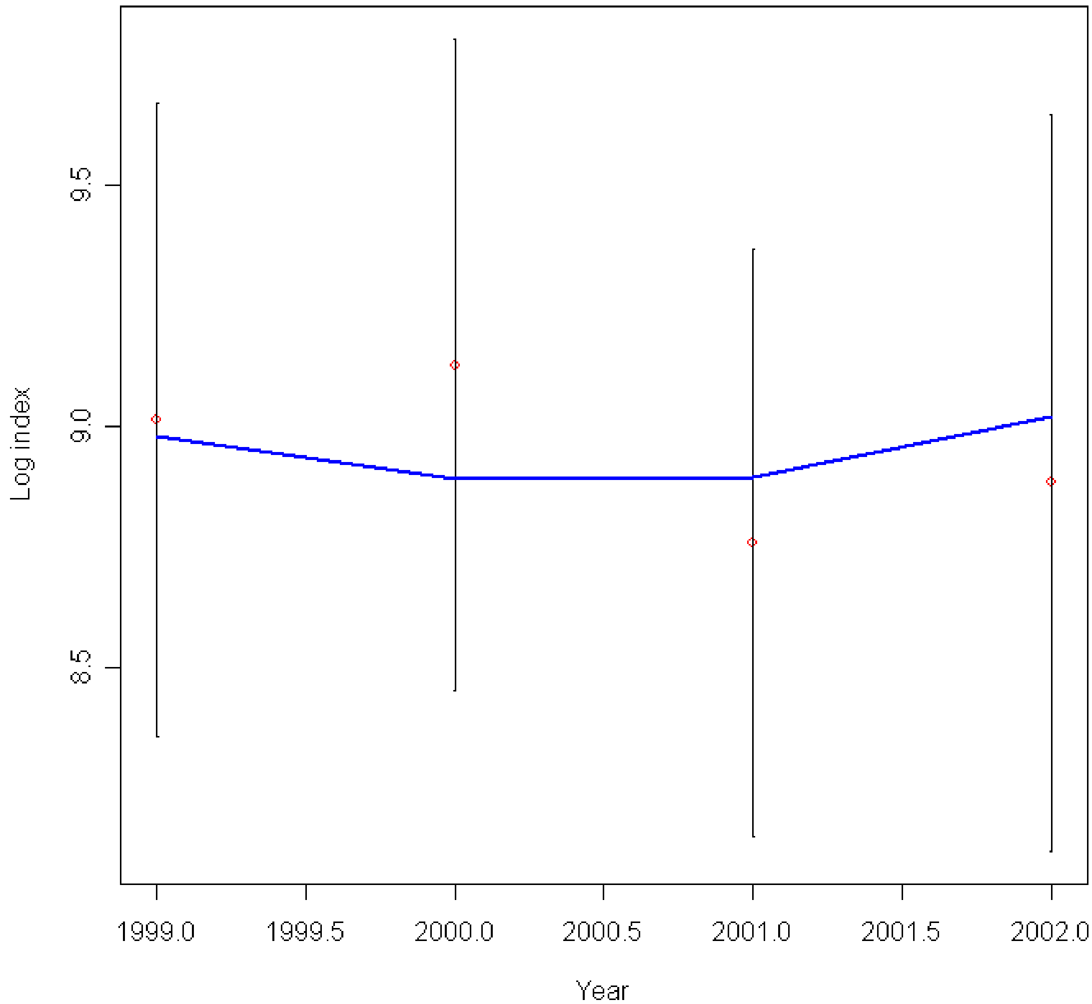
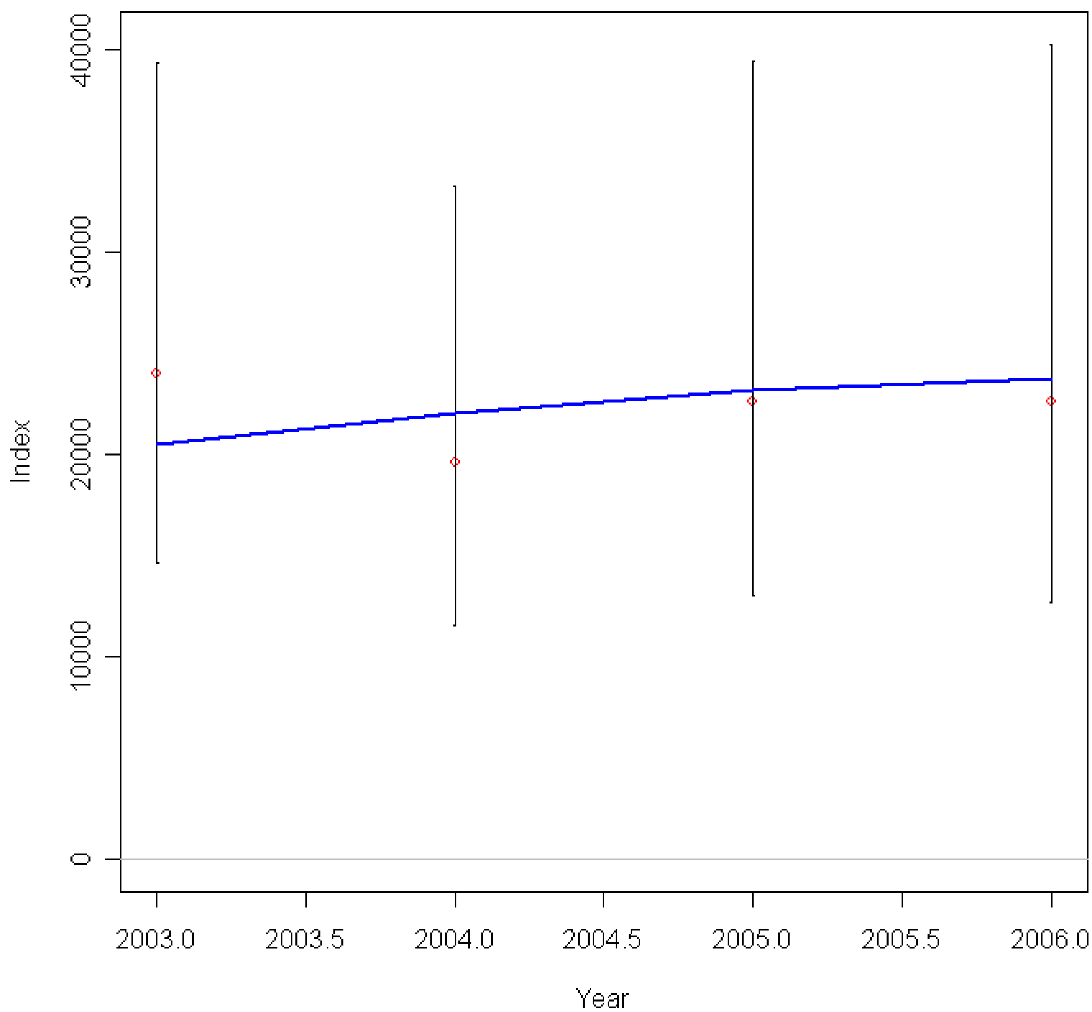


Figure 29. Base case model fits to the NWFSC Slope-Shelf survey



30. Base model fit to the AFSC Slope Survey.

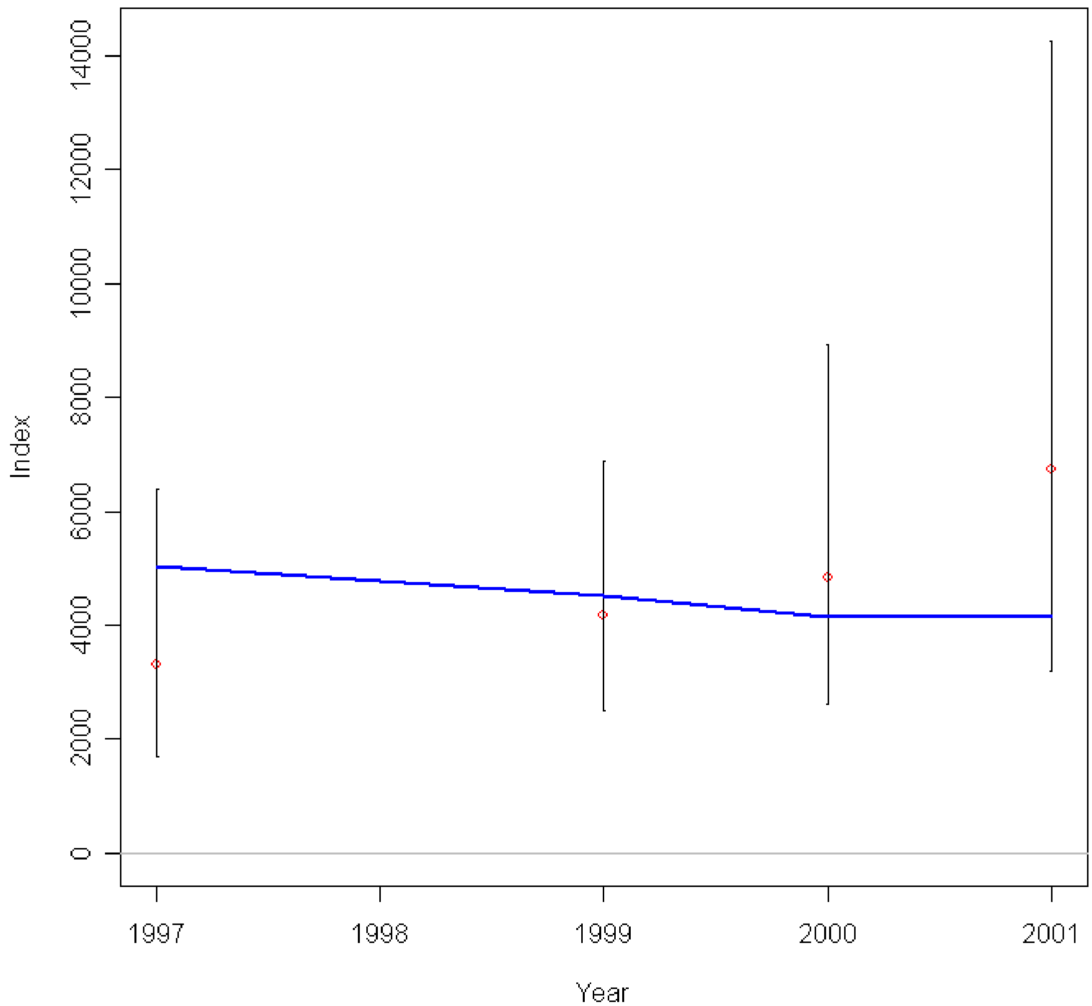


Figure 31. Base case model fit to Triennial Survey data.

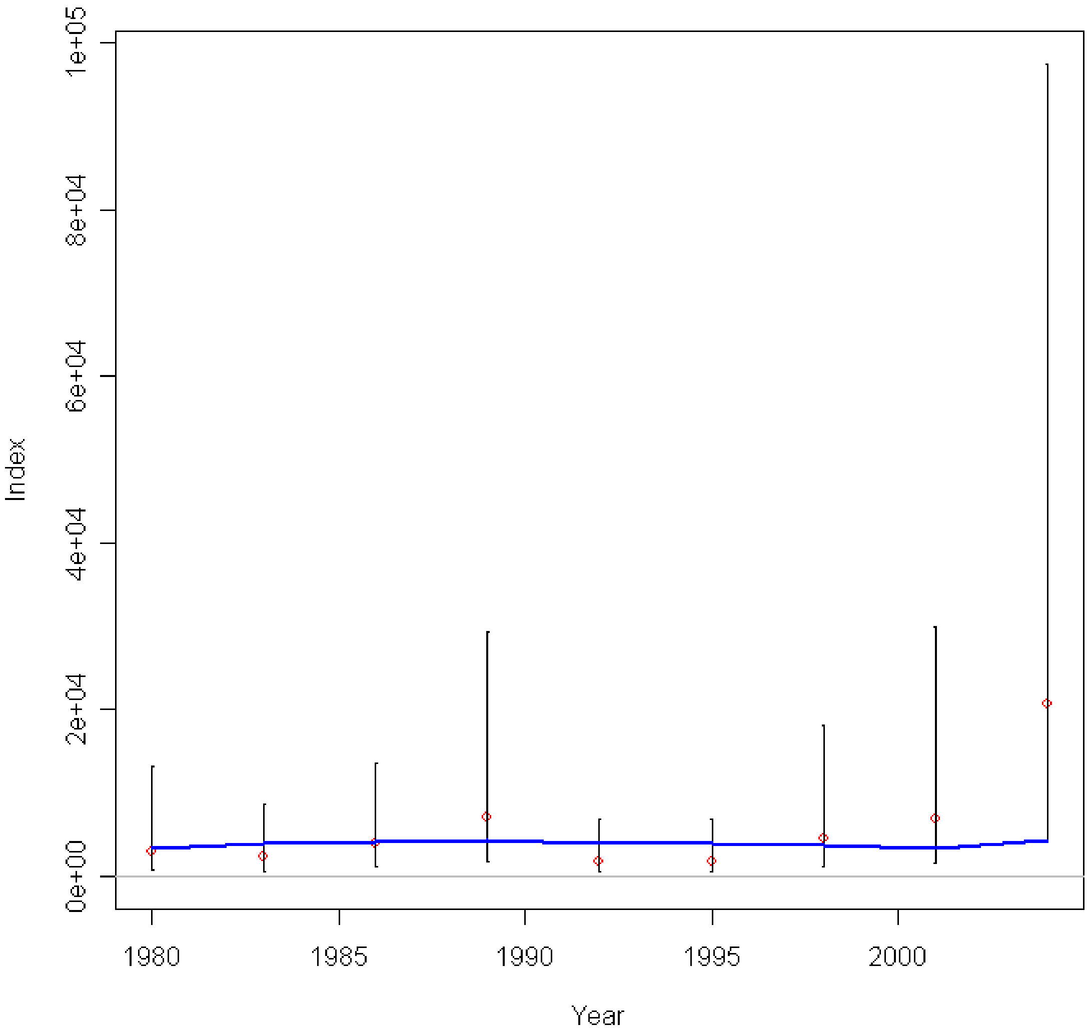


Figure 32. Female selectivity for the Triennial Survey

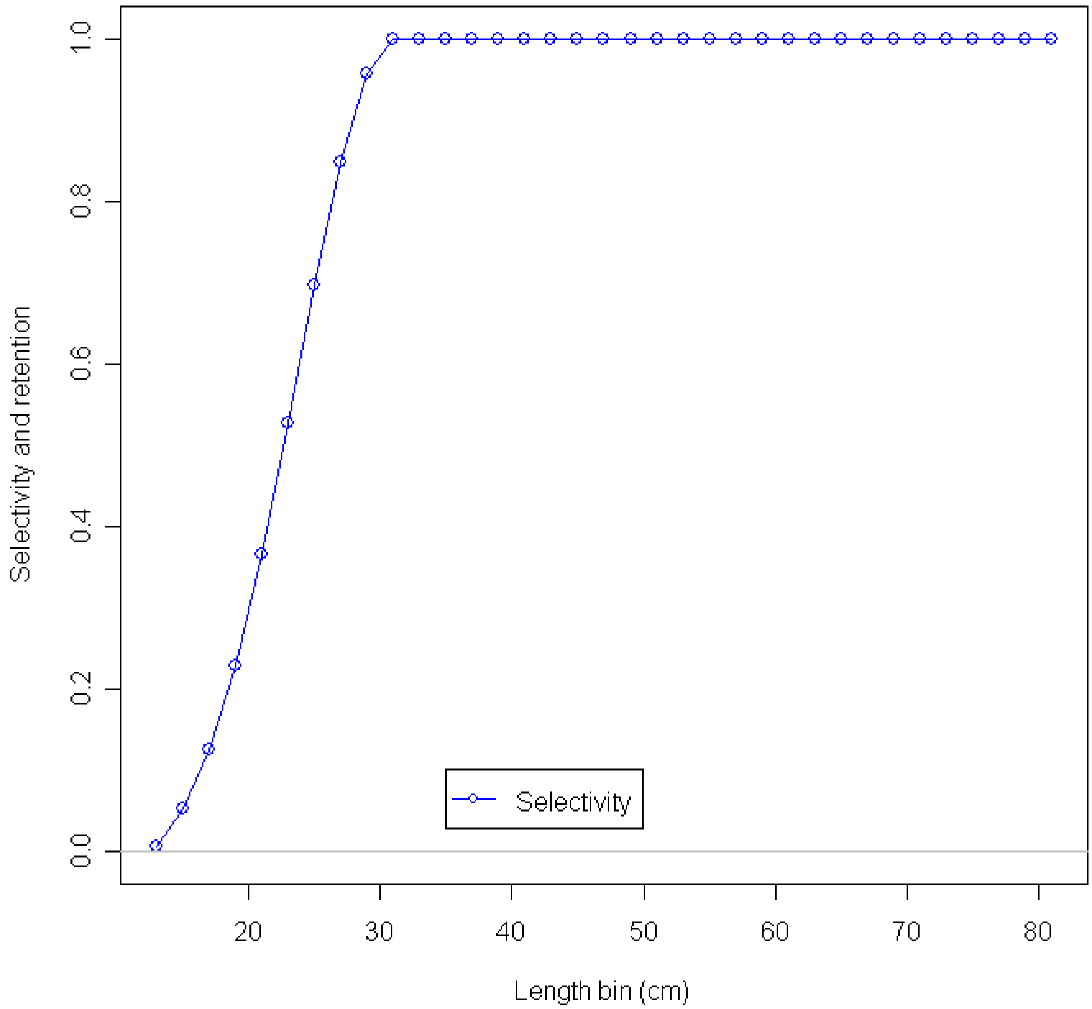


Figure 33. Male selectivity for the Triennial Survey

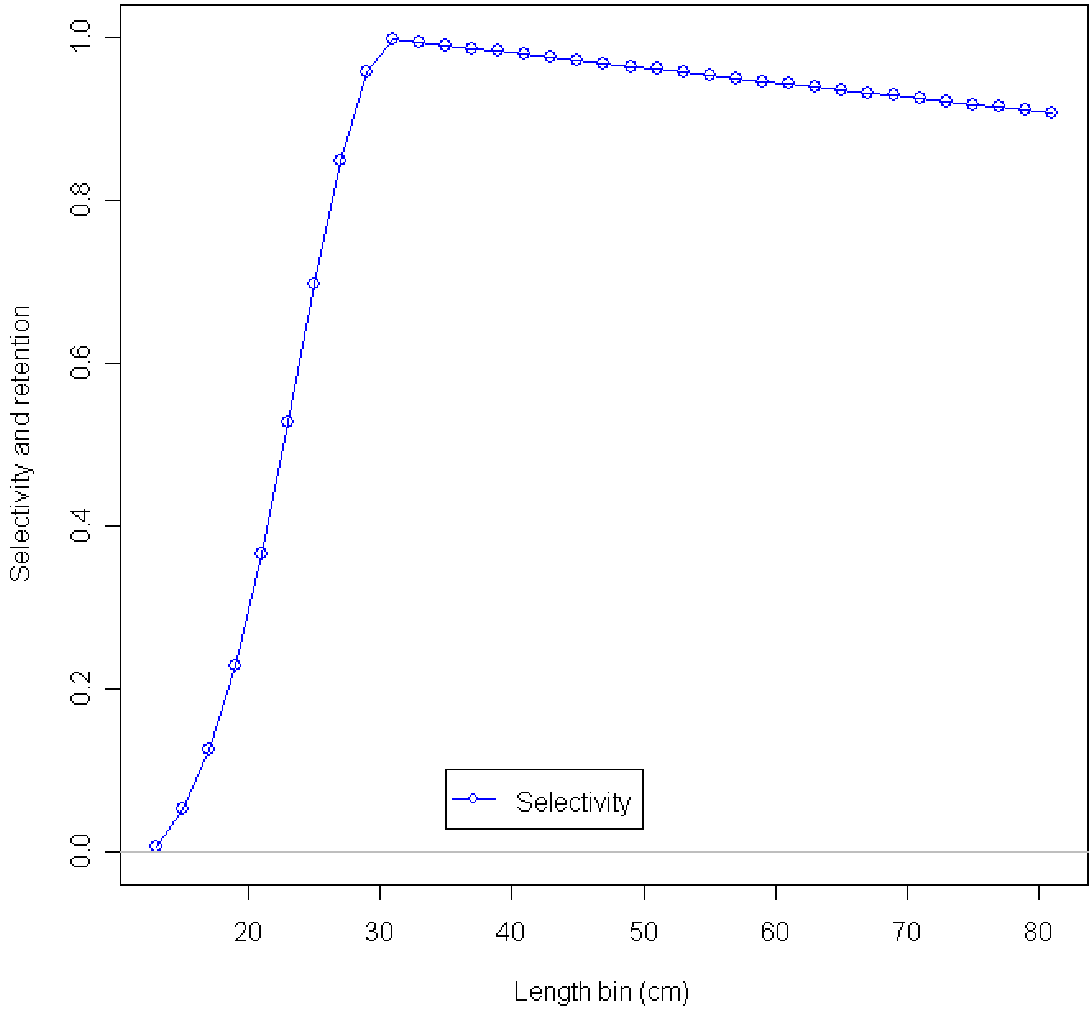


Figure 34. Female selectivity for the AFSC Slope Survey. We also fixed selectivity for the NWFSC Slope Survey at these values.

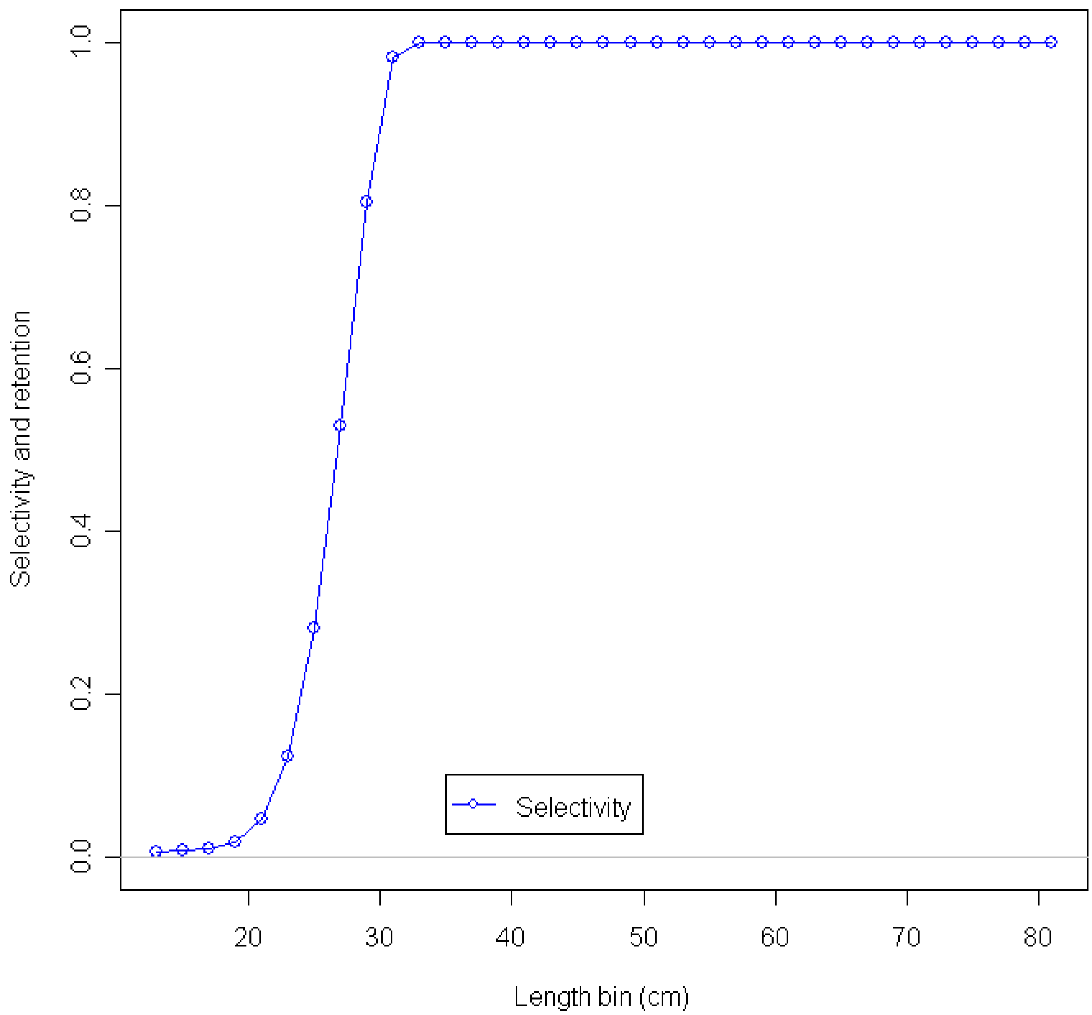


Figure 35. Male selectivity for the AFSC Slope Survey. We also fixed selectivity for the NWFSC Slope Survey at these values.

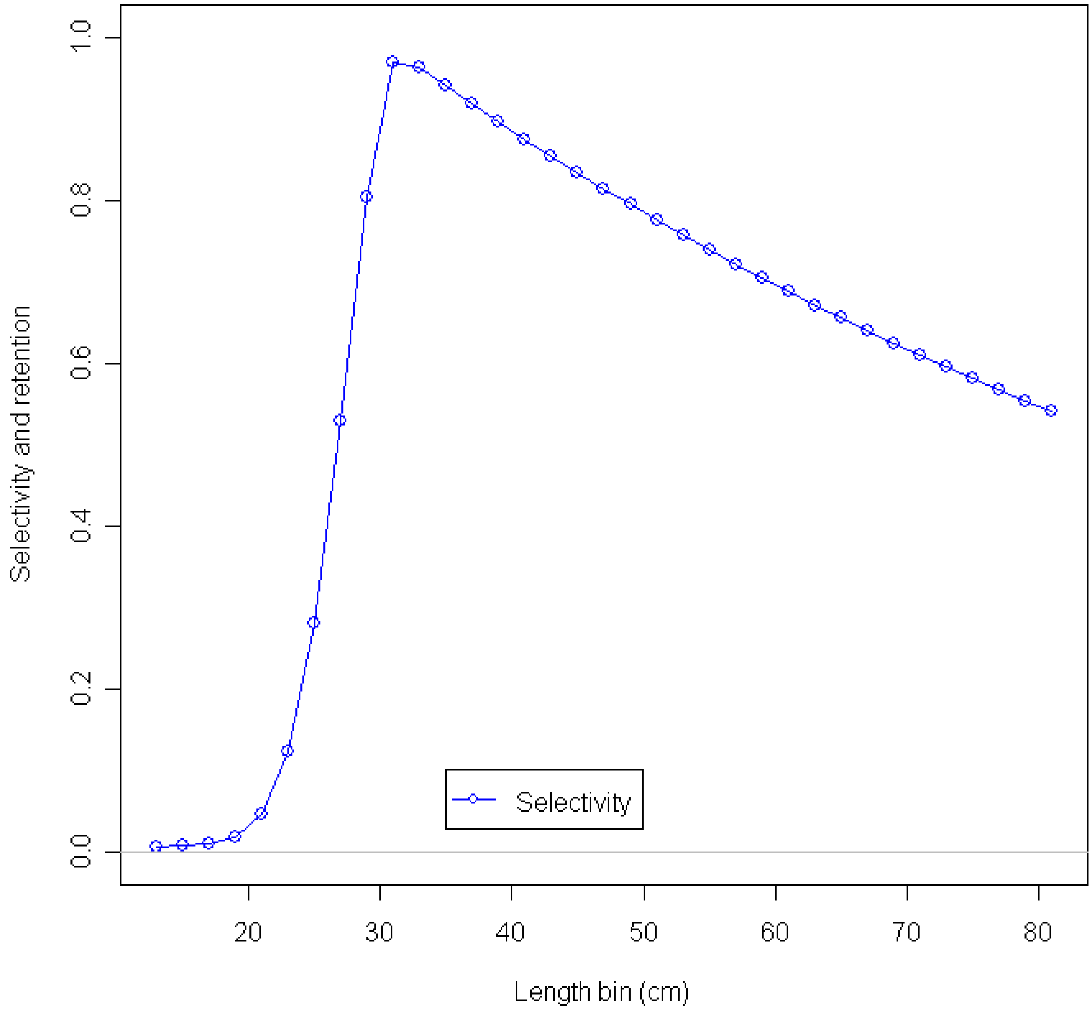


Figure 36. Female selectivity for the NWFSC Slope-Shelf Survey

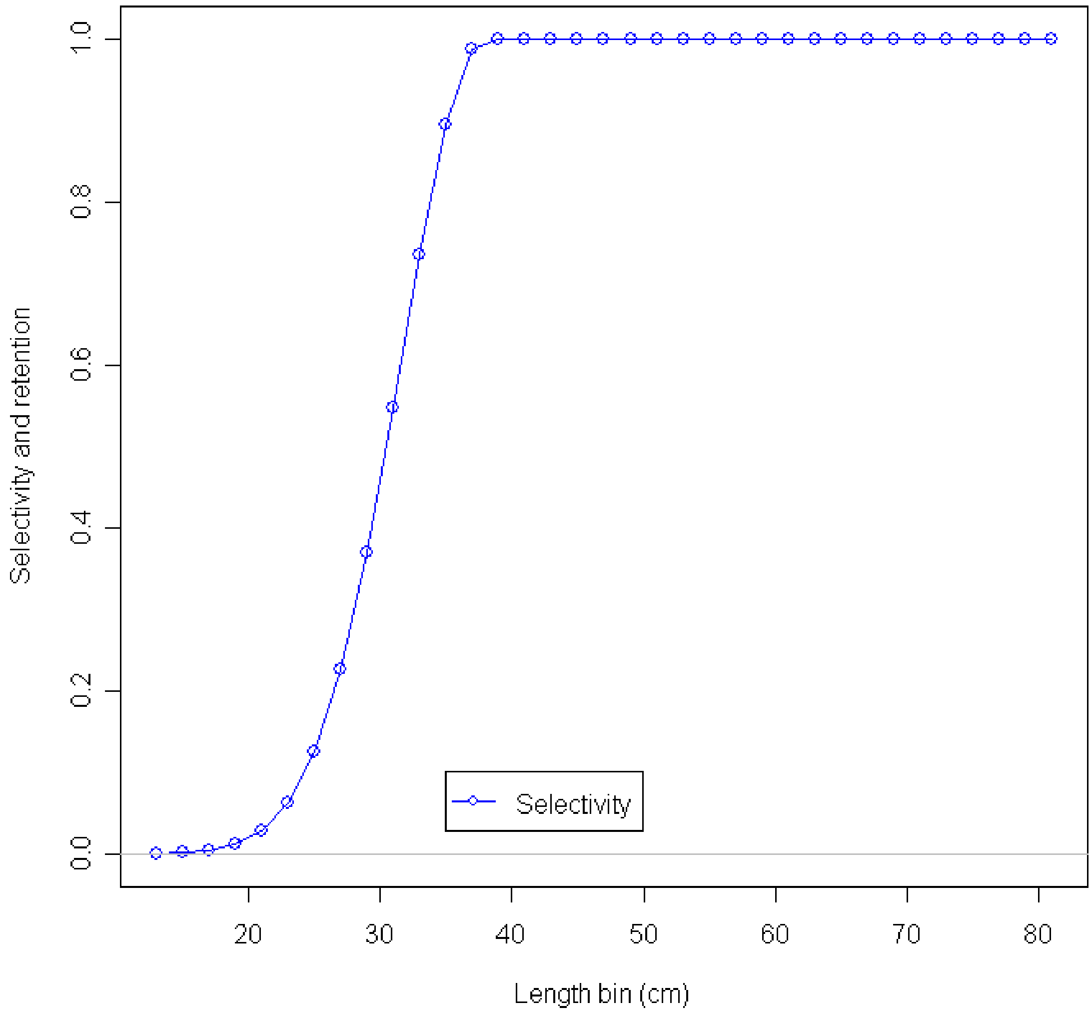


Figure 37. Male selectivity for the NWFSC Slope-Shelf Survey

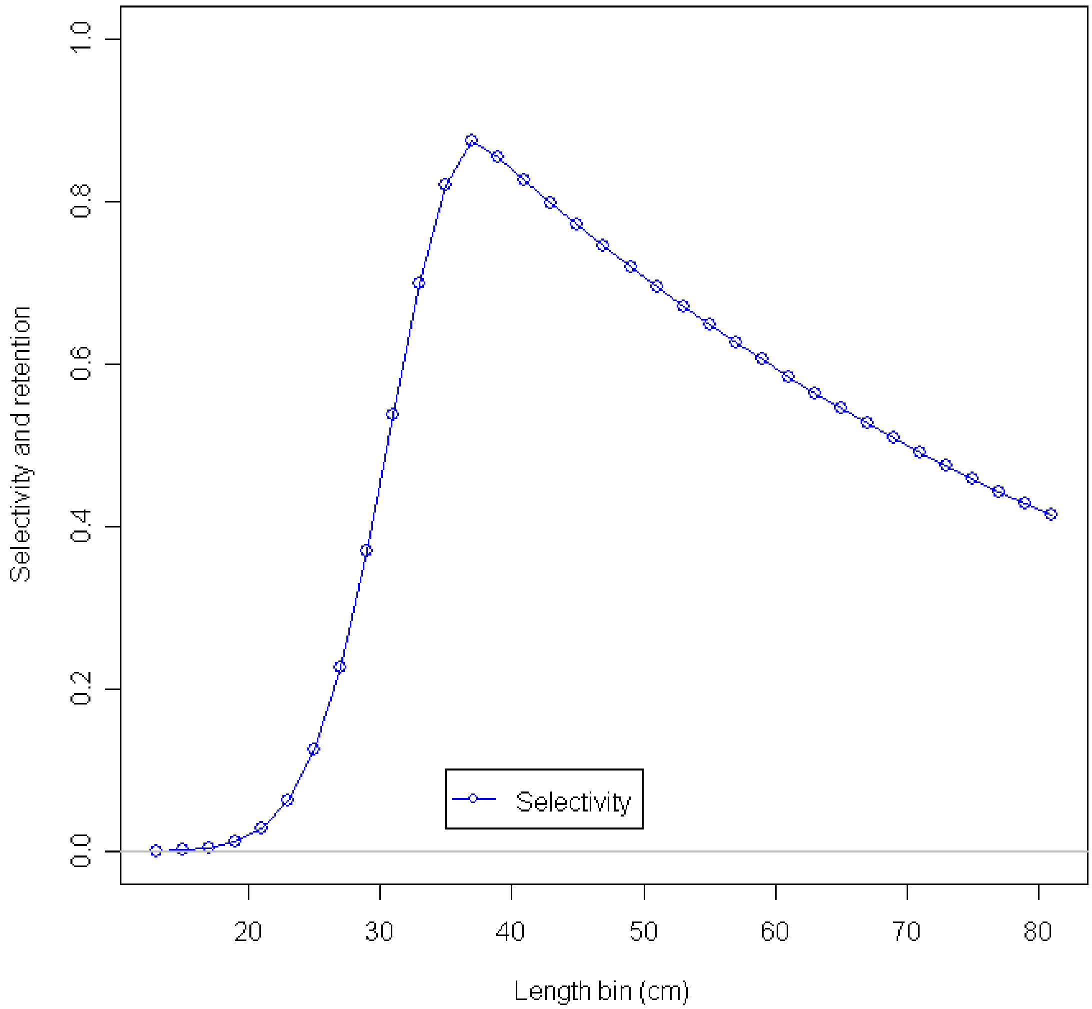


Figure 38. Selectivity for the discard fleet

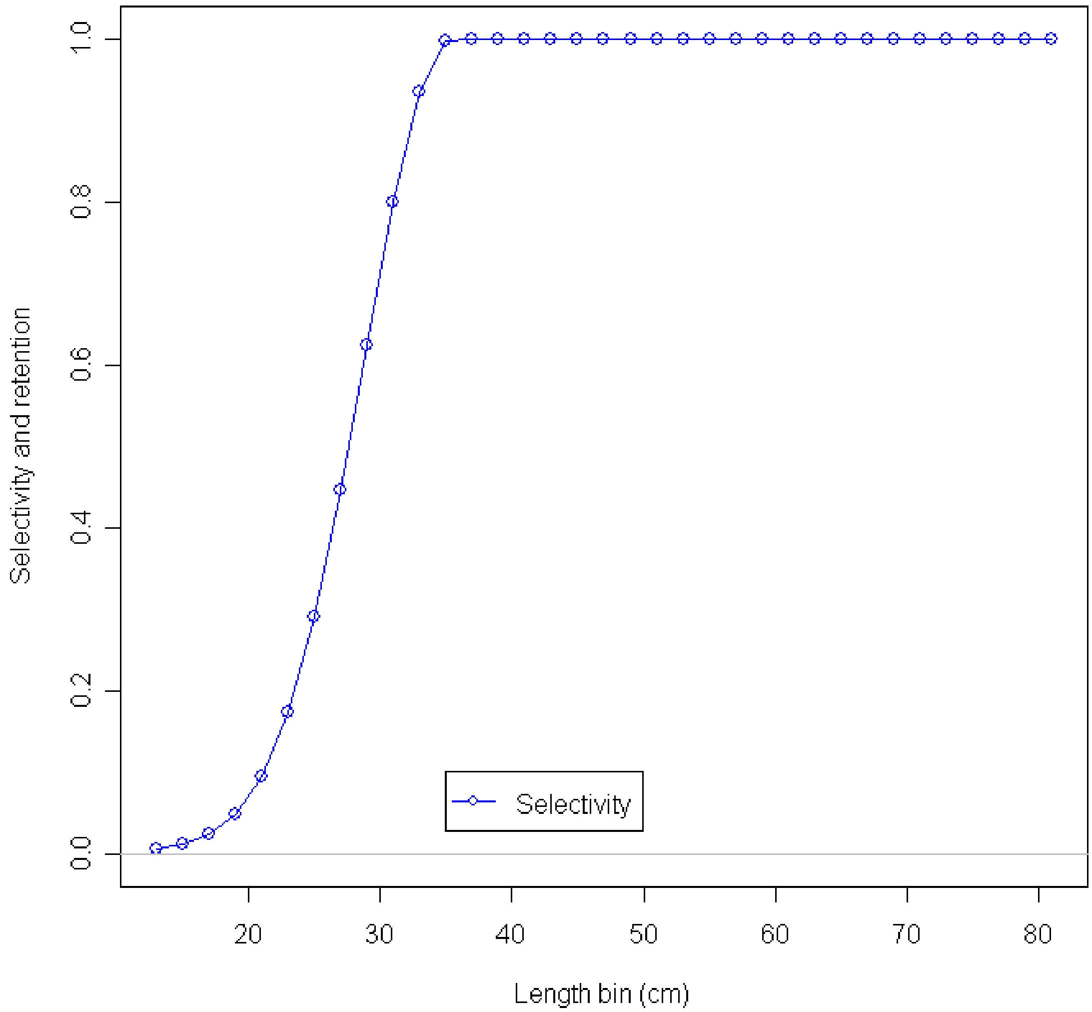


Figure 39. Estimated selectivity for the fillet fleet. The model estimated no difference between the sexes. We assume full retention, since we have added discards to landings.

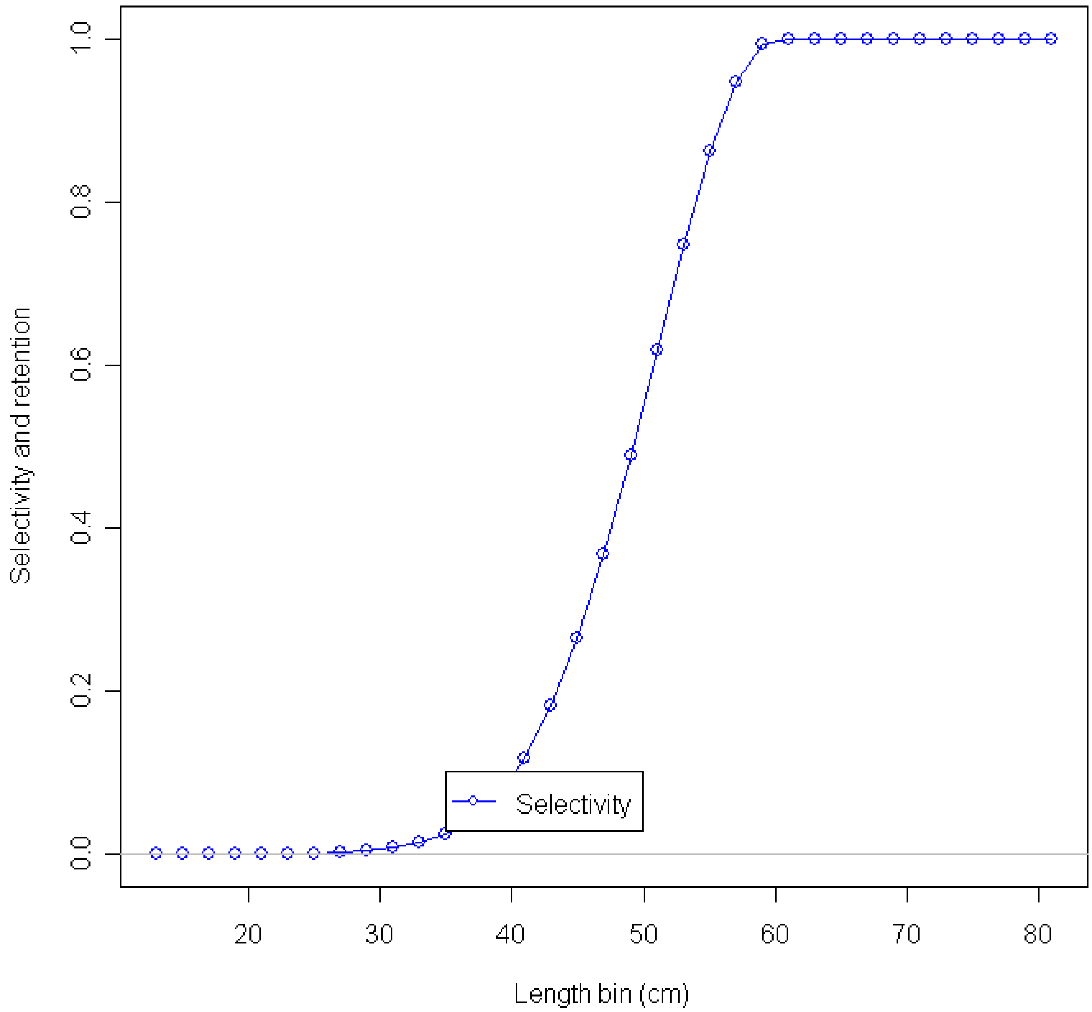


Figure 40. Model fit to fillet fishery female length compositions.

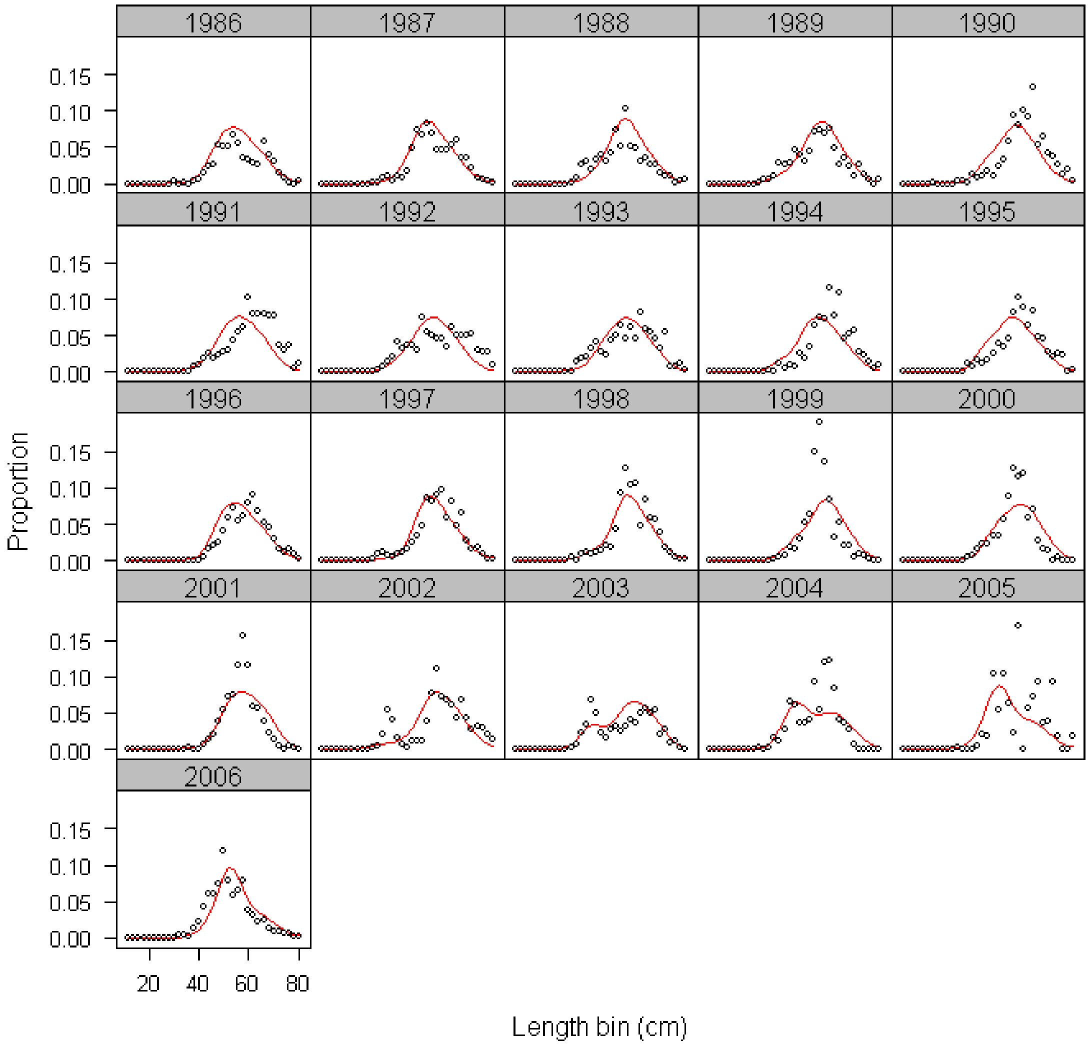


Figure 41. Residuals from model fit to female length compositions for the fillet fishery.

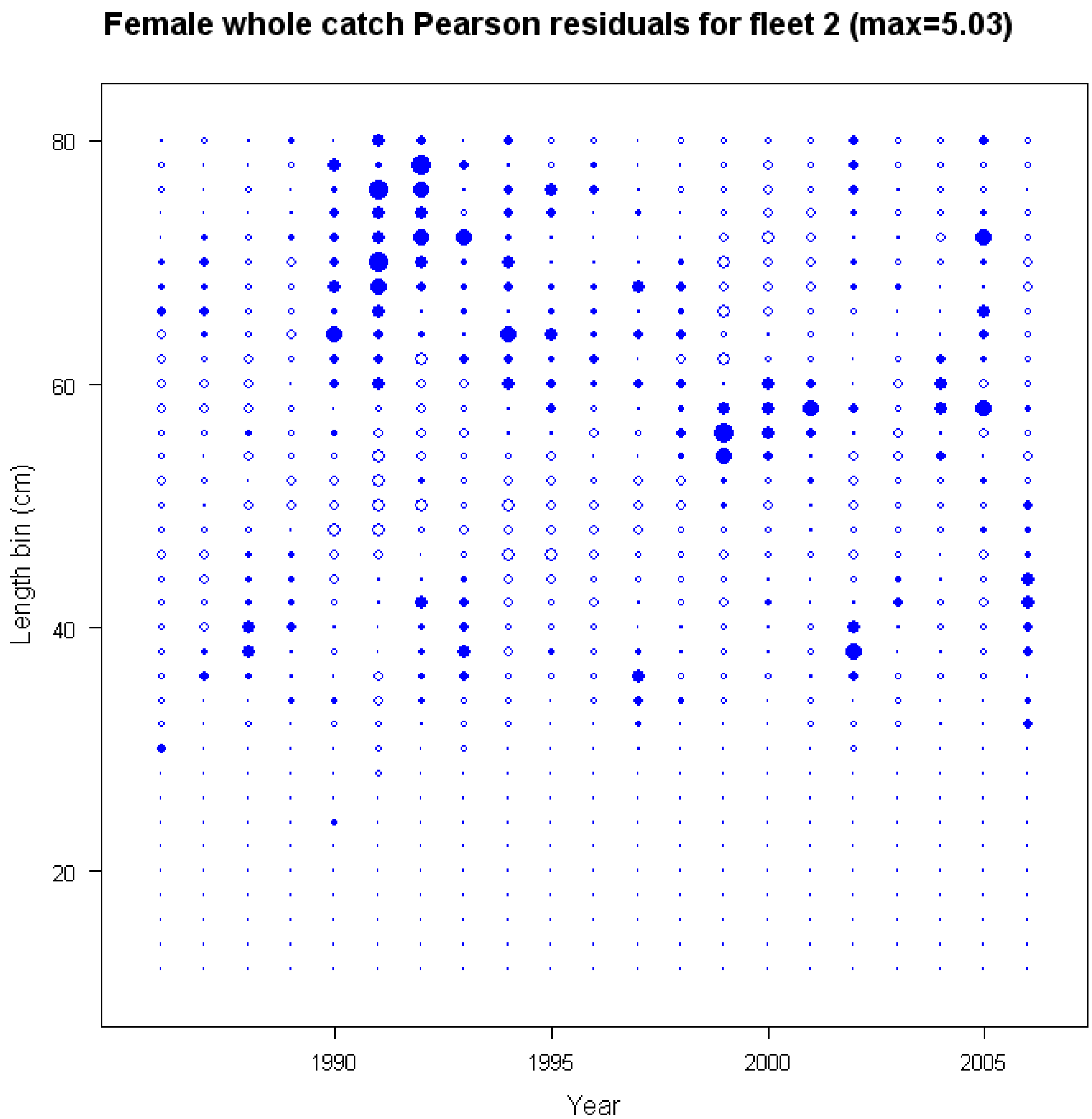


Figure 42. Observed vs. effective sample size for retained female length compositions from the fillet fleet.

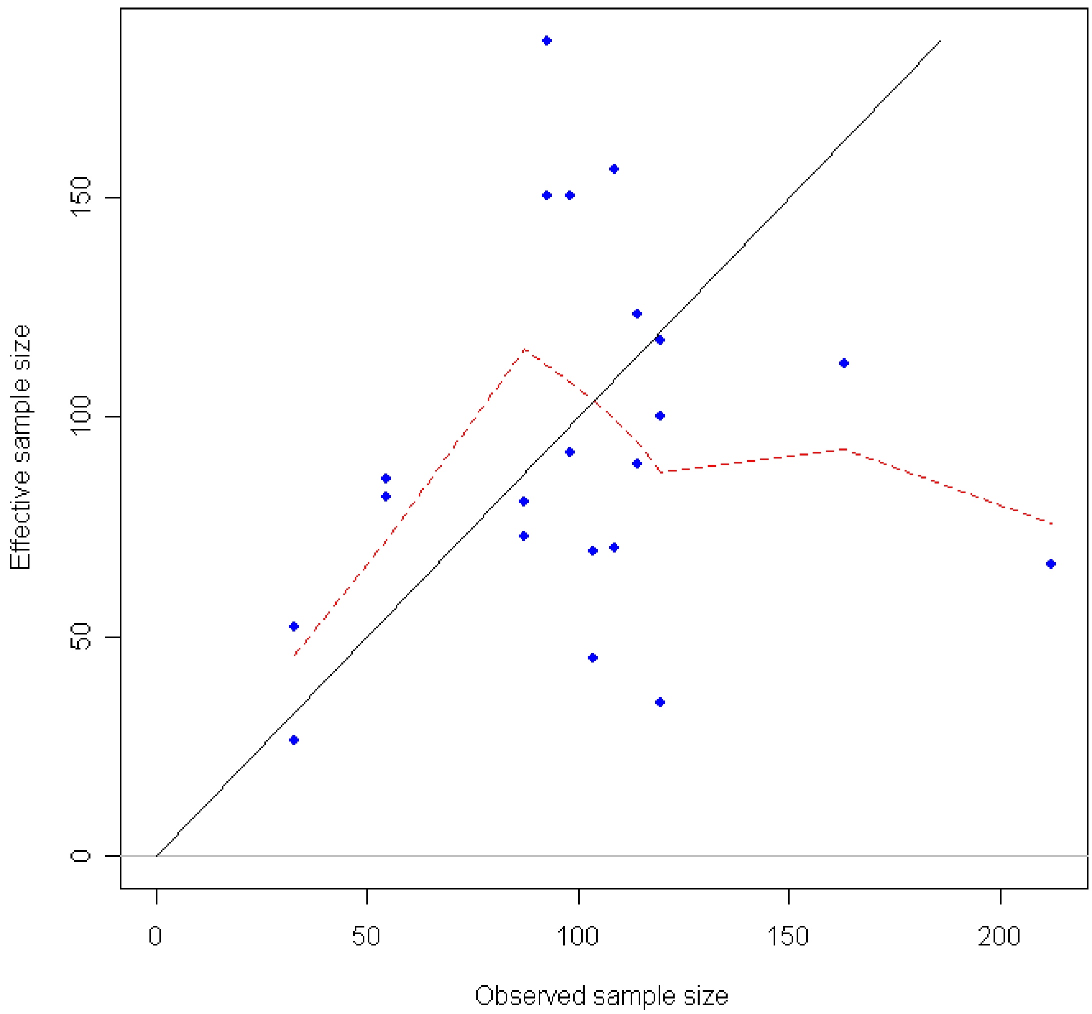


Figure 43. Model fits to length compositions from males in the fillet fishery.

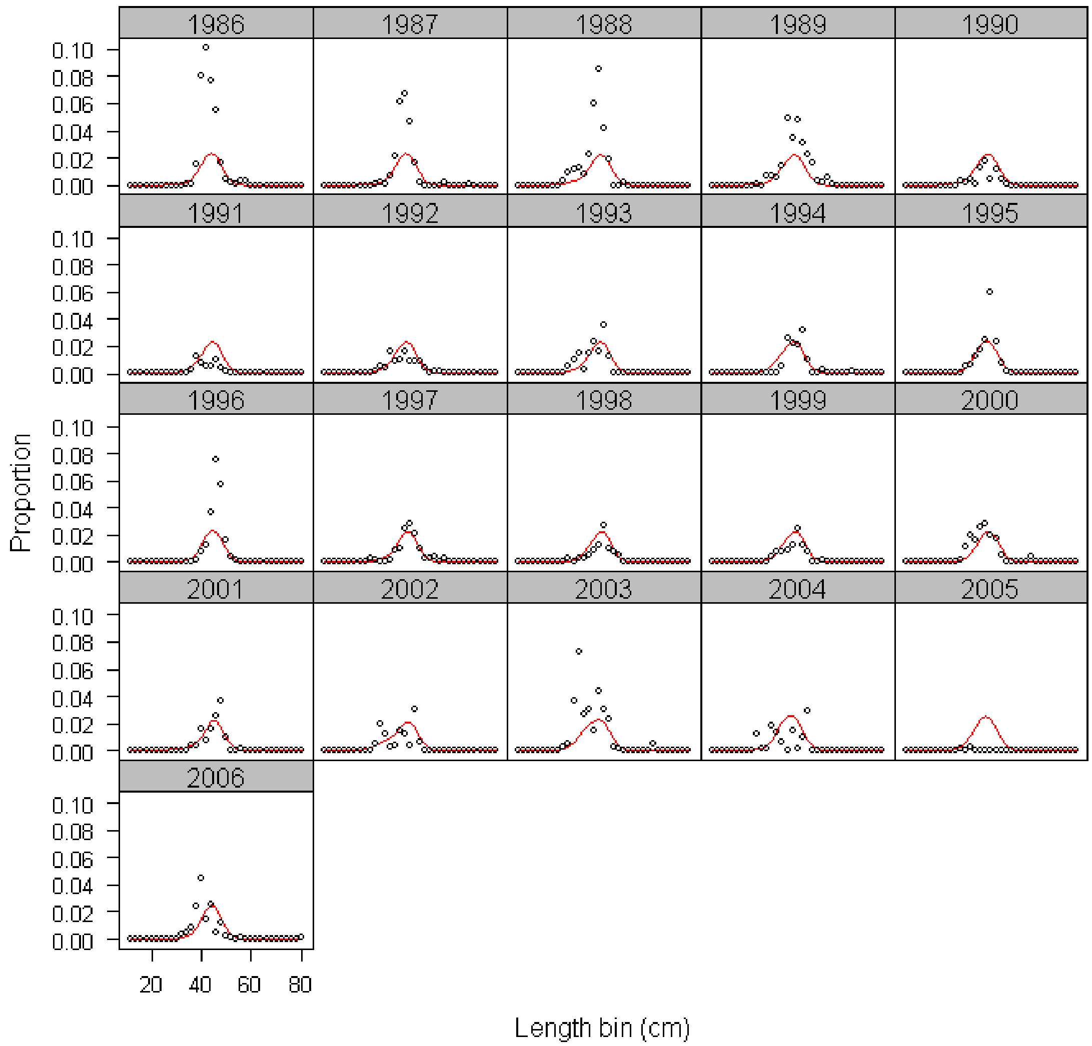


Figure 44. Residuals from model fit to male length compositions from the fillet fishery.

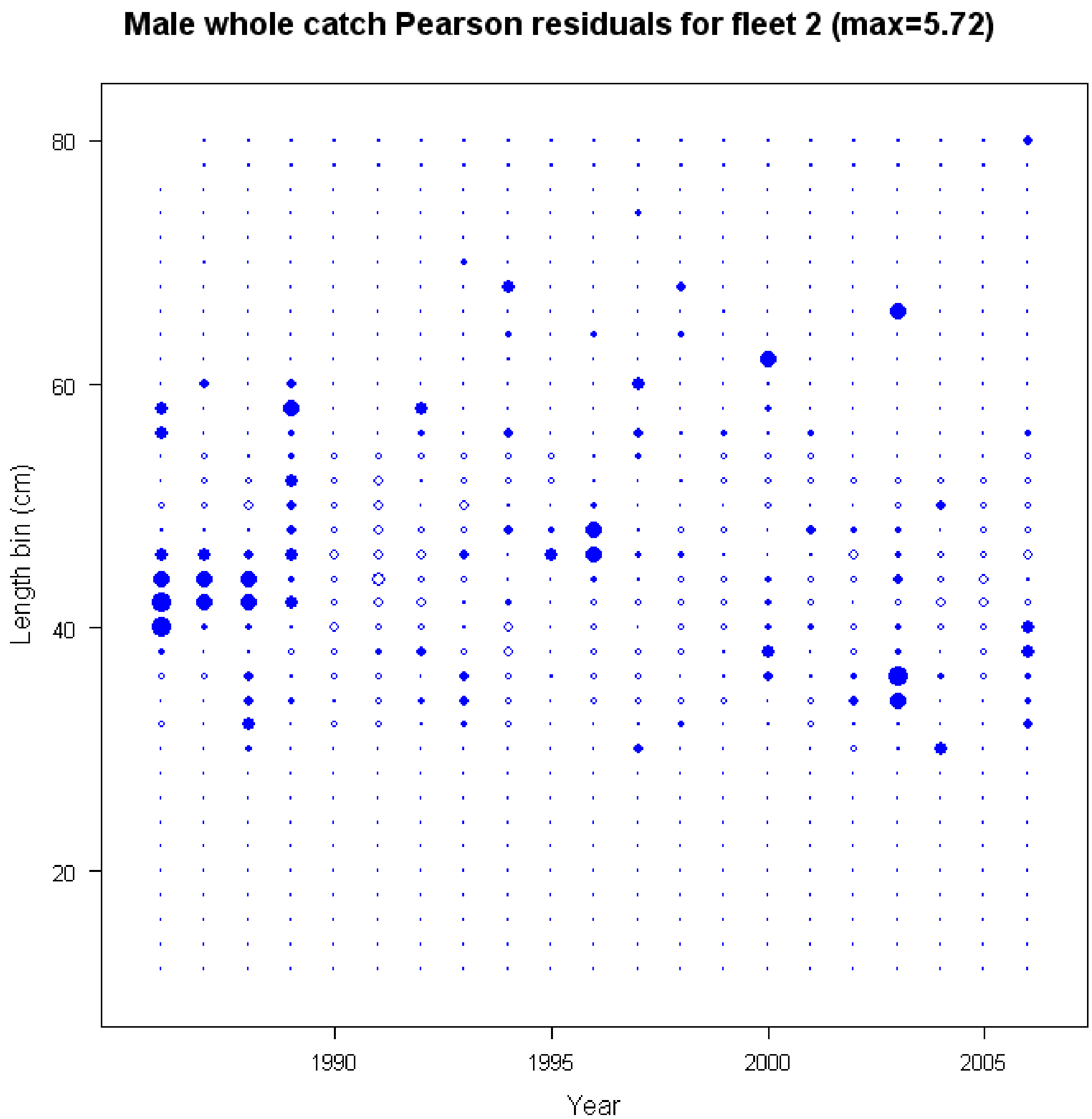


Figure 45. Observed vs. effective sample size for male length compositions from the fillet fishery.

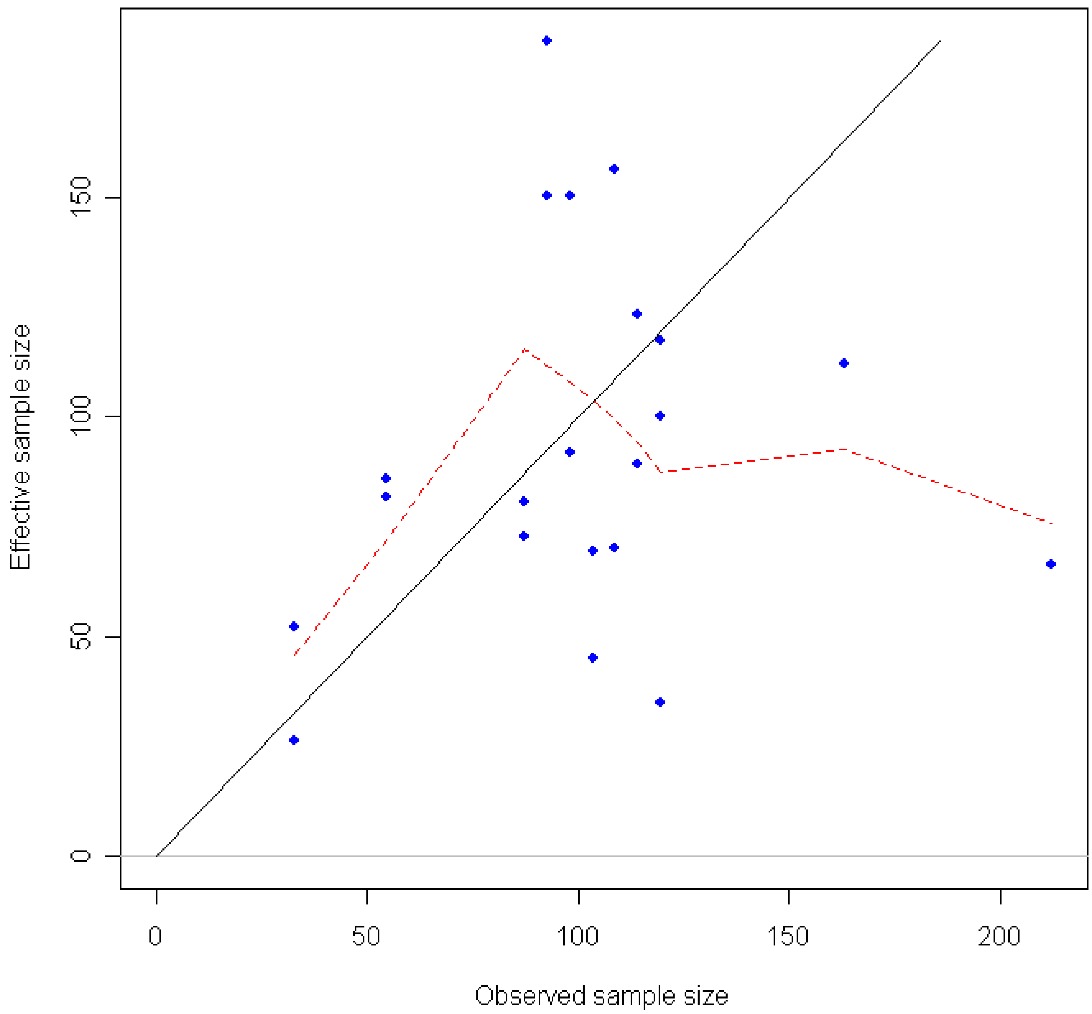


Figure 46. Model fits to combined-sex catch from the bycatch fleet.

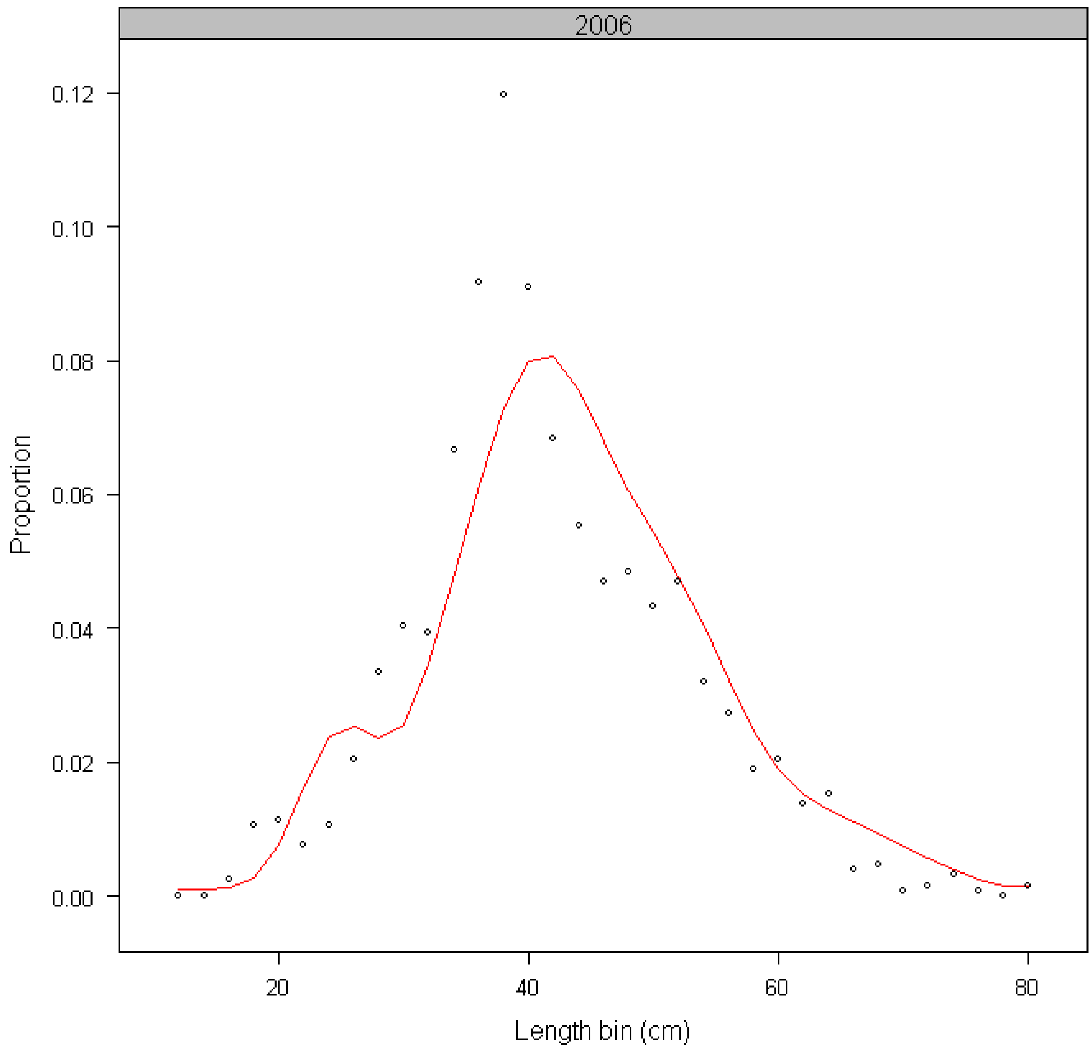


Figure 47. Residuals from model fit to combined-sex length compositions from the bycatch fleet.

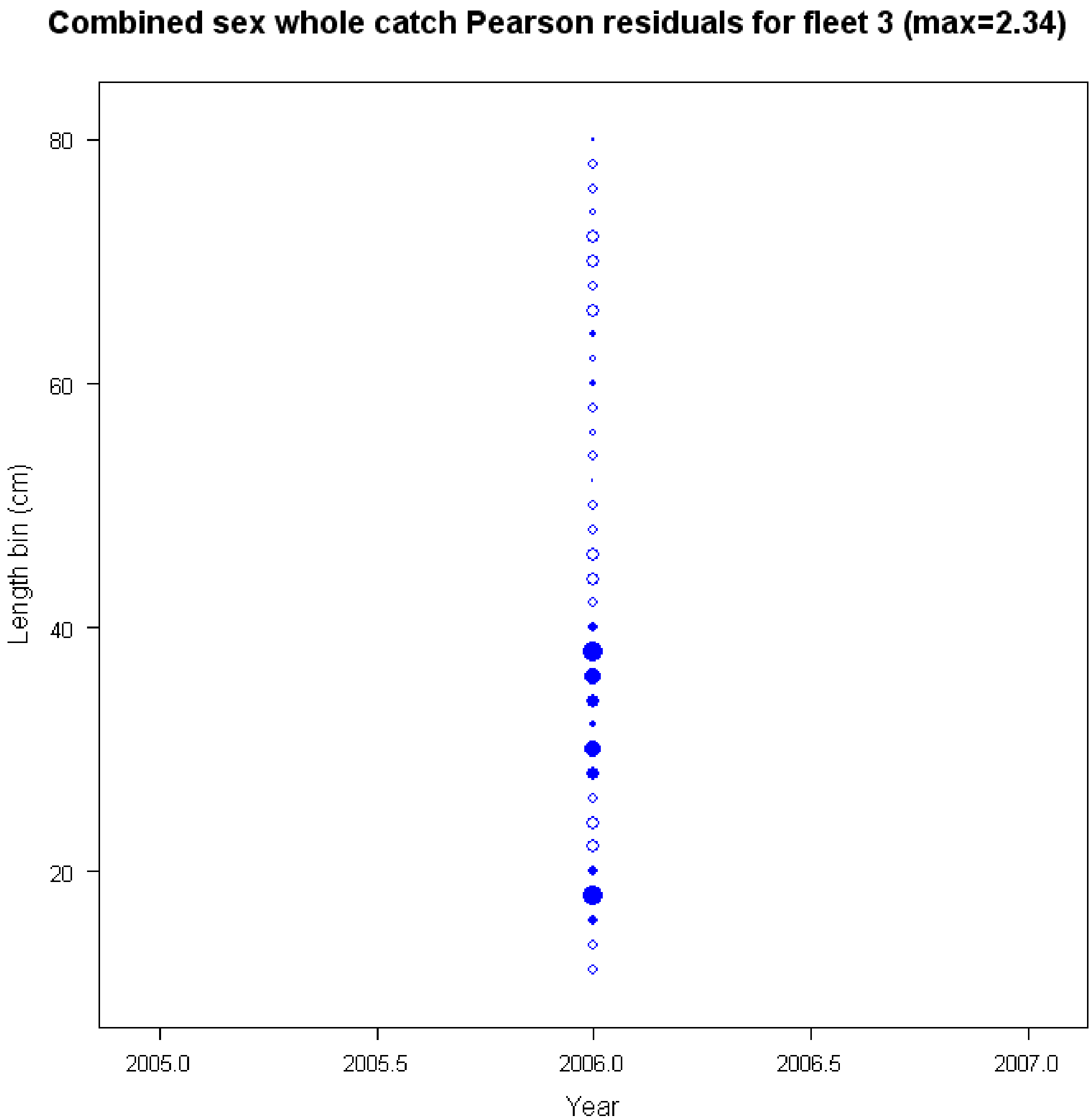


Figure 48. Observed vs. effective sample size for combined-sex length compositions from the bycatch fleet.

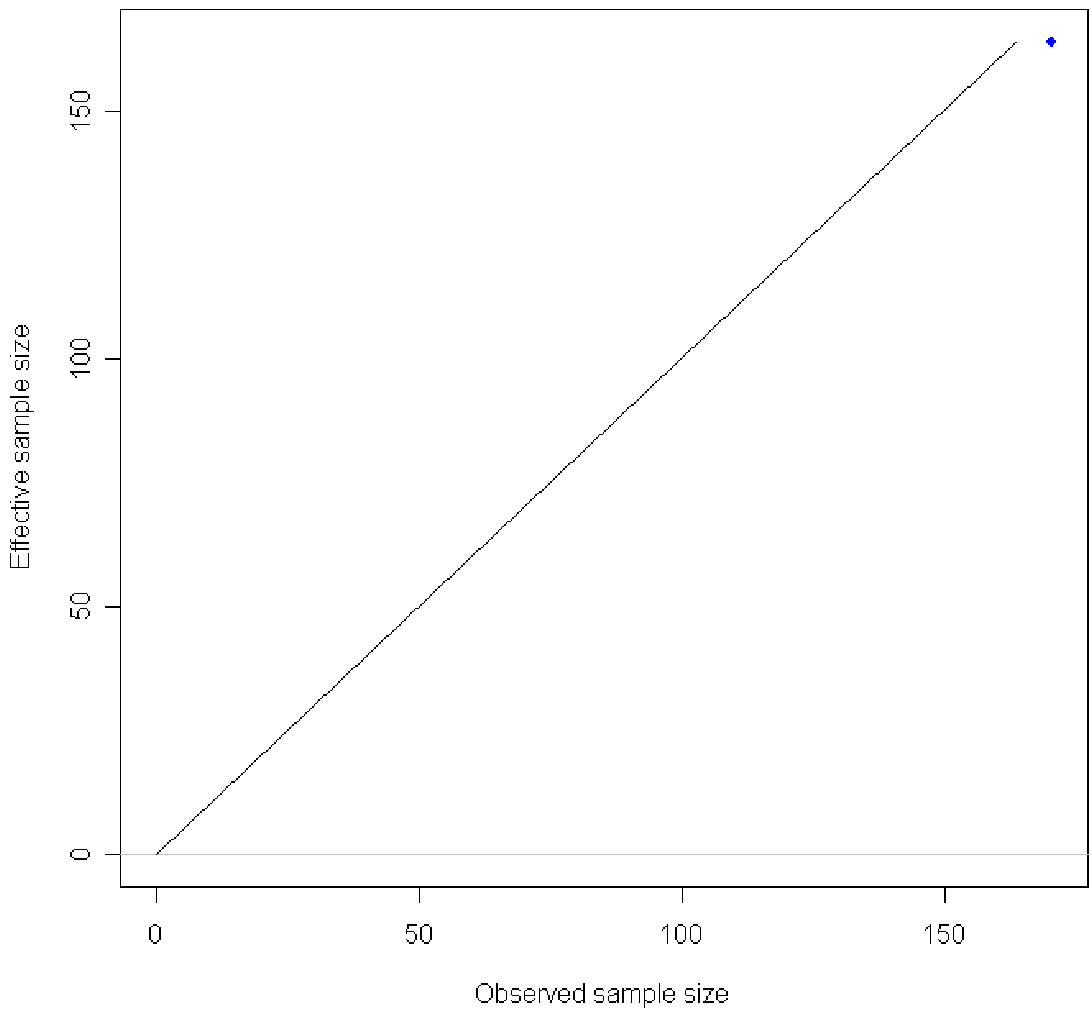


Figure 49. Model fits to female length composition from the NWFSC Slope-Shelf data

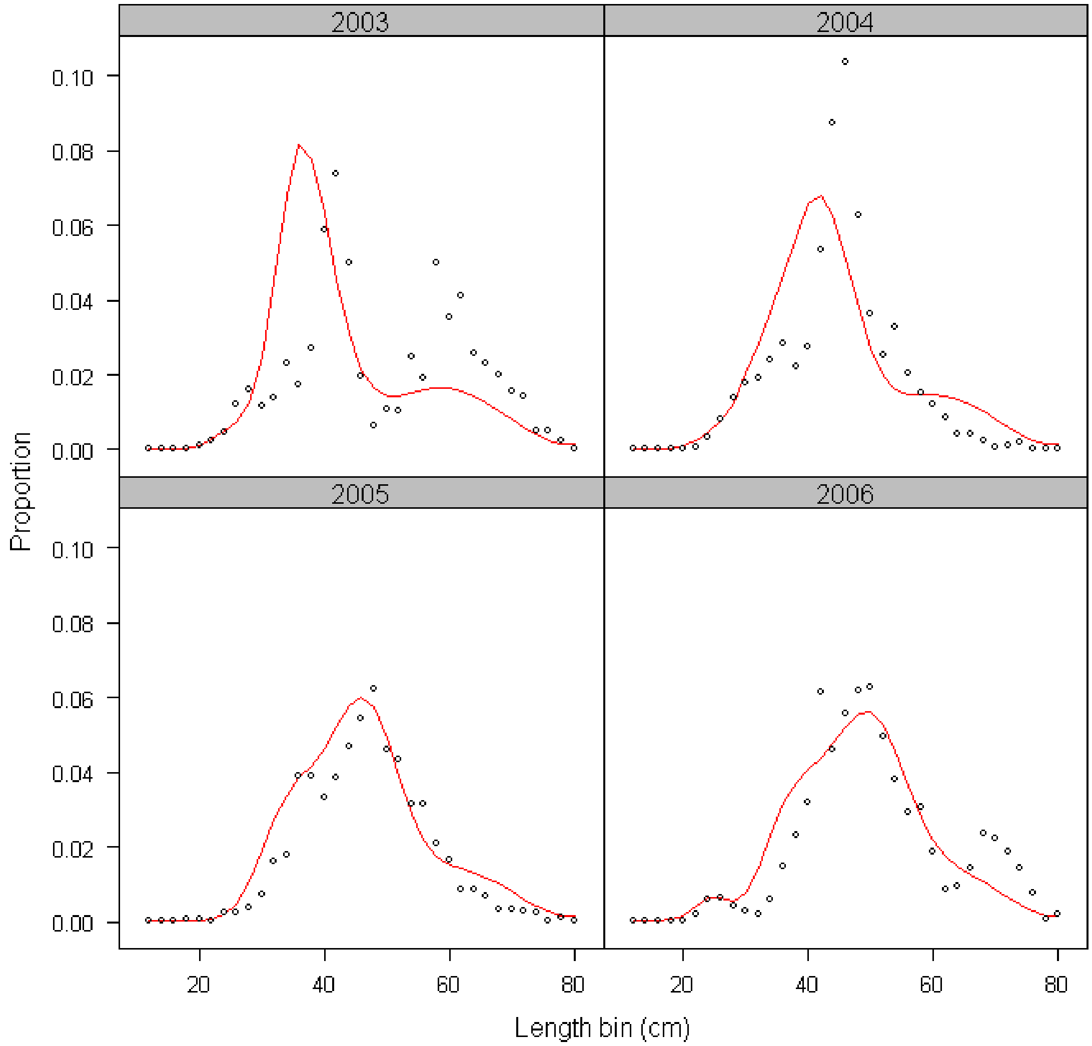
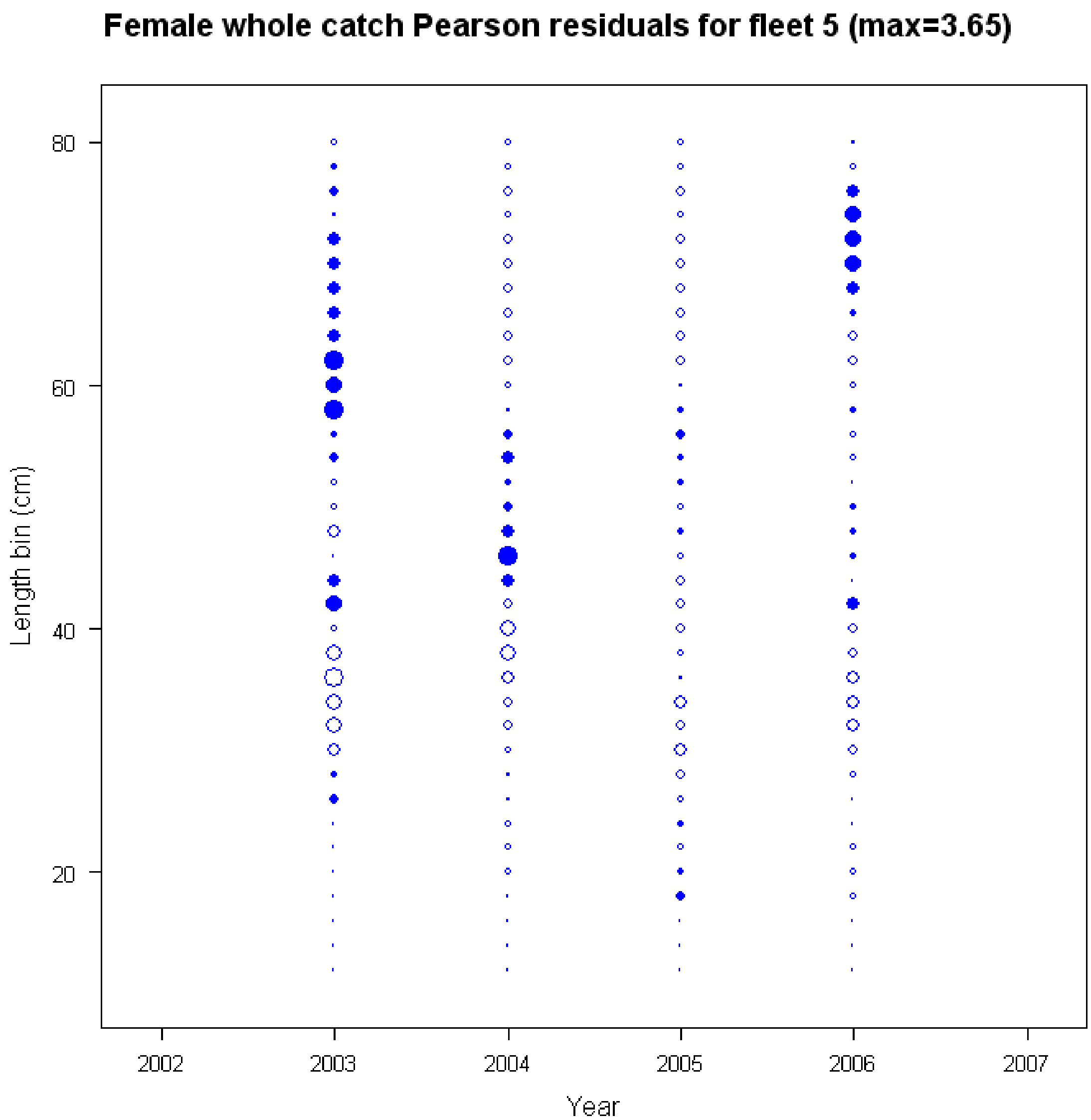


Figure 50. Residuals from model fits to female length composition data from the NWFSC Slope-Shelf survey.



51. Observed vs. effective sample size for model fits to the NWFSC Slope-Shelf female length compositions

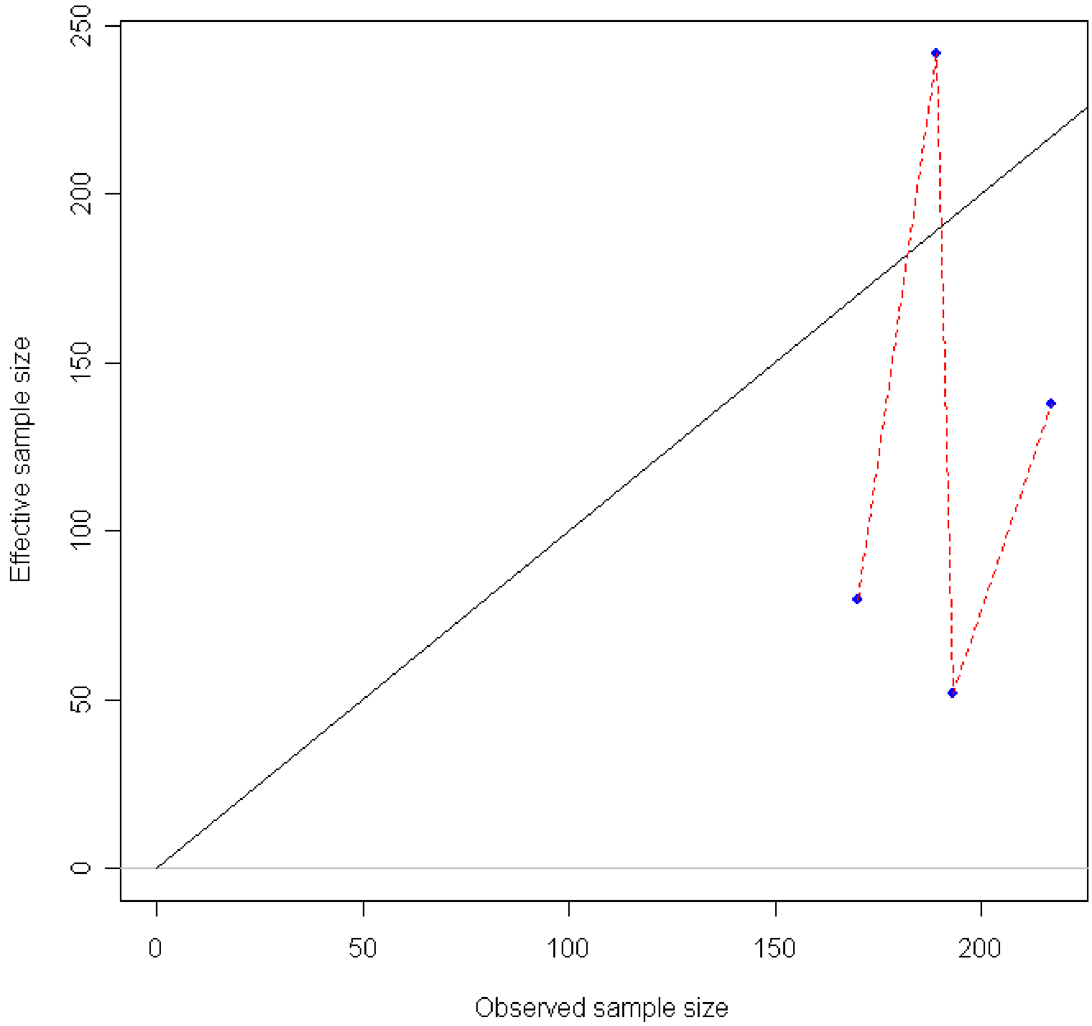


Figure 52. Model fits to the NWFSC Slope-Shelf male length composition data.

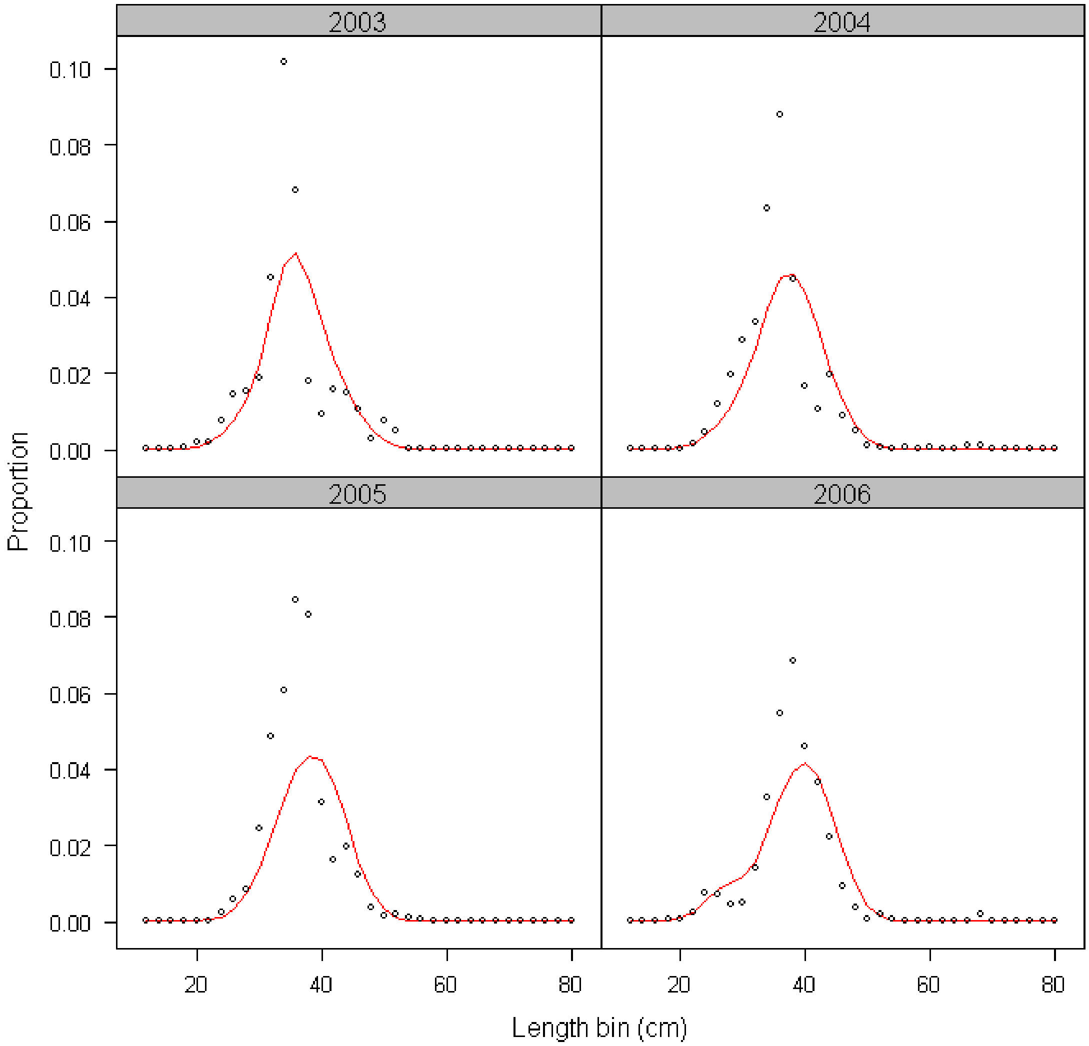


Figure 53. Residuals from the model fit to NWFSC Slope-Shelf male length composition data.

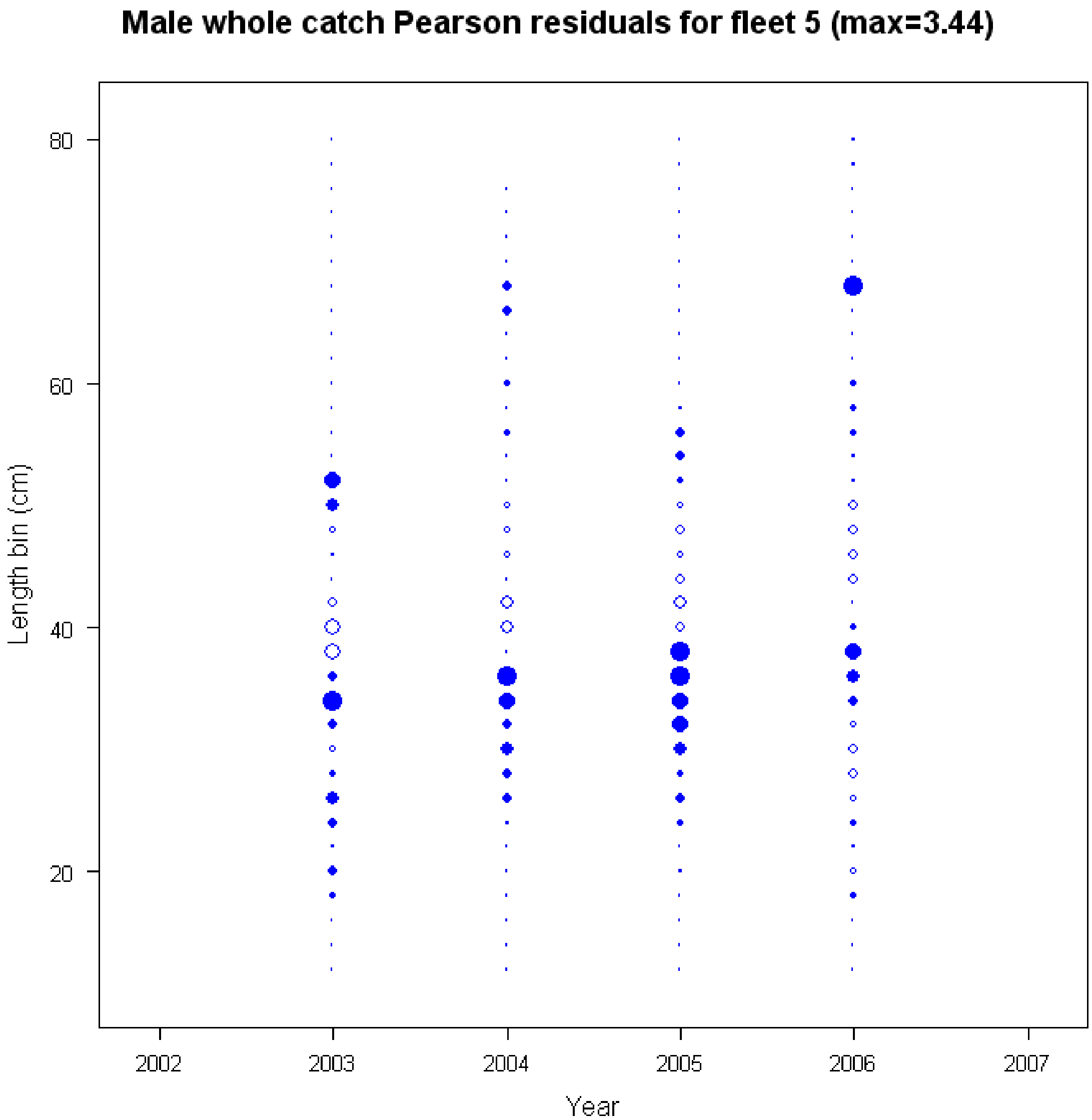


Figure 54. Observed vs. effective sample size for male length composition data from the NWFSC Slope-Shelf Survey.

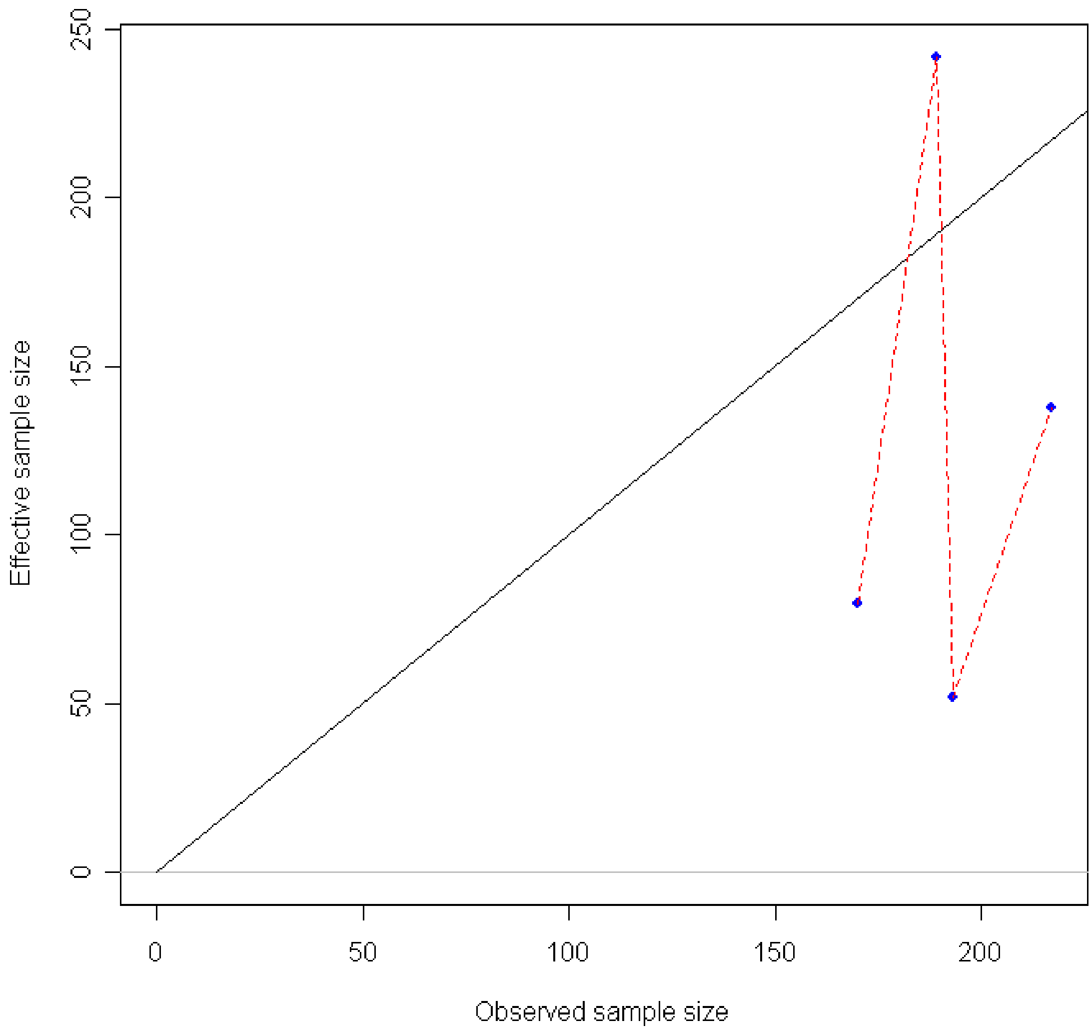


Figure 55. Female length composition and base case model fits, for the Triennial Survey.

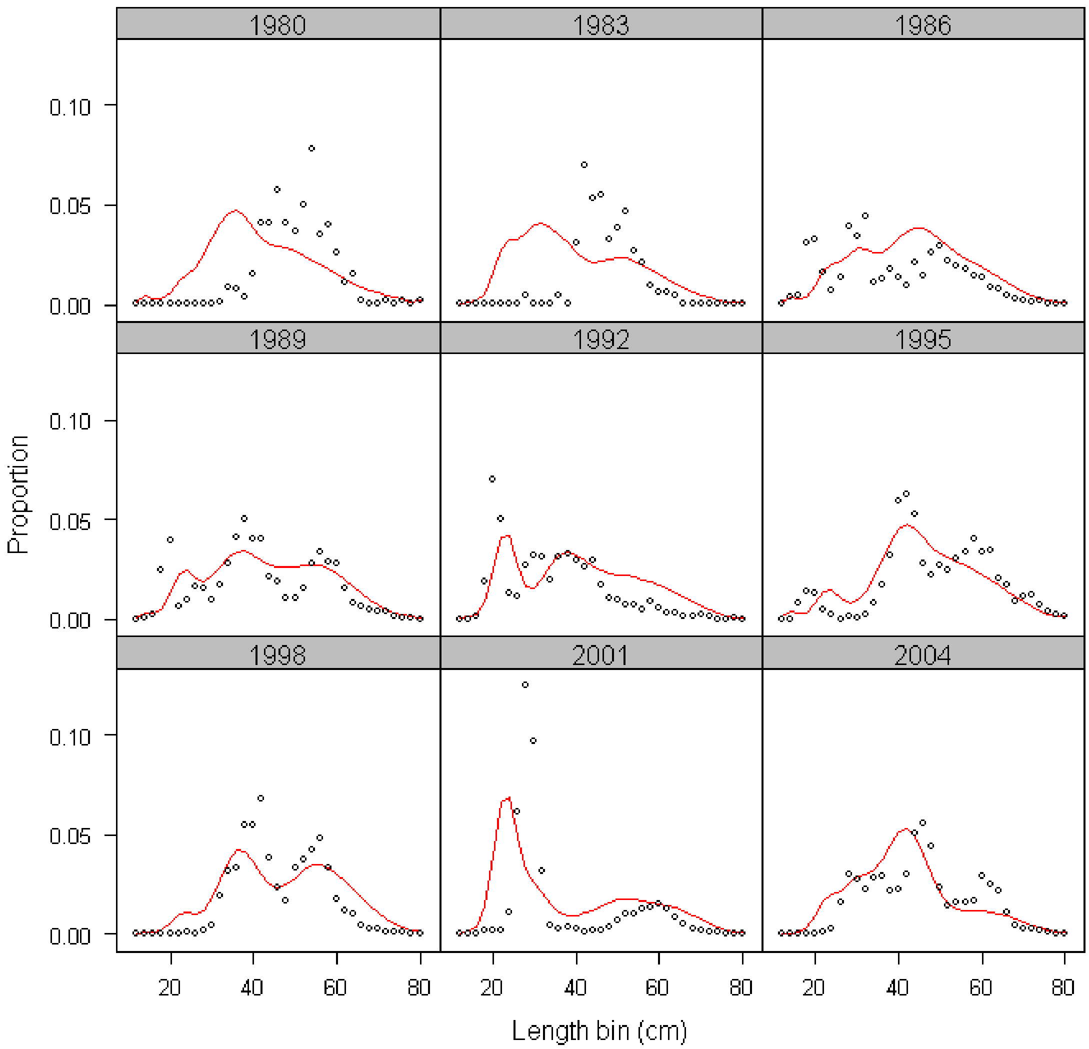


Figure 56. Residuals for base case model fit to female length compositions from the Triennial Survey.

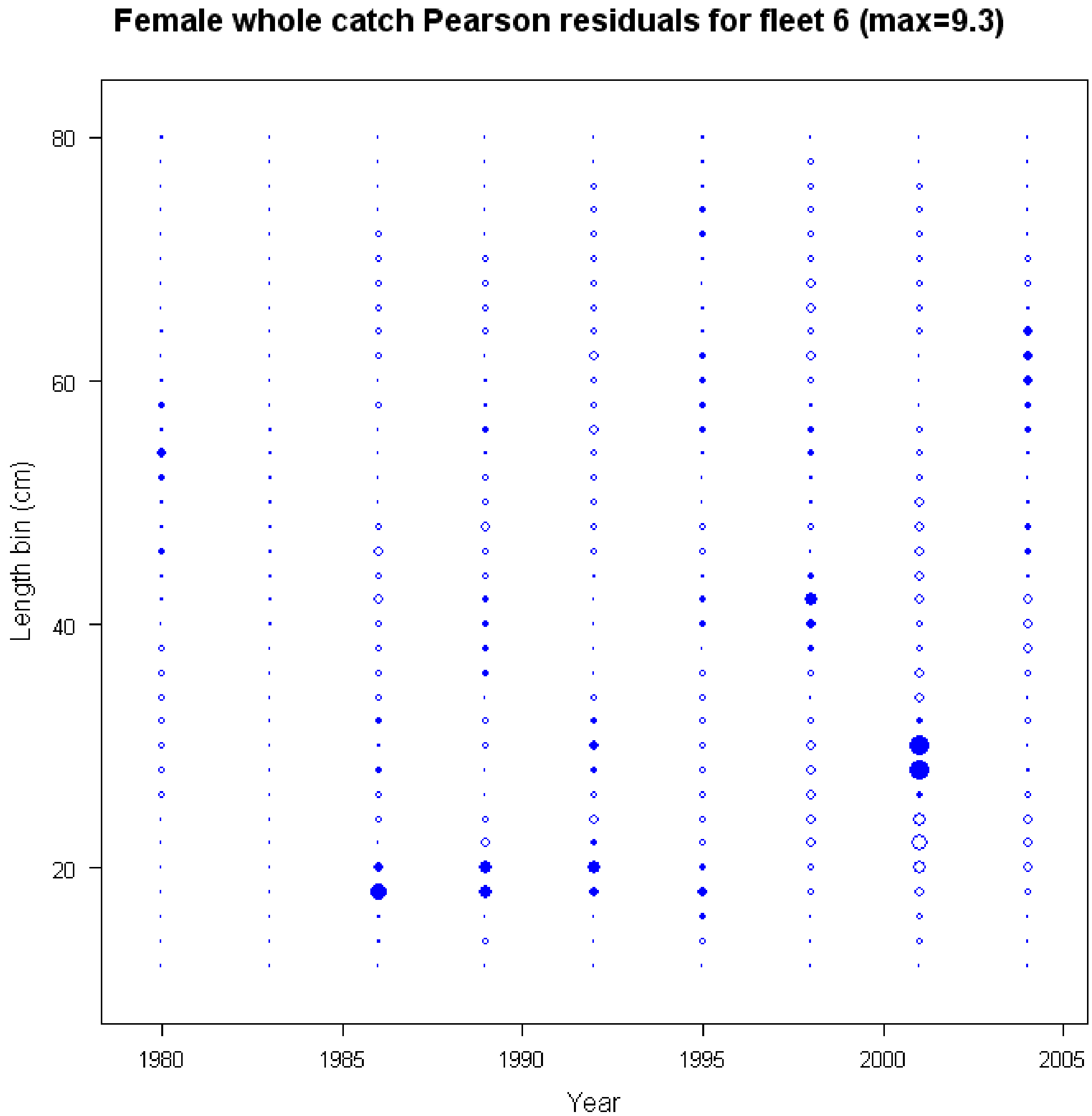


Figure 57. Observed vs. effective sample size for female length compositions from the Triennial Survey.

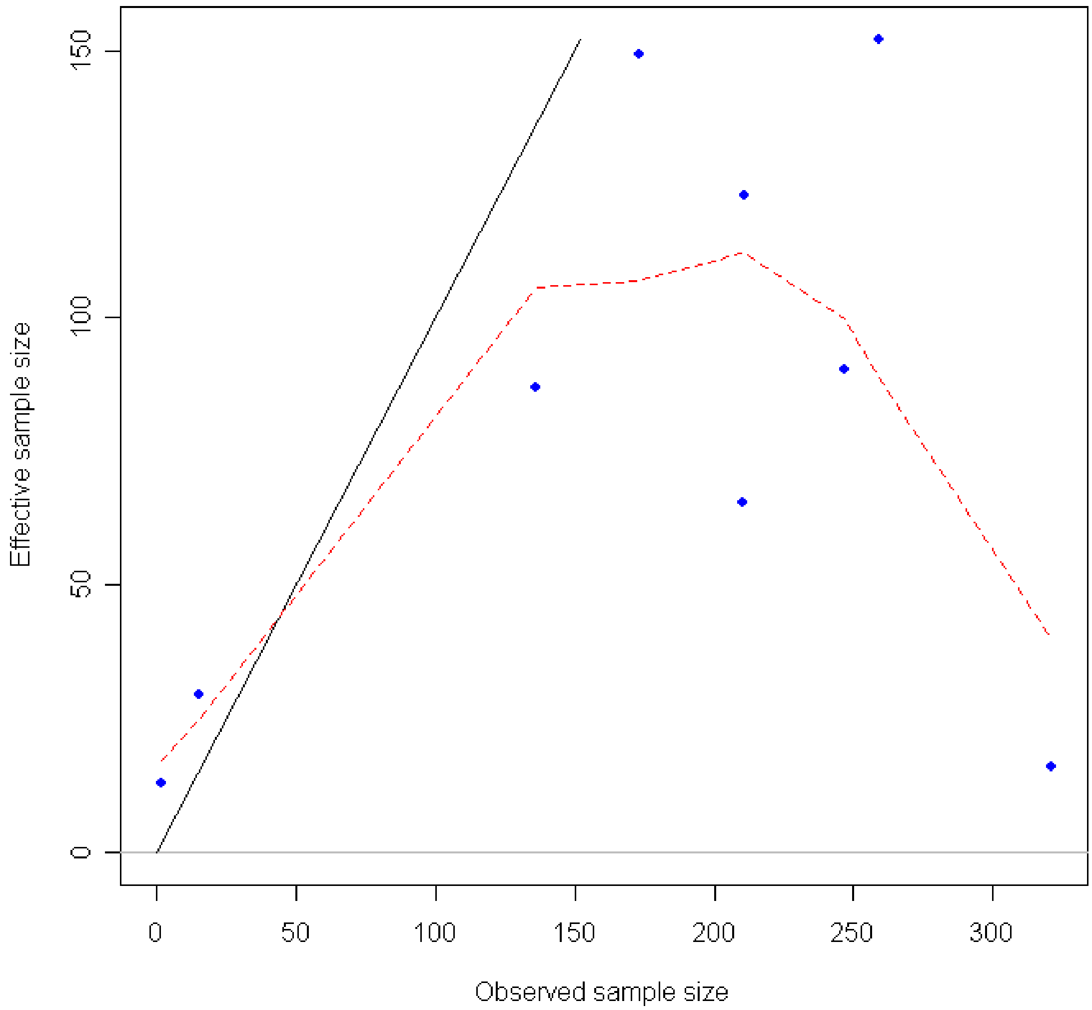


Figure 58. Model fits to male length composition data from the Triennial Survey

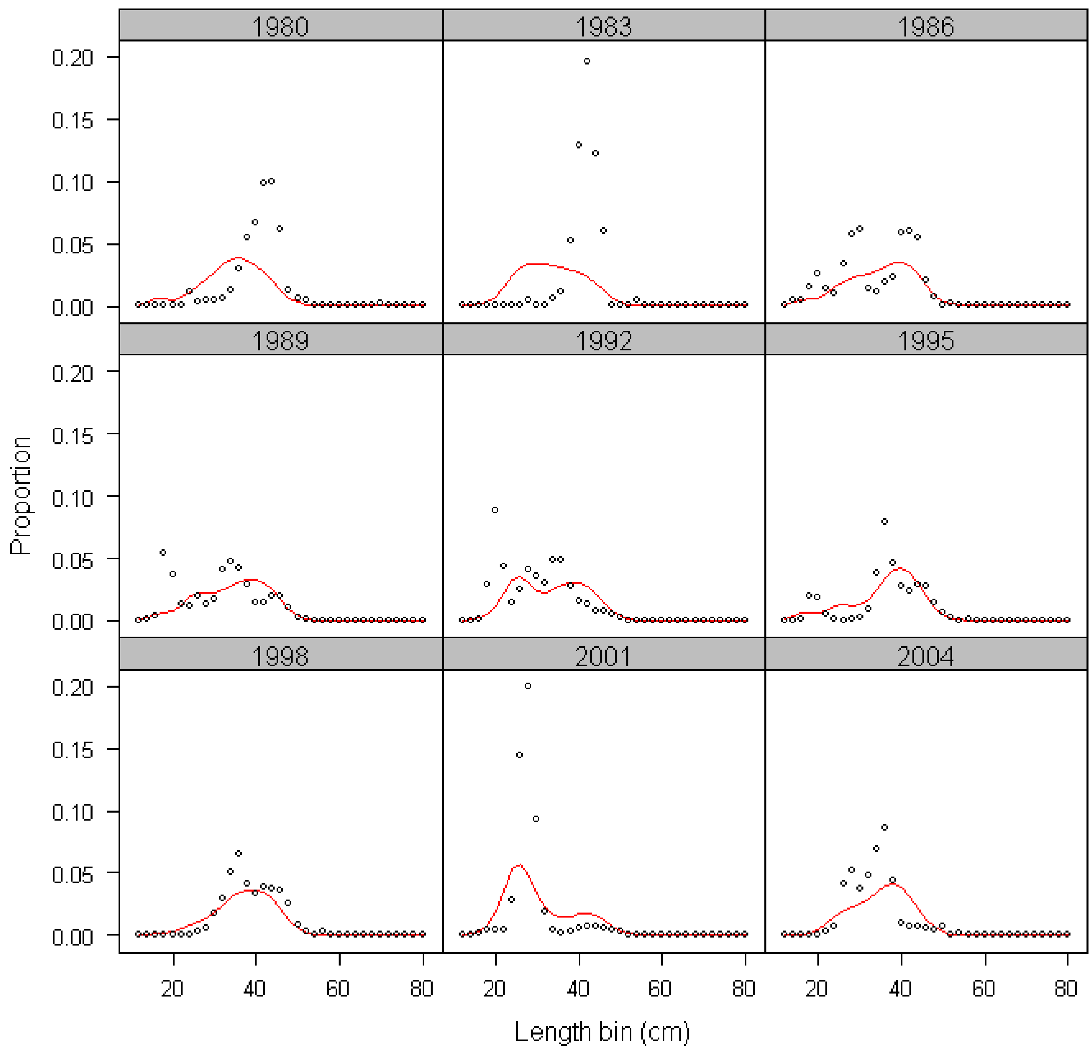


Figure 59. Residual plots for model fit to male length composition data from the Triennial Survey.

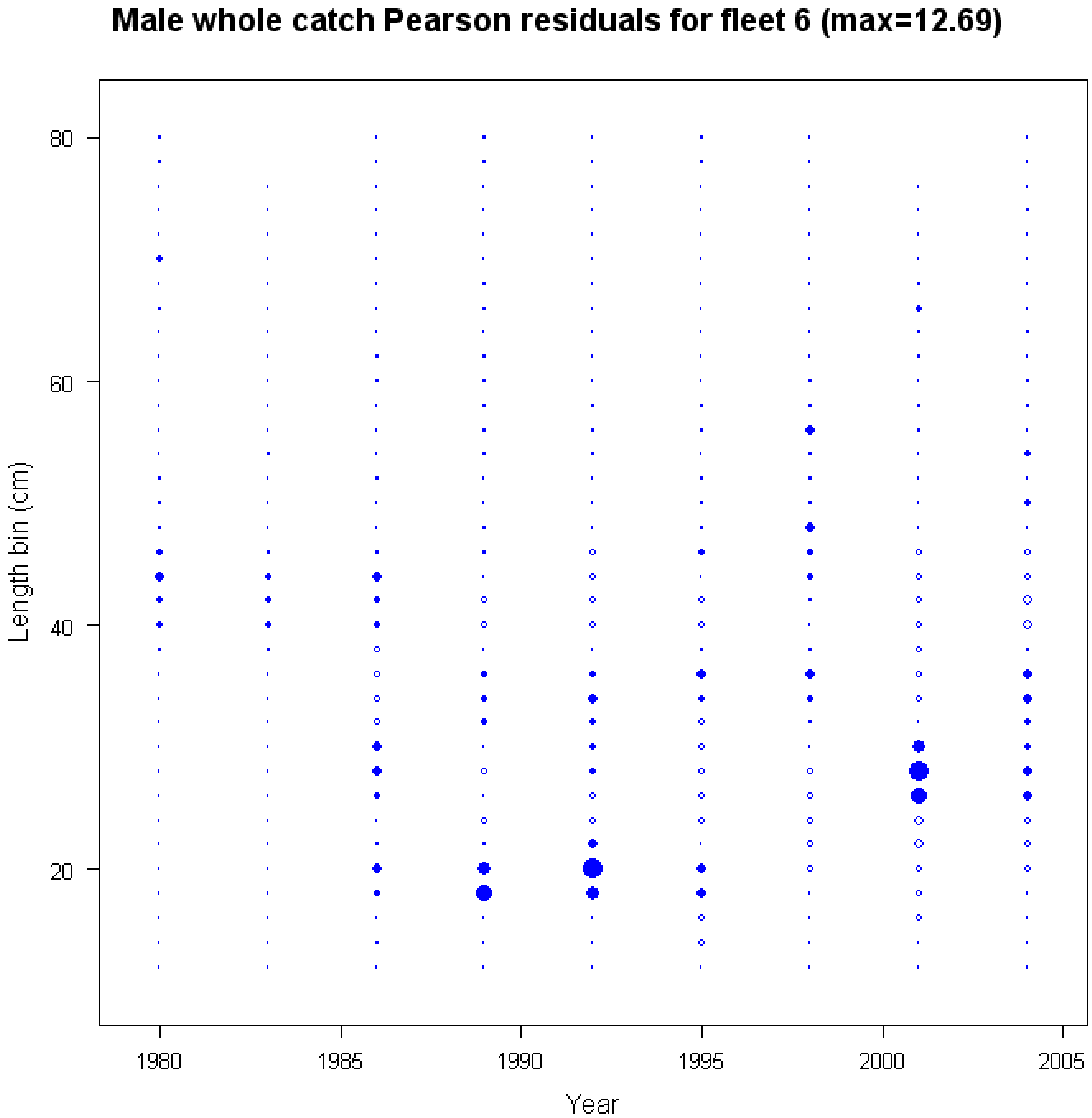


Figure 60. Observed vs. effective sample size for male length compositions from the Triennial Survey.

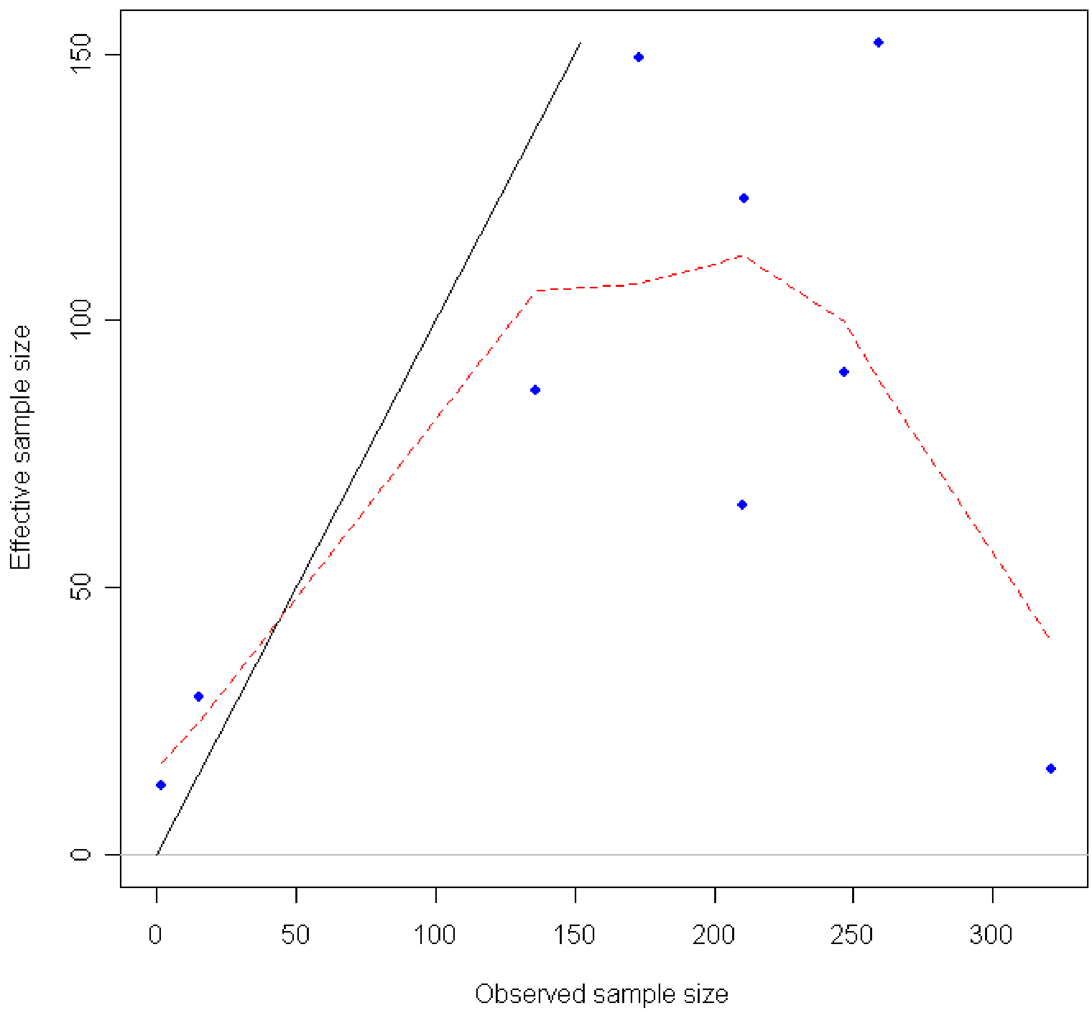


Figure 61. Base model fit to female length compositions from the AFSC Slope Survey.

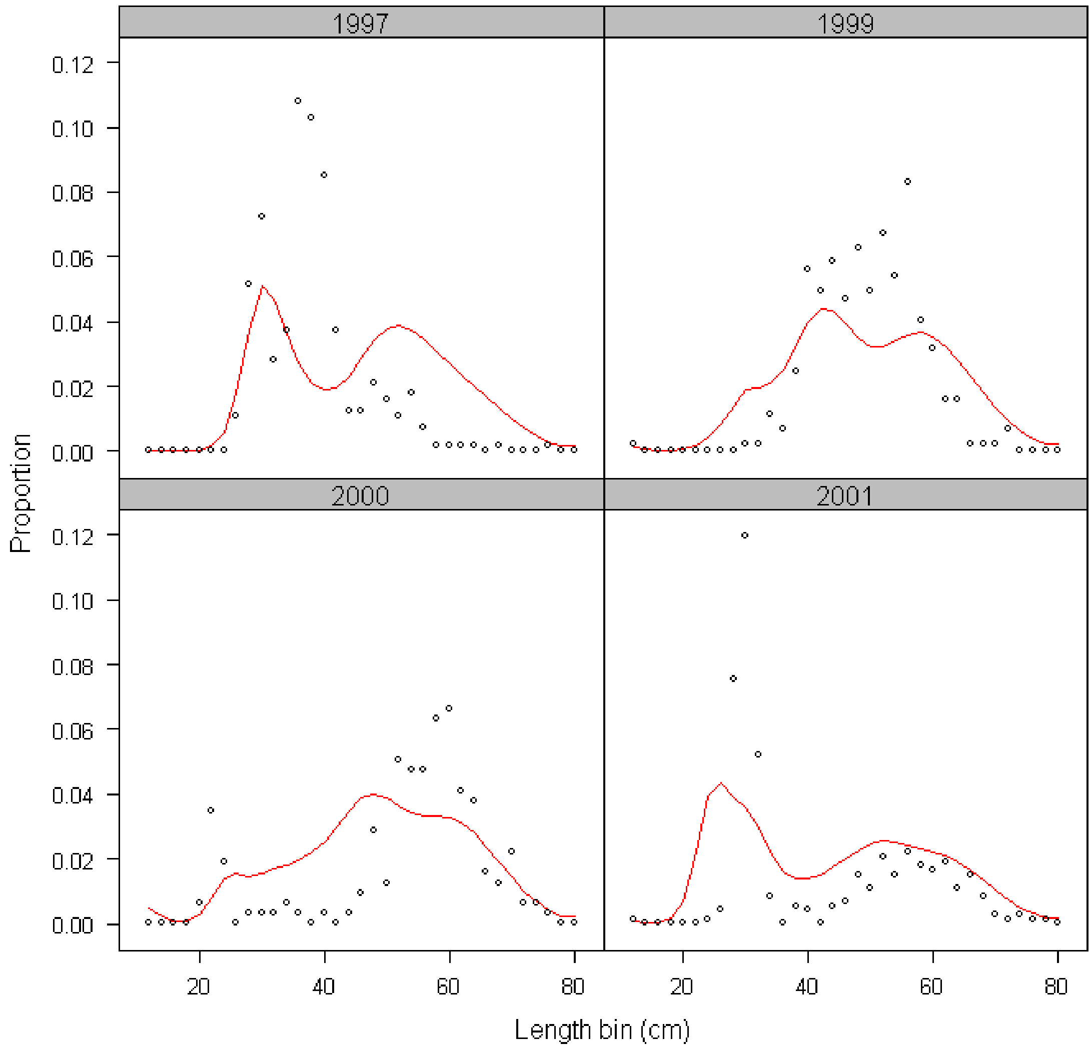


Figure 62. Residuals from base model fits to the AFSC Slope Survey female length compositions.

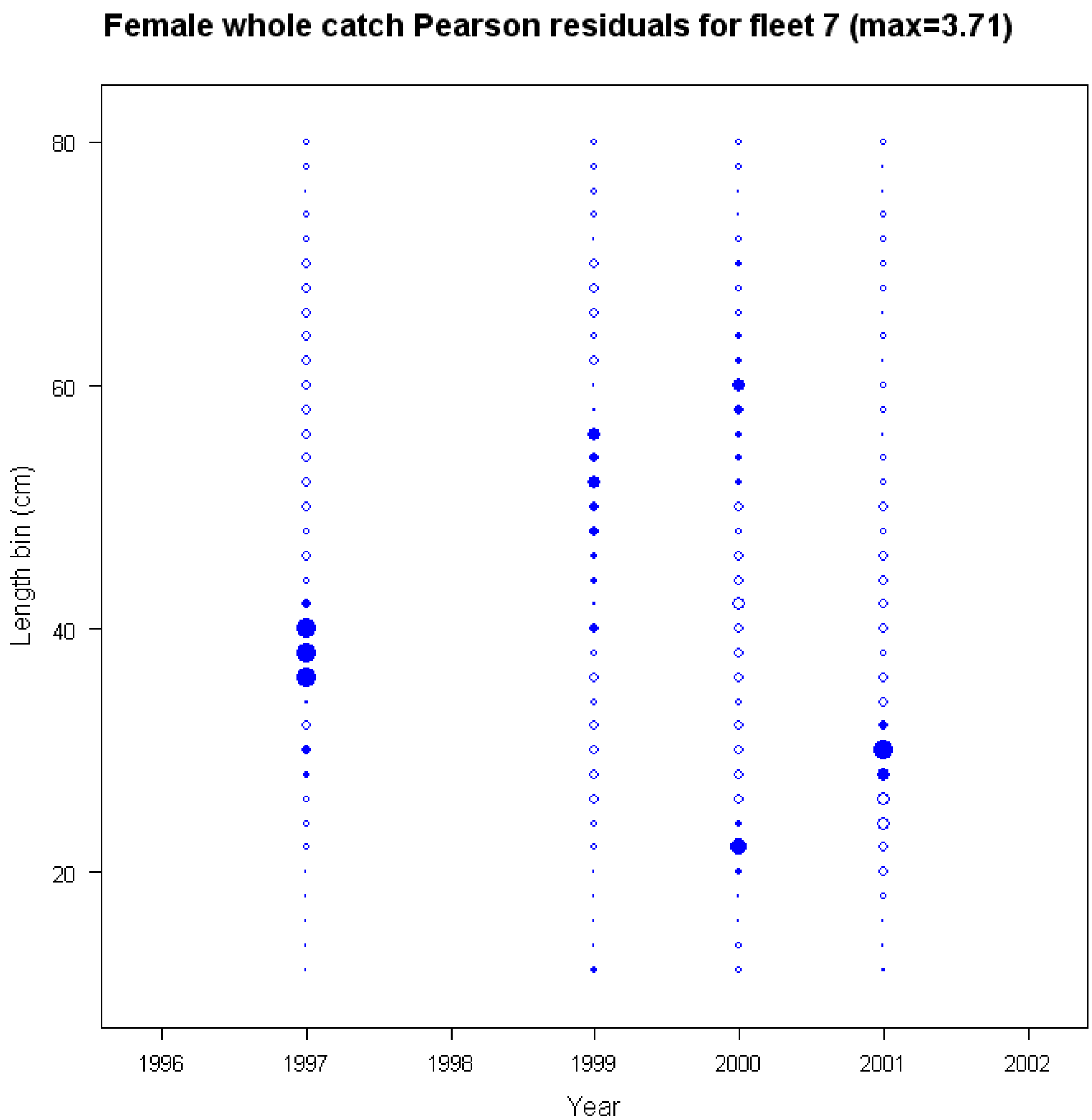


Figure 63. Observed vs. effective sample size for AFSC Slope Survey female length compositions.

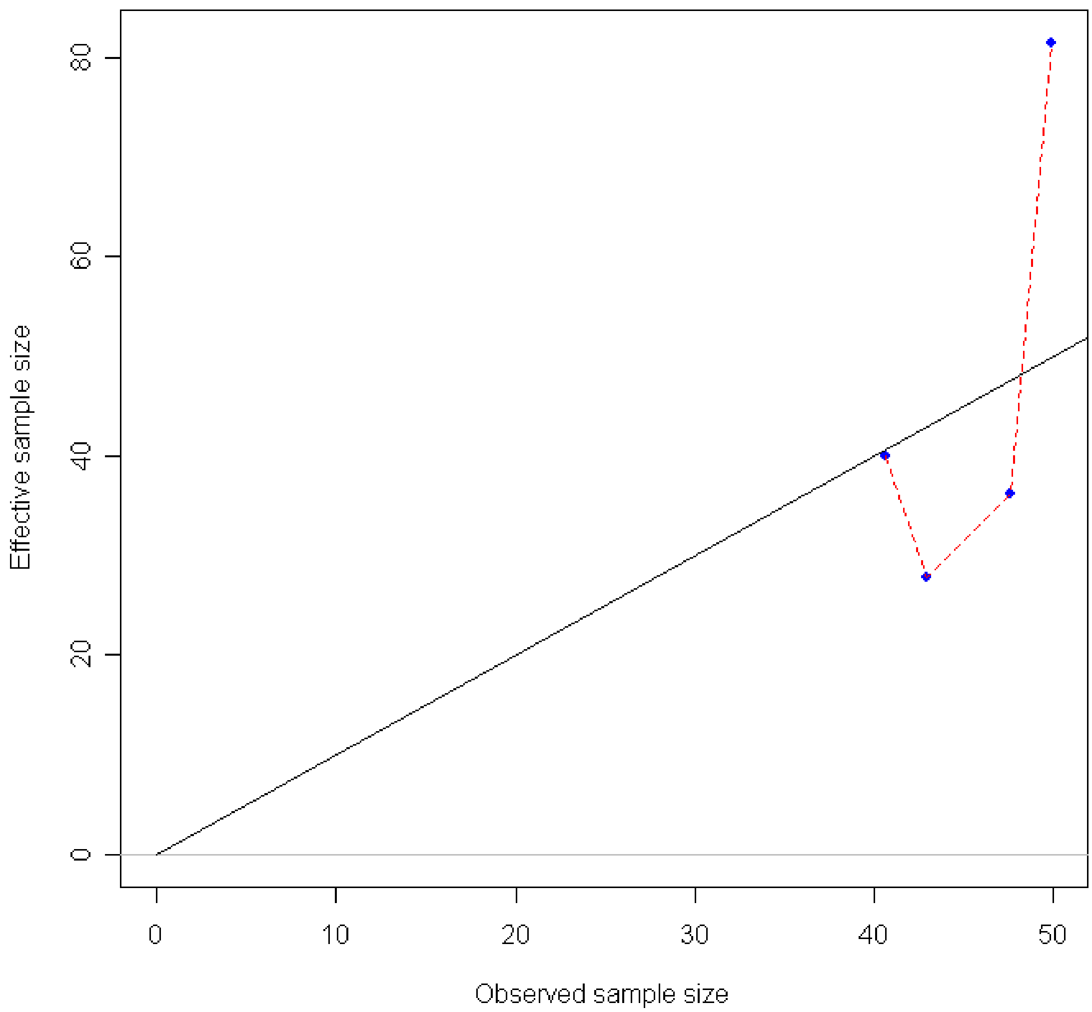


Figure 64. Model fit to AFSC Slope Survey male length compositions.

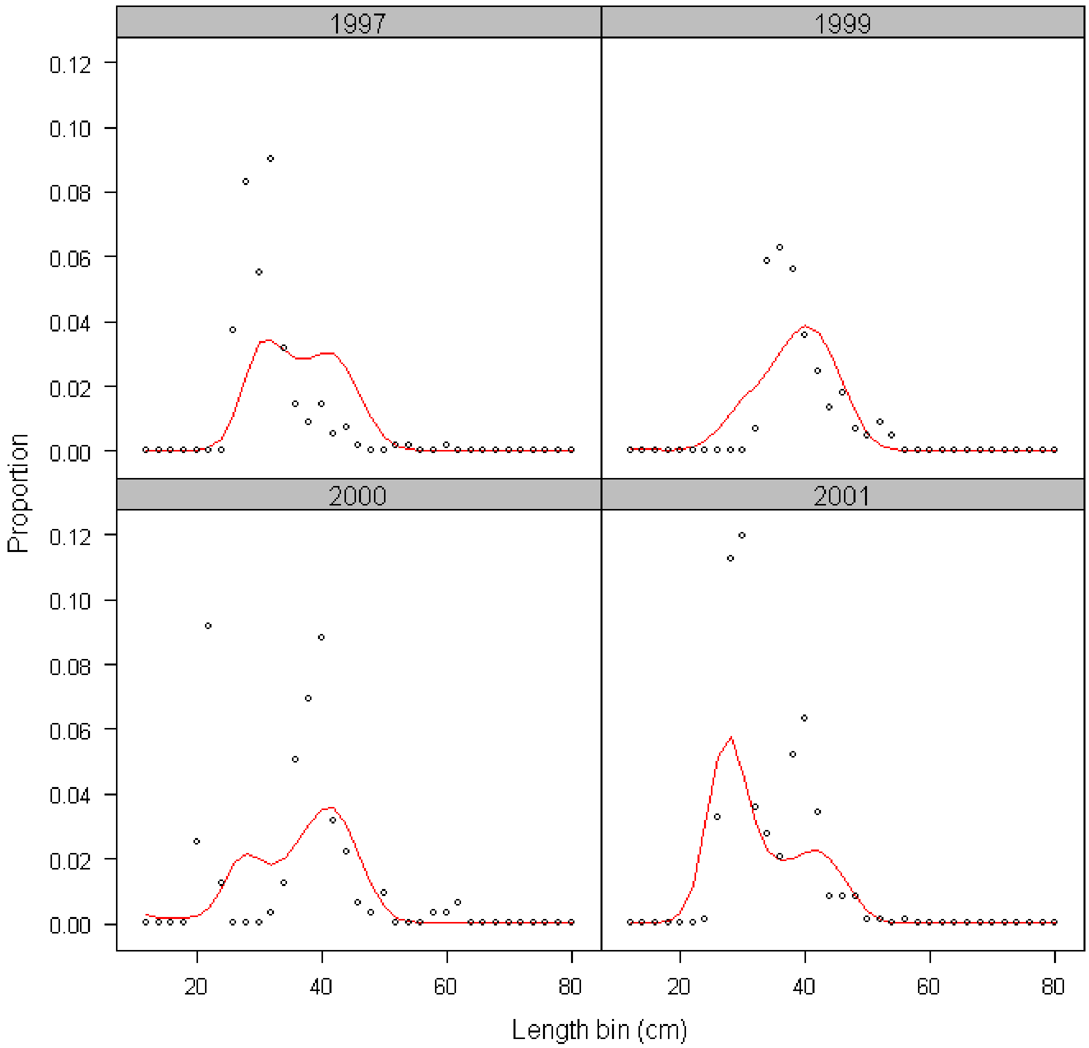


Figure 65. Residuals of the model fit to AFSC Slope Survey male length compositions.

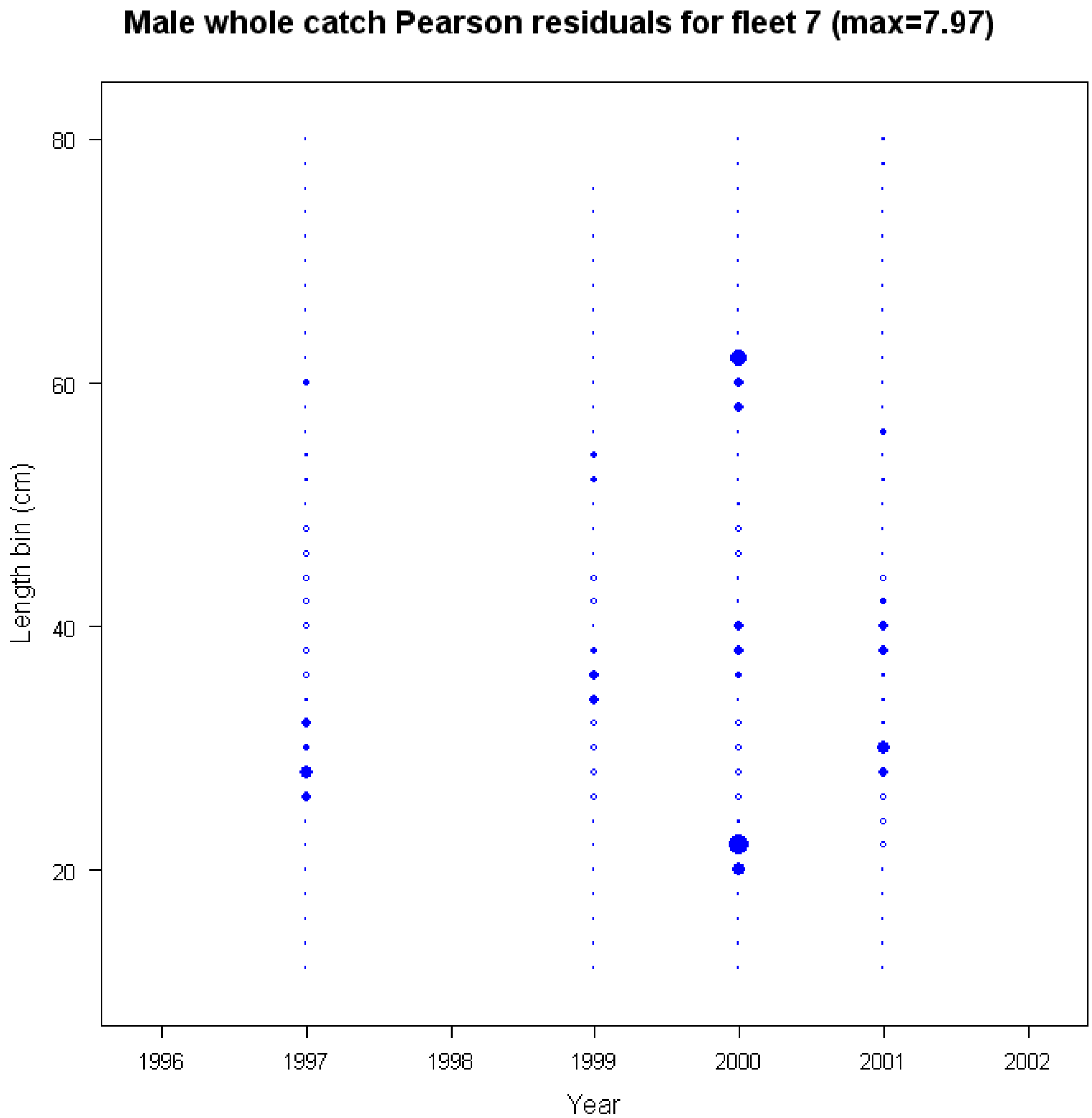


Figure 66. Observed and effective sample size from the model fit to AFSC Slope Survey male length compositions.

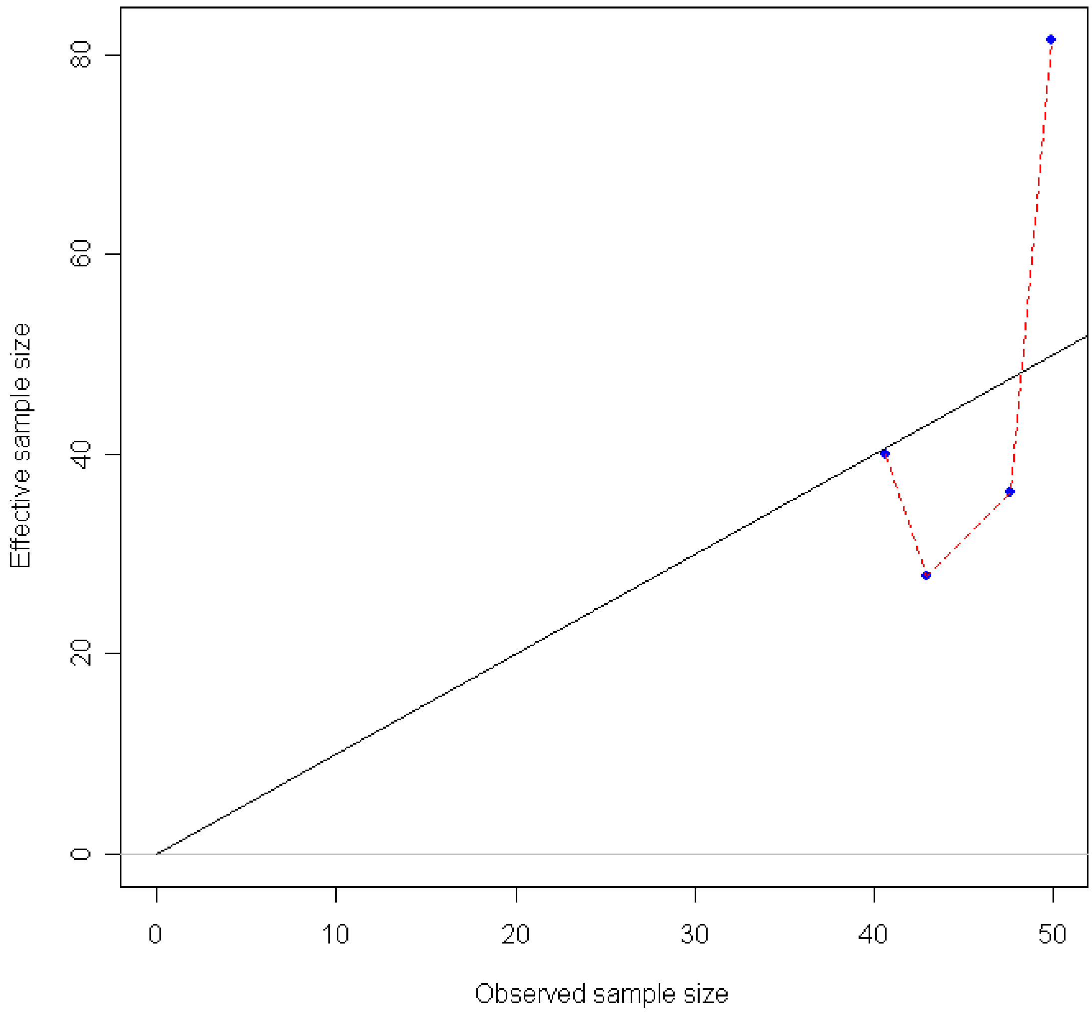


Figure 67. An example of fits to conditional age-at-length, for females retained by the fillet fishery in 1986.

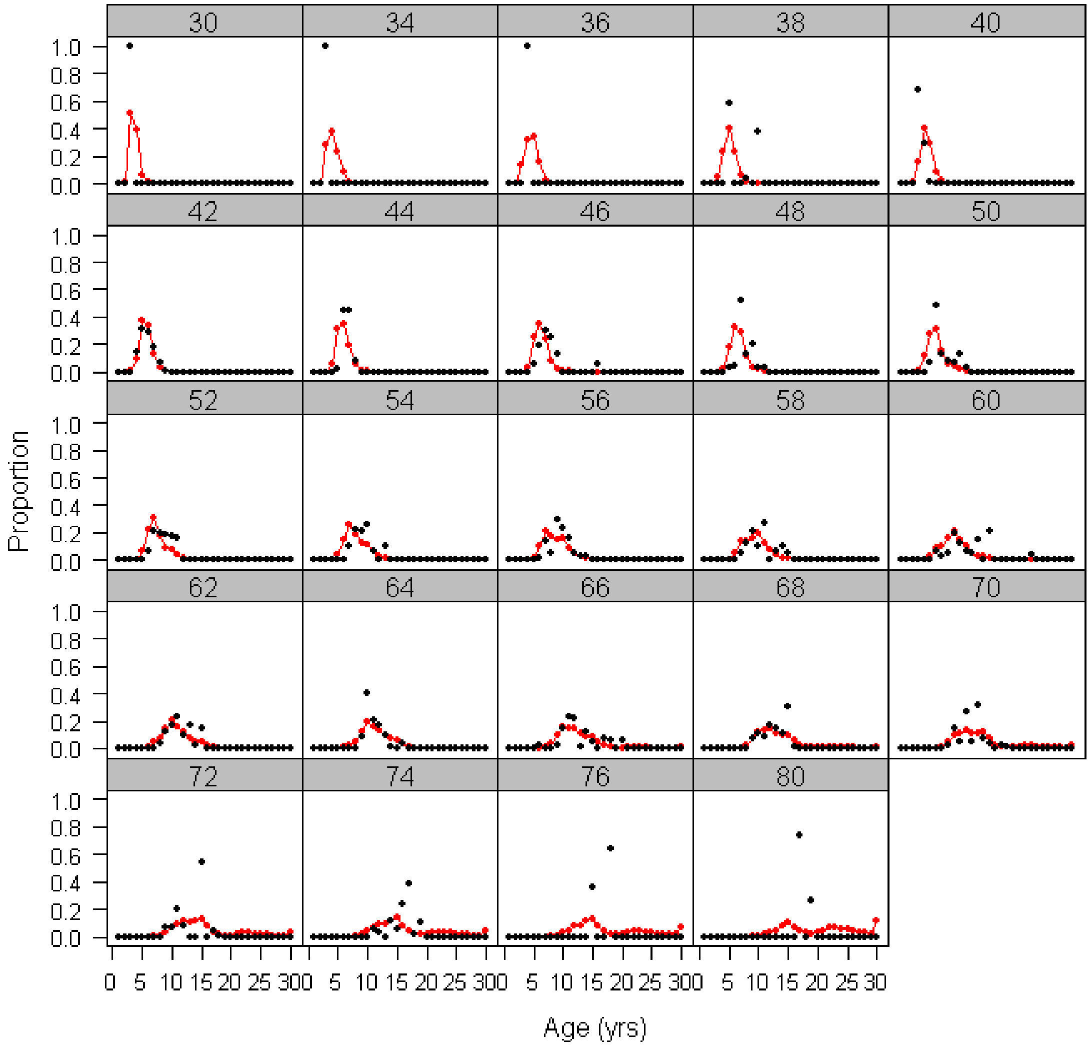


Figure 68. Residuals from model fit to age-at-length data for females retained by the fillet fishery in 1986.

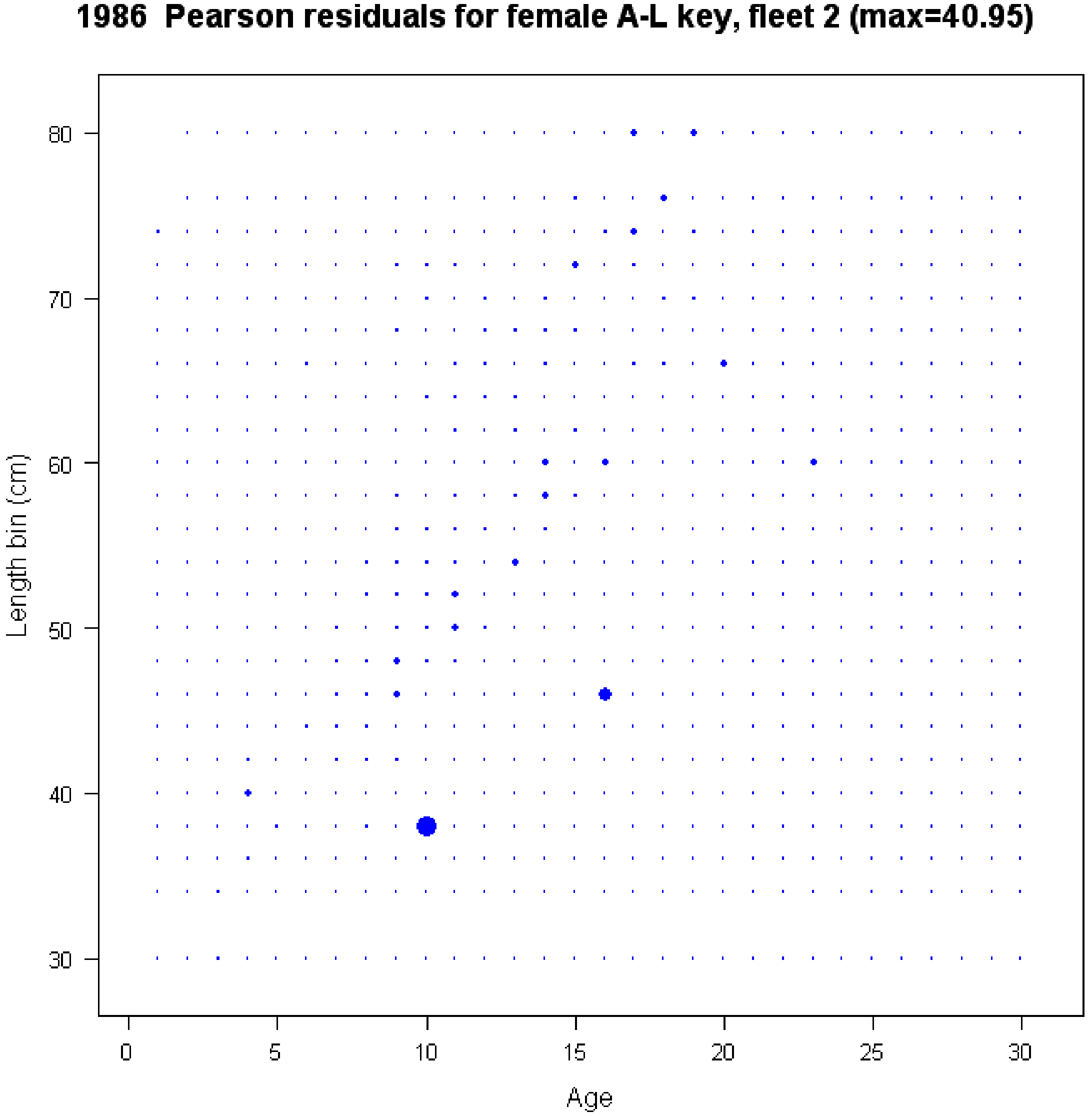


Figure 69. Implied age composition fits for the fillet fishery, for females.

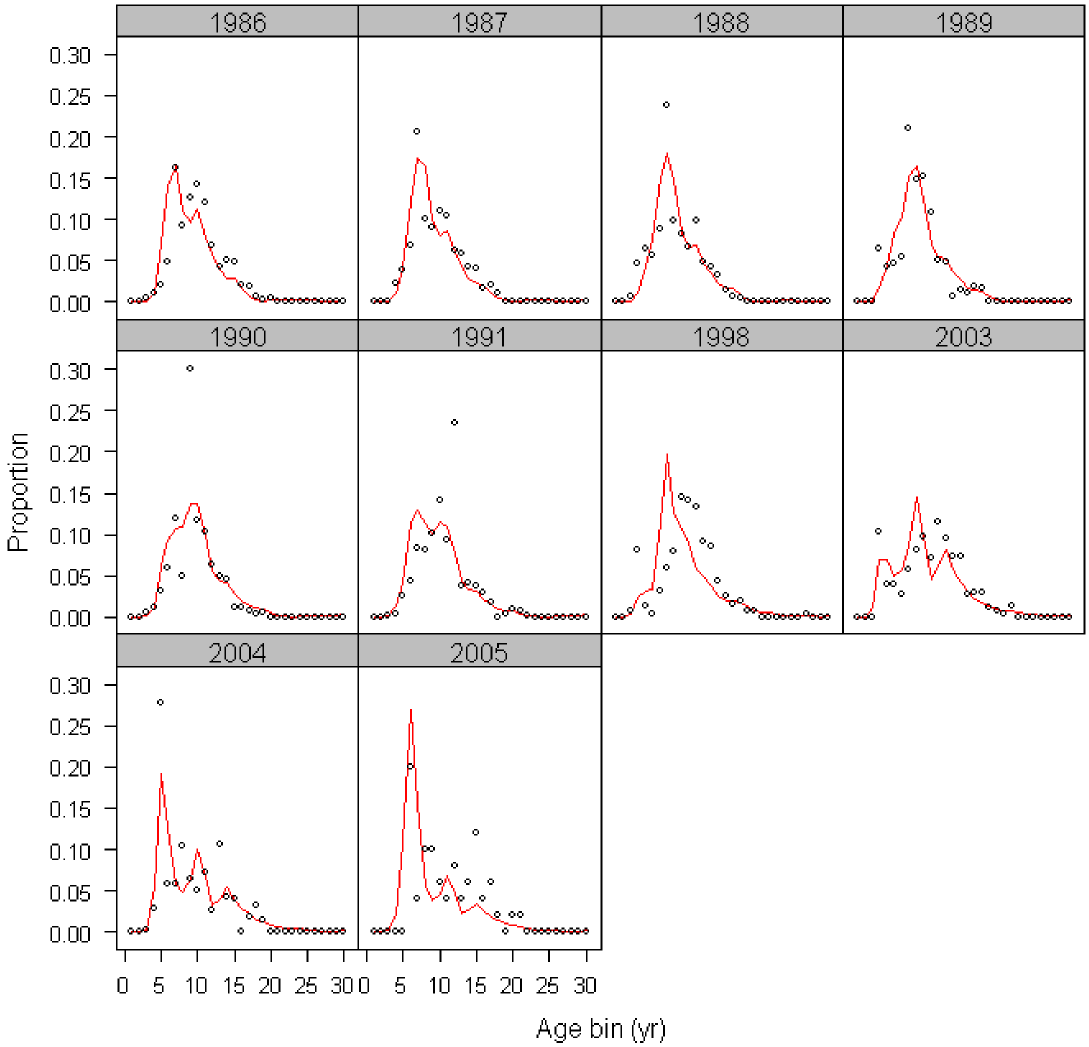


Figure 70. Residuals from the implied age composition fits from the fillet fishery, for females.

Figure 71. Model fit to the implied age compositions for the fillet fishery, for males.

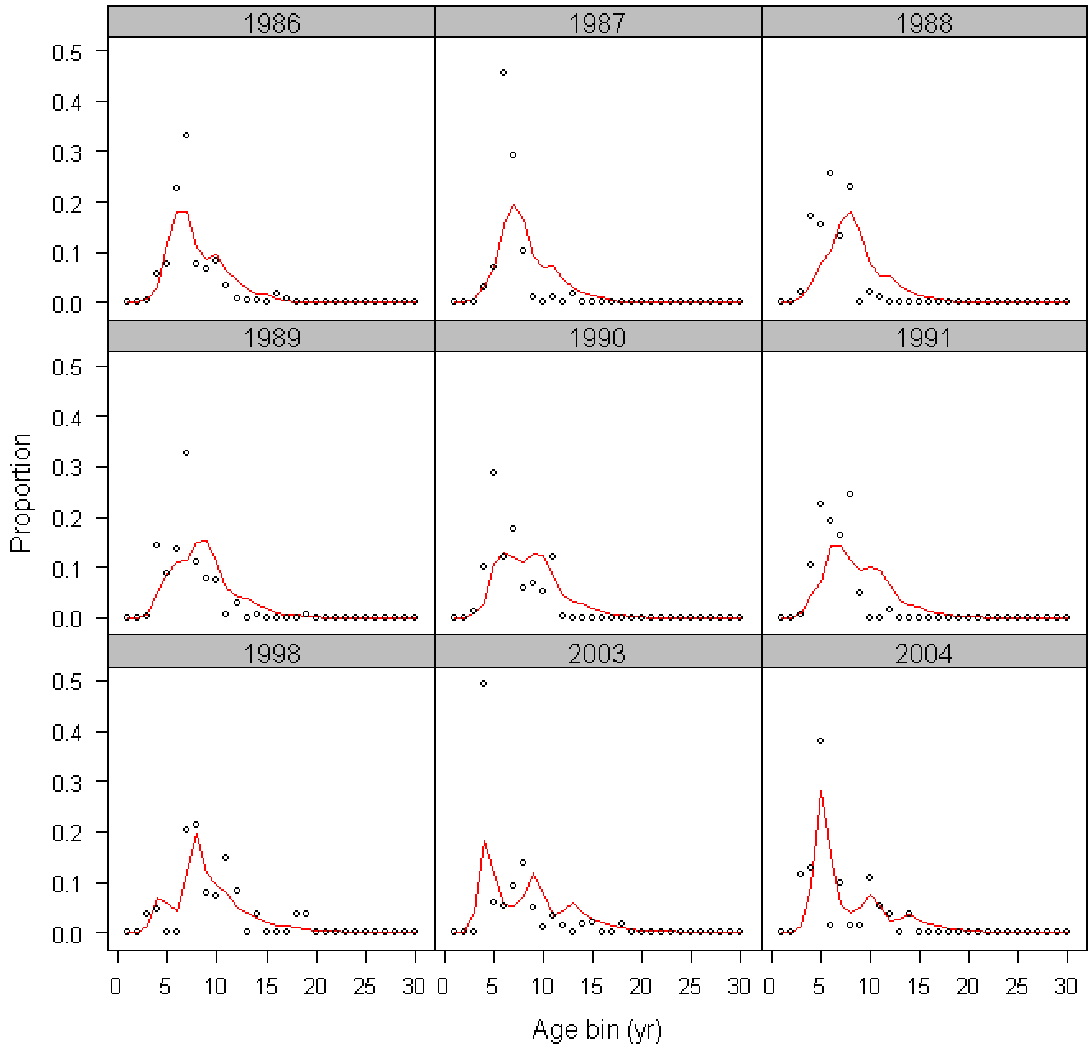


Figure 72. Residuals from implied model fit to age compositions from the fillet fishery, for males.

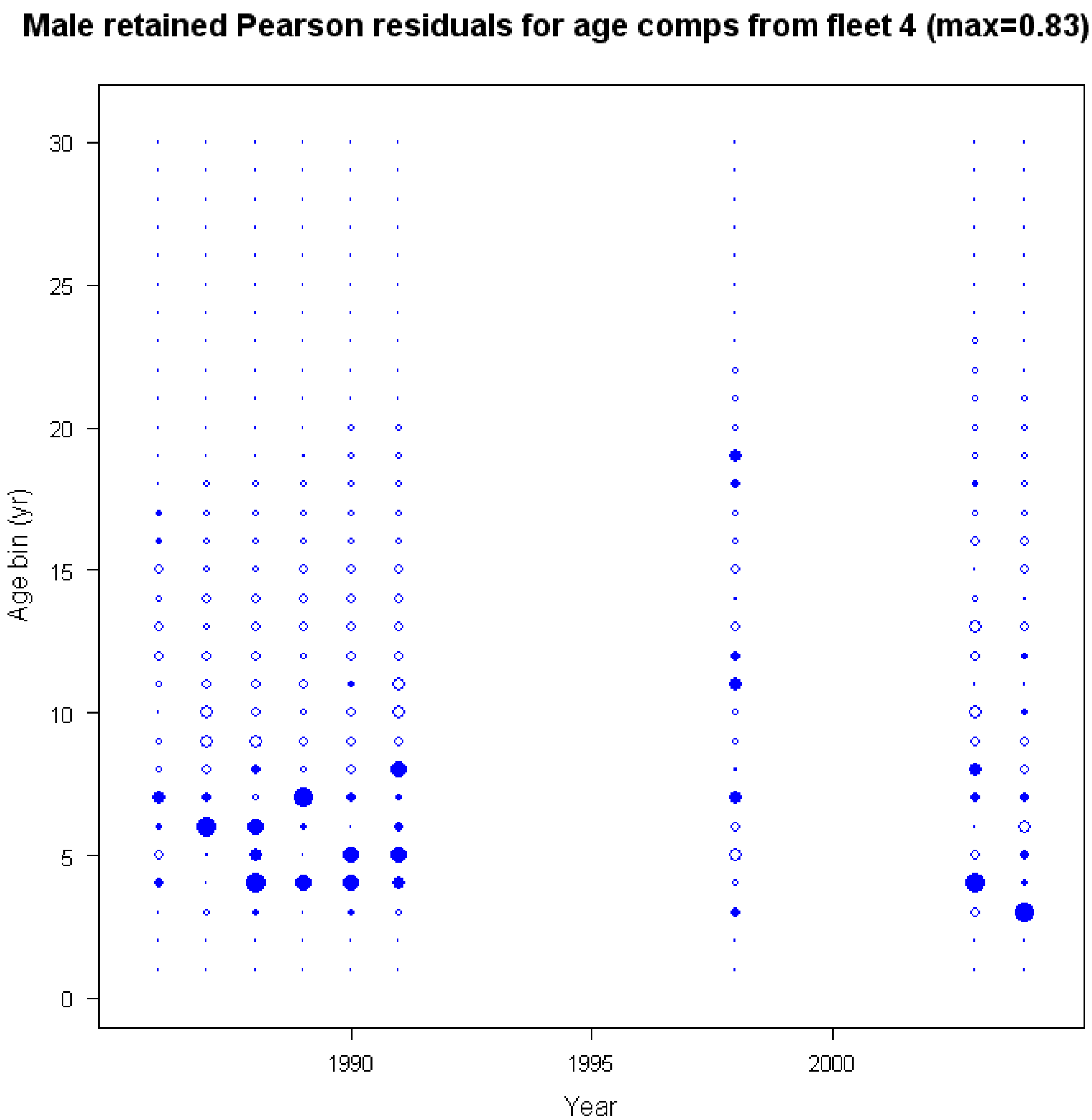


Figure 73. Implied age composition fits to the NWFSC Slope-Shelf data, for females.

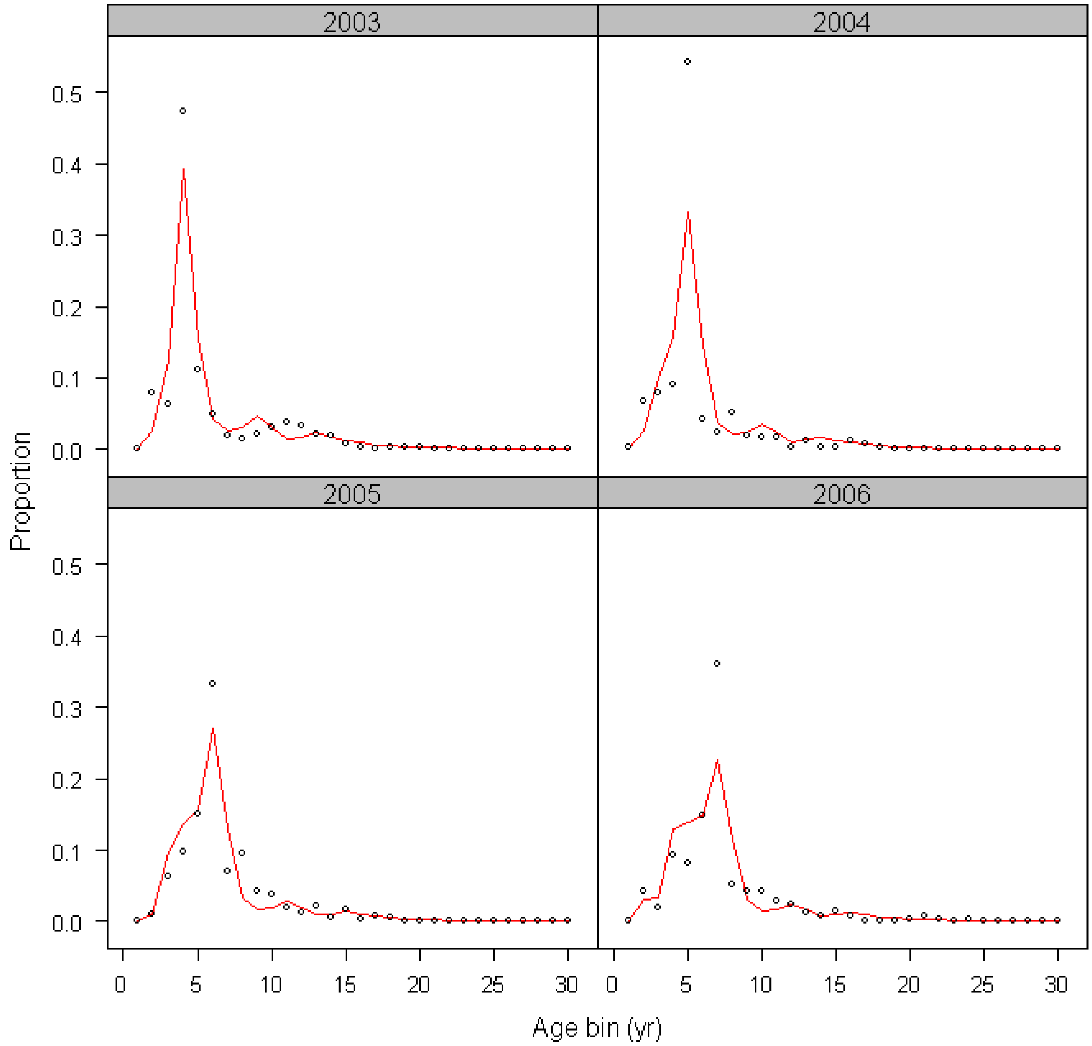


Figure 74. Residuals from implied age composition fits to the NWFSC Slope-Shelf data, for females.

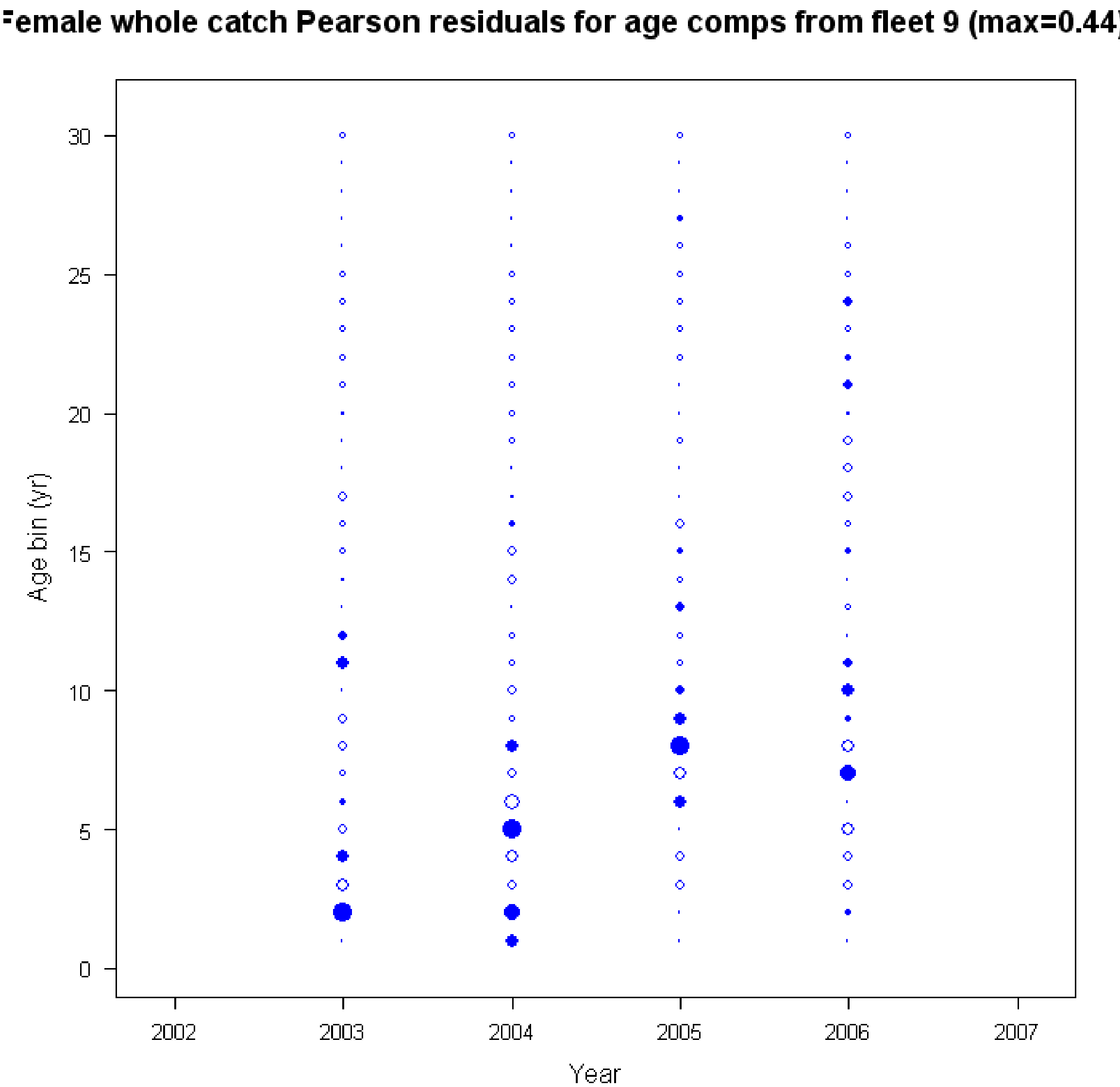


Figure 75. Fits to the implied age composition from the NWFSC Slope-Shelf survey, for males.

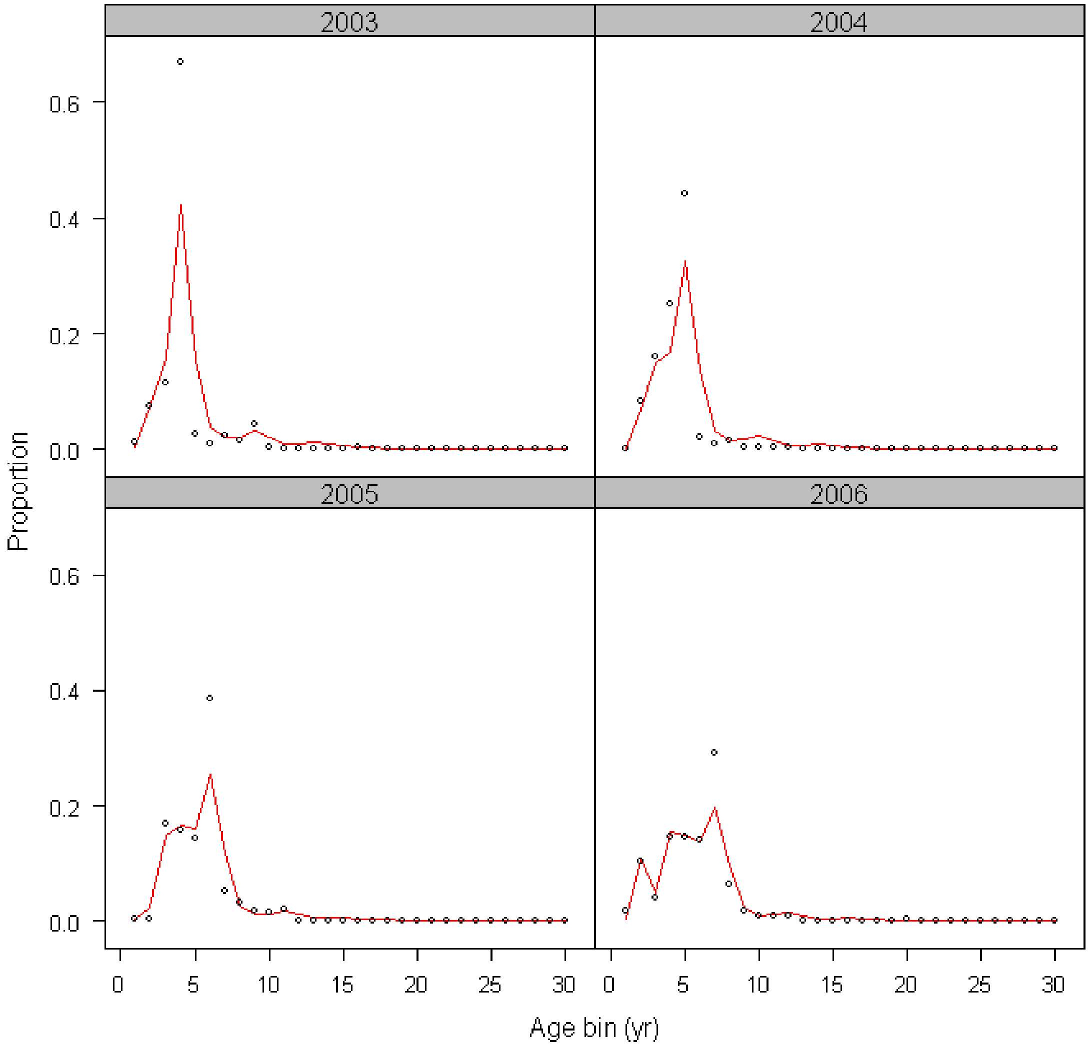


Figure 76. Residuals from fits to the implied age compositions for the NWFSC Slope-Shelf survey, for males.

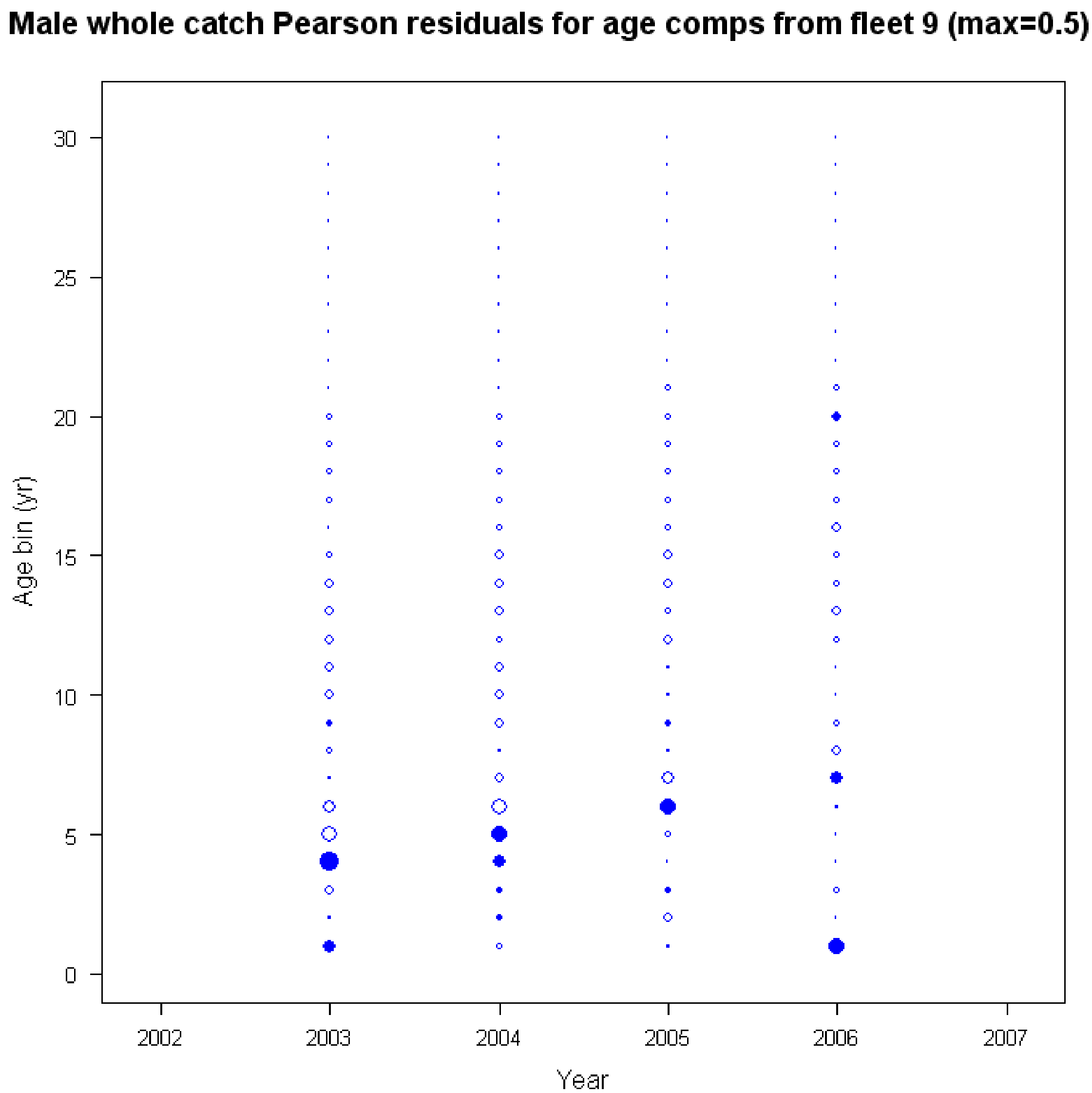


Figure 77. Likelihood profile on steepness, for all data. This is equal to total likelihood, minus the likelihood components for recruitment deviations and forecast recruitment deviations.

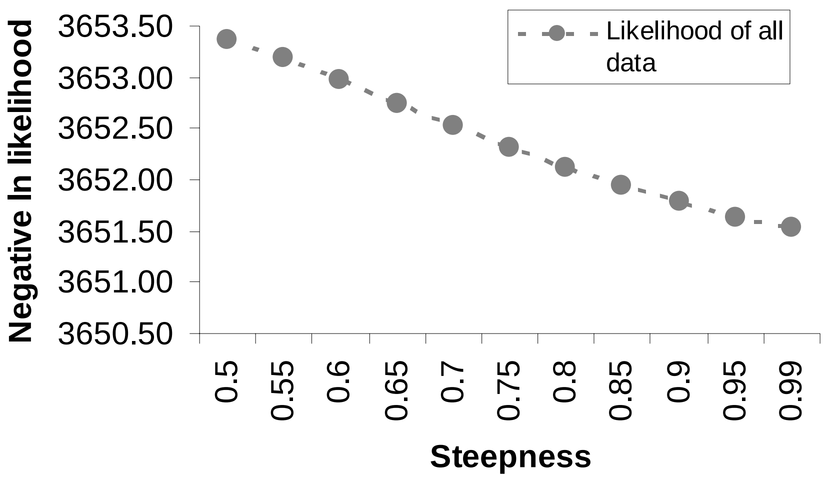


Figure 78. Likelihood profile on steepness, for age composition data only.

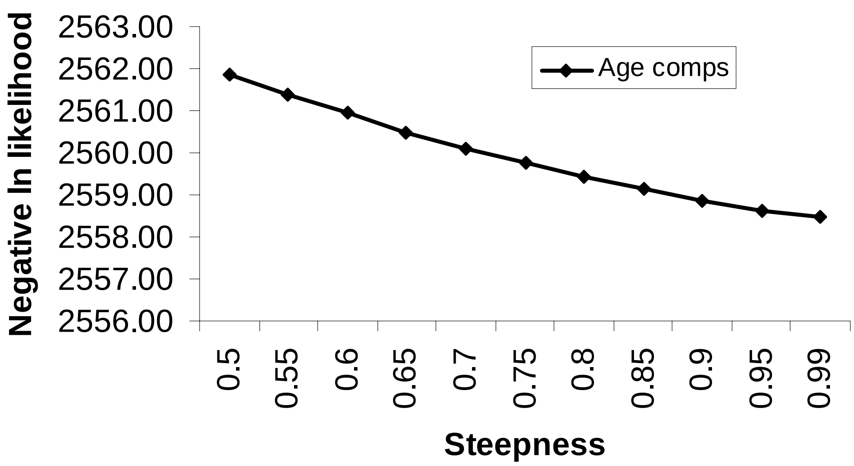


Figure 79. Likelihood profile on steepness, for length composition data only.

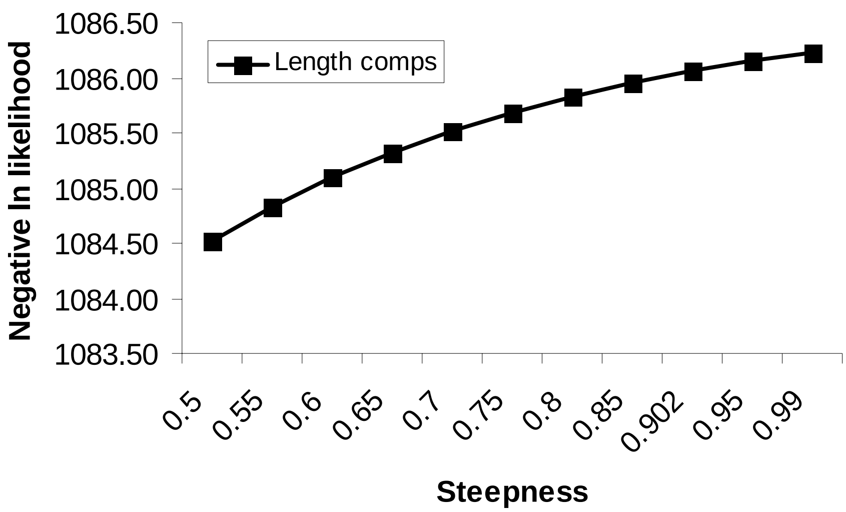


Figure 80. Likelihood profile on steepness, for abundance indices only.

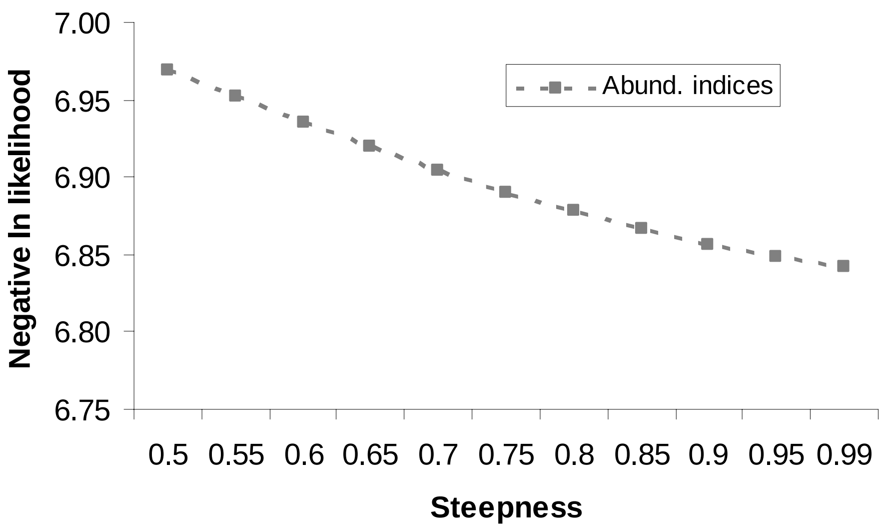


Figure 81. Likelihood profile on male natural mortality (M), for all data components. This is equal to total likelihood minus the likelihood components for recruitment deviations and forecast recruitment deviations. Female natural mortality is male M – 0.108.

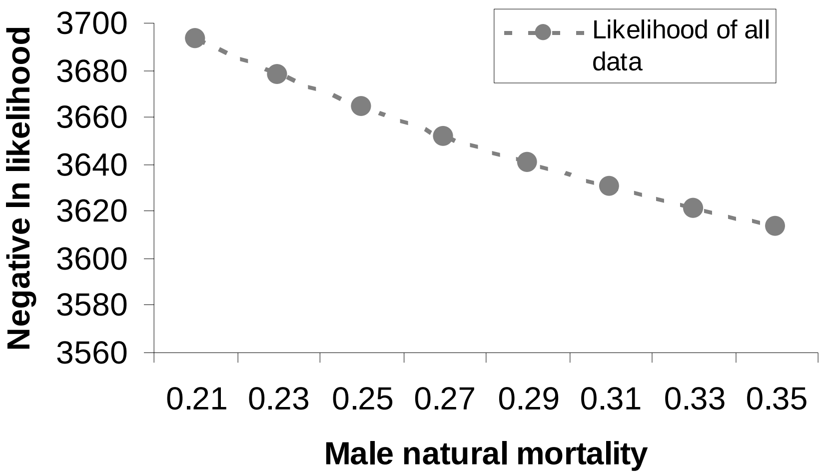


Figure 82. Likelihood profile on male natural mortality (M), for age composition data. Female natural mortality is male M – 0.108.

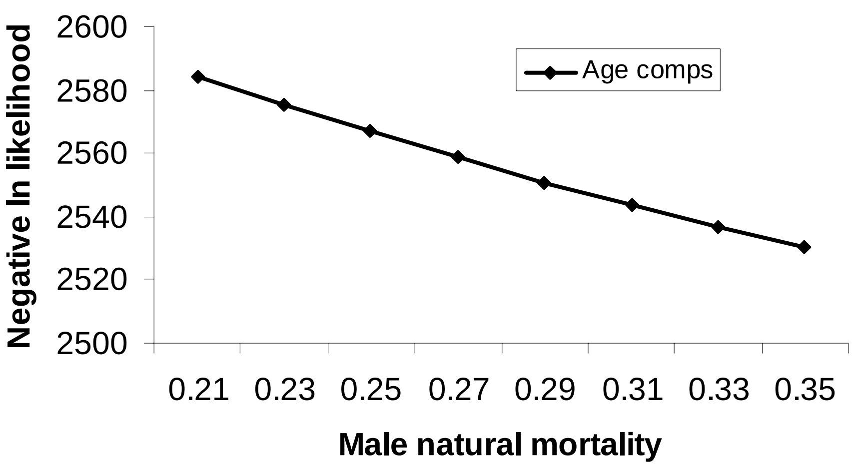


Figure 83. Likelihood profile on male natural mortality (M), for length composition data. Female natural mortality is male M – 0.108.

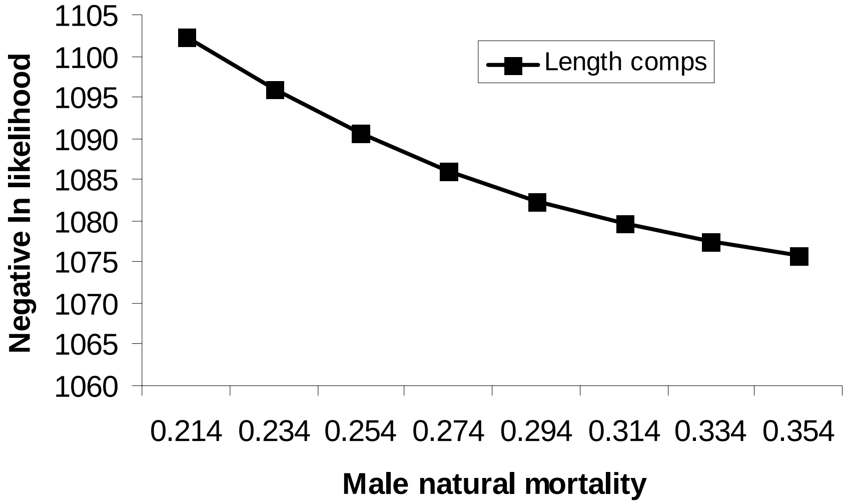


Figure 84. Likelihood profile on male natural mortality (M), for abundance indices. Female natural mortality is male M – 0.108.

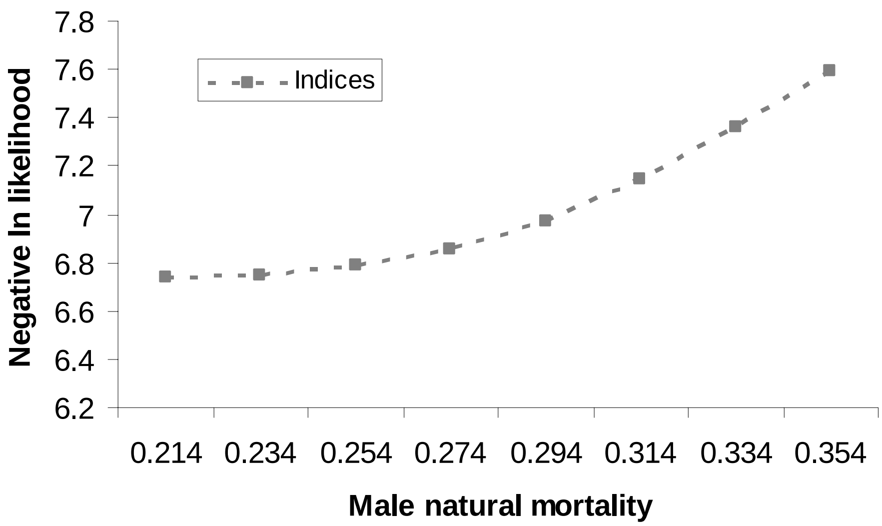


Figure 85. Total catch for all fleets in the base model, and alternate scenarios with 1/2x and 2x base catches.

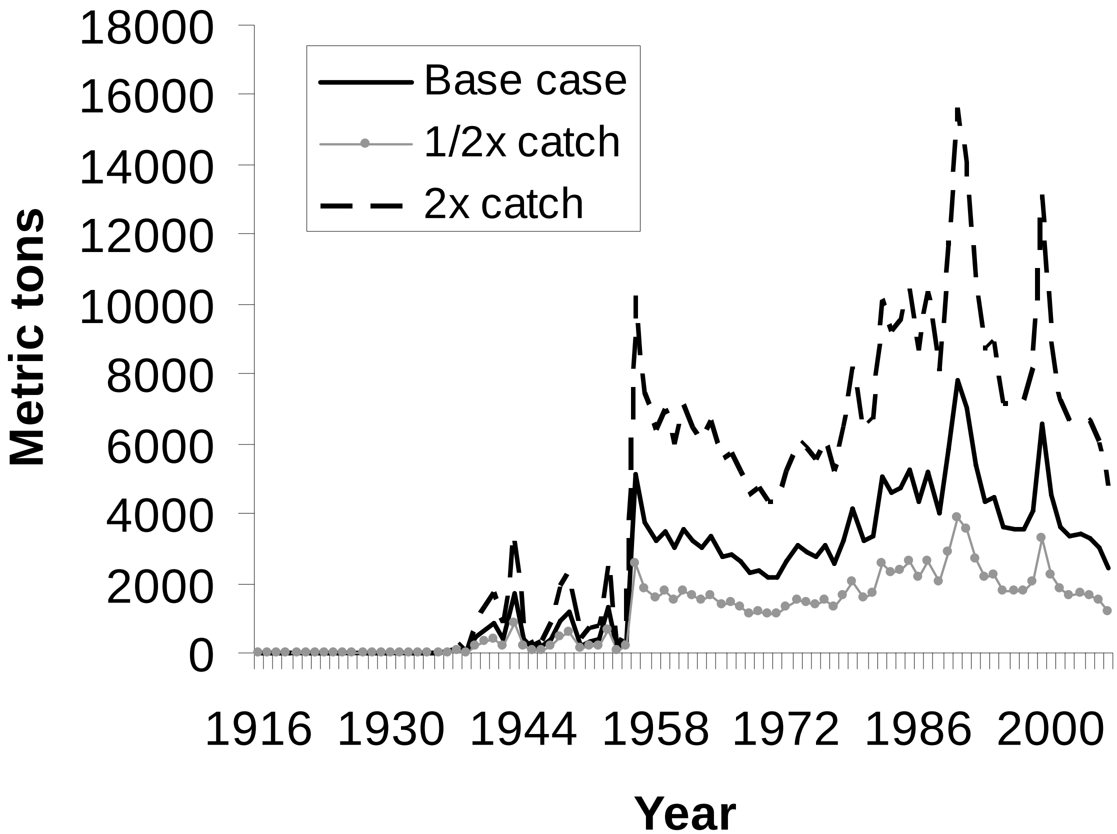


Figure 86. Estimated spawning biomass under three catch scenarios.

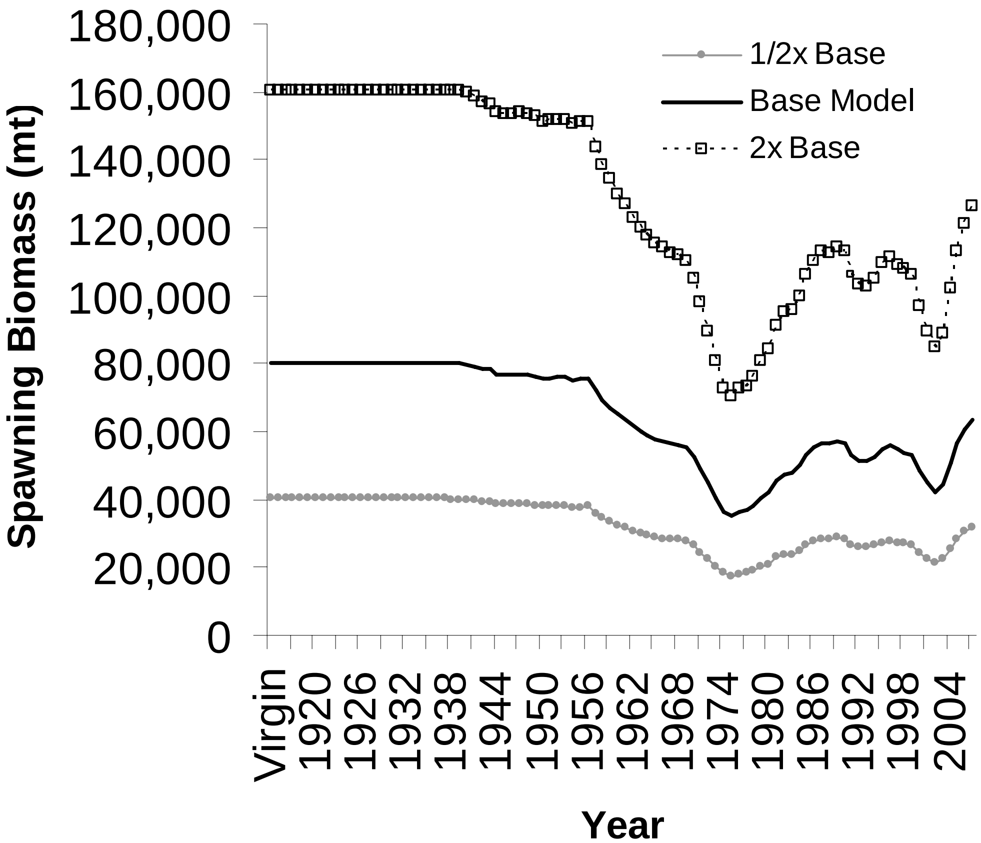


Table 1. Historical landings reconstruction for arrowtooth flounder. Each data source begins with a bold value, and ends the year before the next bold value. Superscripts refer to the data sources listed at the bottom of the table and in the Literature Cited section.

Year	CA landings, mt	OR landings, mt	WA landings, mt	Coastwide landings, mt
1916	0	0	0	0
1917	0	0	0	0
1918	0	0	0	0
1919	0	0	0	0
1920	0	0	0	0
1921	0	0	0	0
1922	0	0	0	0
1923	0	0	0	0
1924	0	0	0	0
1925	0	0	0	0
1926	0	0	0	0
1927	0	0	0	0
1928	0	**0.02**[3]	0	0.02
1929	0	6	0	6
1930	0	2	0	2
1931	0	2	0	2
1932	0	12	0	12
1933	0	8	0	8
1934	0	5	0	5
1935	0	10	0	10
1936	0	34	0	34
1937	0	148	0	148
1938	0	7	0	7
1939	0	453	0	453
1940	0	641	0	641
1941	0	846	0	846
1942	0	**412**[4]	0	412
1943	0	1717	0	1717
1944	0	407	0	407
1945	0	113	0	113
1946	0	167	0	167
1947	0	425	0	425
1948	0	936	0	936
1949	0	1165	0	1165
1950	**34**[1]	**168**[5]	0	202
1951	27	318	0	345
1952	51	339	0	390
1953	40	1282	0	1322
1954	**80**[2]	0	0	80
1955	339	0	0	339
1956	523	**1240**[6]	**1911**[8]	3674

1957	463	903	770	2137
1958	325	814	456	1595
1959	416	863	599	1878
1960	485	371	404	1260
1961	60	337	1523	1920
1962	61	489	937	1487
1963	52	200	974	1225
1964	47	558	1044	1649
1965	41	440	603	1085
1966	39	455	602	1096
1967	36	294	758	1088
1968	38	200	360	598
1969	16	127	342	486
1970	16	36	160	212
1971	12	**1**[7]	242	256
1972	87	23	**33**[9]	144
1973	449	33	180	662
1974	333	109	108	549
1975	45	77	23	145
1976	97	32	156	286
1977	6	79	116	202
1978	94	177	244	515
1979	127	339	410	876
1980	65	199	345	609

Data sources:

1 = California Dept. Fish and Game (1968)

2 = NMFS Annual Commercial Landings Database

3 = Cleaver (1951), ½ of “sole” and “scrapfish”

4 = Cleaver (1951), arrowtooth + ½ of “sole” and “scrapfish”

5 = Smith (1956)

6 = PFMFC (1981)

7 = NMFS Annual Commercial Landings Database

8 = PFMFC (1981)

9 = NMFS Annual Commercial Landings Database

Table 2a. Basic data and statistics summary for Arrowtooth flounder caught in the AFSC Triennial Shelf survey.

Number tows with zero and positive catch by year and spatial strata.

	Vancouver				Columbia				Eureka+Monterey			
	55-155 m		156-549 m		55-155 m		156-549 m		55-155 m		156-549 m	
Year	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0
1980	11	7	12	11	130	56	71	65	47	9	30	8
1983	33	24	29	26	193	98	97	79	84	15	43	20
1986	123	93	49	49	159	101	49	47	82	16	21	4
1989	30	23	24	23	128	93	60	56	124	17	44	15
1992	29	24	18	18	143	112	58	51	119	24	36	16
1995	19	16	18	17	101	53	80	62	100	14	74	34
1998	26	23	15	14	106	58	79	66	103	19	84	36
2001	21	19	17	16	105	93	82	73	102	53	82	32
2004	19	18	15	13	91	81	67	64	80	34	68	40

Mean and CV of catch per kg/4 ha by year and spatial strata (all tows).

	Vancouver				Columbia				Eureka+Monterey			
	55-155 m		156-549 m		55-155 m		156-549 m		55-155 m		156-549 m	
Year	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**
1980	3.58	0.53	14.69	0.52	0.65	0.20	5.08	0.21	0.10	0.39	0.22	0.44
1983	2.30	0.28	11.53	0.25	1.02	0.14	2.53	0.18	0.07	0.43	0.48	0.27
1986	7.38	0.16	18.14	0.10	2.01	0.19	4.41	0.14	0.13	0.36	0.05	0.56
1989	3.99	0.28	46.91	0.52	2.18	0.18	5.67	0.13	0.07	0.33	0.46	0.40
1992	2.09	0.22	7.15	0.21	0.80	0.13	2.62	0.15	0.12	0.28	0.91	0.29
1995	3.98	0.33	6.00	0.26	0.97	0.22	3.45	0.35	0.06	0.39	0.93	0.27
1998	22.44	0.60	14.50	0.34	1.53	0.17	2.83	0.16	0.05	0.26	0.46	0.19
2001	12.53	0.18	43.56	0.38	3.69	0.18	4.09	0.18	0.40	0.19	0.39	0.38
2004	27.28	0.34	107.24	0.76	6.38	0.17	11.29	0.19	1.41	0.33	2.84	0.20

Mean and CV catch per kg/2 ha by year and spatial strata (only positive tows).

	Vancouver				Columbia				Eureka+Monterey			
	55-155 m		156-549 m		55-155 m		156-549 m		55-155 m		156-549 m	
Year	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**
1980	5.62	0.49	16.03	0.51	1.50	0.18	5.55	0.20	0.51	0.26	0.81	0.34
1983	3.17	0.26	12.86	0.25	2.01	0.12	3.11	0.17	0.41	0.37	1.03	0.21
1986	9.75	0.15	18.14	0.10	3.16	0.18	4.59	0.14	0.68	0.29	0.24	0.36
1989	5.21	0.27	48.95	0.52	3.00	0.17	6.08	0.12	0.49	0.25	1.35	0.34
1992	2.53	0.20	7.15	0.21	1.02	0.13	2.98	0.15	0.57	0.22	2.04	0.23
1995	4.73	0.32	6.36	0.25	1.85	0.20	4.45	0.35	0.42	0.31	2.02	0.24
1998	25.37	0.59	15.54	0.33	2.80	0.15	3.39	0.15	0.28	0.16	1.06	0.14
2001	13.85	0.17	46.28	0.37	4.16	0.17	4.59	0.18	0.76	0.17	0.99	0.36
2004	28.80	0.34	123.73	0.75	7.17	0.17	11.82	0.18	3.31	0.30	4.82	0.18

Table 2b. Basic data and statistics summary for Arrowtooth flounder caught in the combined AFSC Slope survey.

	46-49°N				43-46°N				36-43°N			
Number tows with zero and positive catch by year and spatial strata.												
	183-299 m		**300-549 m**		**183-299 m**		**300-549 m**		**183-299 m**		**300-549 m**	
Year	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0
1997	4	4	5	5	6	6	13	10	11	4	15	5
1999	3	3	9	9	6	6	13	13	12	5	16	6
2000	4	4	7	6	4	3	15	14	12	4	18	2
2001	4	4	7	6	4	4	15	13	12	9	18	3
Mean and CV of catch per kg/2 ha by year and spatial strata (all tows).												
	46-49°N				**43-46°N**				**36-43°N**			
	183-299 m		**300-549 m**		**183-299 m**		**300-549 m**		**183-299 m**		**300-549 m**	
Year	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**
1997	28.56	0.46	7.93	0.34	5.82	0.27	2.09	0.21	0.67	0.55	0.79	0.33
1999	42.53	0.38	7.08	0.33	6.71	0.24	2.77	0.16	0.17	0.41	0.34	0.62
2000	21.99	0.54	7.38	0.65	5.01	0.31	1.70	0.32	0.54	0.61	0.12	0.54
2001	23.85	0.72	1.69	0.67	10.98	0.23	1.57	0.28	1.42	0.23	0.21	0.34
Mean and CV catch per kg/2 ha by year and spatial strata (only positive tows).												
	46-49°N				**43-46°N**				**36-43°N**			
	55-155 m		**156-549 m**		**55-155 m**		**156-549 m**		**55-155 m**		**156-549 m**	
Year	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**
1997	28.56	0.46	10.20	0.32	6.59	0.25	2.93	0.15	1.93	0.48	2.74	0.25
1999	42.53	0.38	7.62	0.32	7.55	0.23	3.29	0.13	0.88	0.19	2.71	0.52
2000	21.99	0.54	9.34	0.64	6.12	0.28	3.49	0.28	1.23	0.58	0.91	0.40
2001	23.85	0.72	4.01	0.63	10.98	0.23	3.05	0.22	2.28	0.18	1.01	0.22

Table 2c. Basic data and statistics summary for Arrowtooth flounder caught in the NWFSC Slope survey.

Number tows with zero and positive catch by year and spatial strata.

	46-49°N				43-46°N				36-43°N			
	183-299 m		**300-549 m**		**183-299 m**		**300-549 m**		**183-299 m**		**300-549 m**	
Year	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0
1999	5	5	18	14	17	15	21	15	23	8	52	15
2000	7	7	14	13	19	17	20	16	32	6	48	6
2001	5	5	19	15	11	9	39	19	25	11	47	6
2002	4	4	20	8	15	15	31	16	29	18	59	12

Mean and CV of catch per kg/2 ha by year and spatial strata (all tows).

	46-49°N				43-46°N				36-43°N			
	183-299 m		**300-549 m**		**183-299 m**		**300-549 m**		**183-299 m**		**300-549 m**	
Year	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**
1999	28.56	0.46	7.93	0.34	5.82	0.27	2.09	0.21	0.67	0.55	0.79	0.33
2000	42.53	0.38	7.08	0.33	6.71	0.24	2.77	0.16	0.17	0.41	0.34	0.62
2001	21.99	0.54	7.38	0.65	5.01	0.31	1.70	0.32	0.54	0.61	0.12	0.54
2002	23.85	0.72	1.69	0.67	10.98	0.23	1.57	0.28	1.42	0.23	0.21	0.34

Mean and CV catch per kg/2 ha by year and spatial strata (only positive tows).

	46-49°N				43-46°N				36-43°N			
	183-299 m		**300-549 m**		**183-299 m**		**300-549 m**		**183-299 m**		**300-549 m**	
Year	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**
1999	28.56	0.46	10.20	0.32	6.59	0.25	2.93	0.15	1.93	0.48	2.74	0.25
2000	42.53	0.38	7.62	0.32	7.55	0.23	3.29	0.13	0.88	0.19	2.71	0.52
2001	21.99	0.54	9.34	0.64	6.12	0.28	3.49	0.28	1.23	0.58	0.91	0.40
2002	23.85	0.72	4.01	0.63	10.98	0.23	3.05	0.22	2.28	0.18	1.01	0.22

Table 2d. Basic data and statistics summary for Arrowtooth flounder caught in the NWFSC slope/shelf survey.

Number tows with zero and positive catch by year and spatial strata.

	Vancouver				Columbia				Eureka+Monterey			
	55-155 m		156-549 m		55-155 m		156-549 m		55-155 m		156-549 m	
Year	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0	# tows 0 catch	# tows > 0
2003	7	30	4	23	9	25	7	45	40	25	36	44
2004	6	16	1	14	17	56	13	44	51	22	14	20
2005	2	13	1	19	31	69	13	57	79	25	25	30
2006	5	14	3	9	32	58	16	69	66	9	32	28

Mean and CV of catch per kg/2 ha by year and spatial strata (all tows).

	Vancouver				Columbia				Eureka+Monterey			
	55-155 m		156-549 m		55-155 m		156-549 m		55-155 m		156-549 m	
Year	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**
2003	50.57	0.34	76.35	0.57	11.21	0.19	34.63	0.52	2.06	0.24	5.07	0.22
2004	46.04	0.81	53.80	0.40	8.80	0.17	25.67	0.33	2.23	0.31	6.72	0.22
2005	54.72	0.43	116.86	0.22	11.63	0.17	19.26	0.21	2.28	0.36	6.50	0.30
2006	12.29	0.31	69.49	0.45	6.60	0.22	53.09	0.54	0.34	0.48	9.31	0.26

Mean and CV catch per kg/2 ha by year and spatial strata (only positive tows).

	Vancouver				Columbia				Eureka+Monterey			
	55-155 m		156-549 m		55-155 m		156-549 m		55-155 m		156-549 m	
Year	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**	**Mean**	**CV**
2003	62.37	0.34	89.63	0.57	15.24	0.16	40.02	0.52	5.37	0.19	9.23	0.20
2004	63.30	0.80	57.65	0.39	11.47	0.16	33.26	0.32	7.39	0.26	11.42	0.18
2005	63.13	0.42	123.01	0.21	16.86	0.14	23.66	0.20	9.48	0.31	11.91	0.26
2006	16.68	0.28	92.64	0.42	10.24	0.20	65.32	0.54	2.85	0.36	19.96	0.23

Table 3a. Triennial shelf survey: Biomass (mt) and associated CVs of Arrowtooth flounder by stratum and year estimated from GLM analysis

	Vancouver				Columbia				Eureka+Monterey						
	55-155 m		156-549 m		55-155 m		156-549 m		55-155 m		156-549 m		Total		
Year	**Median**	**CV**	**Median**	**CV**	**Median**	**CV**	**Median**	**CV**	**Median**	**CV**	**Median**	**CV**	**Biomass**	**CV**	**SD ln(Index)**
1980	269	0.793	1468	0.661	151	0.364	971	0.328	5	0.724	11	0.749	3001	0.411	0.395
1983	166	0.431	1219	0.443	226	0.362	617	0.321	5	0.559	17	0.485	2274	0.332	0.323
1986	565	0.314	1870	0.382	394	0.342	955	0.328	9	0.537	4	1.150	3830	0.296	0.290
1989	303	0.414	4968	0.468	373	0.331	1317	0.341	7	0.529	25	0.524	7059	0.381	0.368
1992	152	0.416	779	0.517	141	0.330	668	0.332	9	0.446	40	0.535	1828	0.329	0.321
1995	201	0.551	505	0.521	205	0.377	840	0.338	6	0.590	39	0.414	1849	0.315	0.308
1998	1548	0.448	1710	0.601	327	0.350	711	0.326	4	0.499	19	0.404	4431	0.373	0.361
2001	754	0.475	4459	0.547	564	0.328	1002	0.304	14	0.372	19	0.367	6967	0.401	0.386
2004	1983	0.479	14337	0.595	1008	0.329	2887	0.324	55	0.404	98	0.353	20640	0.456	0.434

Table 3b. AFSC slope survey: Biomass (mt) and associated CVs of Arrowtooth flounder by stratum and year estimated from GLM analysis

	46-49°N				43-46°N				36-43°N						
	183-300 m		300-549 m		183-300 m		300-549 m		183-300 m		300-549 m		Total		
Year	**Median**	**CV**	**Median**	**CV**	**Median**	**CV**	**Median**	**CV**	**Median**	**CV**	**Median**	**CV**	**Biomass**	**CV**	**SD ln(Index)**
1997	1197	0.670	611	0.432	88	0.391	1025	0.290	9	0.588	180	0.597	3295	0.275	0.269
1999	794	0.651	881	0.329	301	0.402	1693	0.261	141	0.475	158	0.521	4164	0.189	0.187
2000	1854	0.523	692	0.410	822	0.654	1160	0.257	29	0.611	49	1.016	4839	0.245	0.242
2001	3612	0.582	504	0.439	666	0.493	1316	0.259	349	0.365	70	0.767	6738	0.320	0.312

Table 3c. NWFSC slope survey: Biomass (mt) and associated CVs of Arrowtooth flounder by stratum and year estimated from GLM analysis

	46-49°N				43-46°N				36-43°N						
	183-300 m		300-549 m		183-300 m		300-549 m		183-300 m		300-549 m		Total		
Year	**Median**	**CV**	**Median**	**CV**	**Median**	**CV**	**Median**	**CV**	**Median**	**CV**	**Median**	**CV**	**Biomass**	**CV**	**SD ln(Index)**
1999	4281	0.619	996	0.360	1392	0.334	910	0.358	204	0.505	228	0.429	8217	0.345	0.336
2000	5699	0.552	664	0.395	1538	0.331	857	0.350	73	0.594	161	0.648	9208	0.355	0.345
2001	3089	0.598	778	0.396	1224	0.470	884	0.326	95	0.426	48	0.704	6362	0.319	0.311
2002	3233	0.859	348	0.504	2230	0.333	821	0.339	191	0.356	61	0.486	7209	0.405	0.390

Table 3d. NWFSC shelf/slope survey: Biomass (mt) and associated CVs of Arrowtooth flounder by stratum and year estimated from GLM analysis

	Vancouver				Columbia				Eureka+Monterey						
	55-155 m		156-549 m		55-155 m		156-549 m		55-155 m		156-549 m		Total		
Year	**Median**	**CV**	**Median**	**CV**	**Median**	**CV**	**Median**	**CV**	**Median**	**CV**	**Median**	**CV**	**Biomass**	**CV**	**SD ln(Index)**
2003	3478	0.470	4639	0.559	3820	0.500	9032	0.403	575	0.570	926	0.411	23976	0.256	0.252
2004	3583	0.655	2931	0.835	2753	0.354	7239	0.396	647	0.652	1104	0.636	19571	0.275	0.270
2005	3547	0.862	6483	0.637	4095	0.313	5308	0.342	831	0.576	1063	0.457	22603	0.289	0.283
2006	790	0.723	4219	1.093	2092	0.334	12715	0.321	180	1.189	1409	0.517	22551	0.302	0.295

Table 4. Sample sizes for survey and fishery data

Triennial shelf survey samples

Year	Number hauls	Number lengths
1980	15	827
1983	2	163
1986	136	6457
1989	211	9342
1992	210	5081
1995	173	5255
1998	259	5585
2001	321	11057
2004	247	8664

AFSC slope survey samples

Year	Number hauls	Number lengths
1997	37	562
1999	43	443
2000	35	315
2001	41	724

NWFSC shelf/slope survey

Year	Number hauls	Number Lengths	Number Ages
2003	196	4568	521
2004	178	2776	506
2005	218	3991	863
2006	189	3036	475

Fillet fishery (PacFIN) samples

Year	Sampled trips	Number Lengths	Number Ages
1986	19	950	306
1987	22	1200	368
1988	16	800	277
1989	17	850	312
1990	19	974	324
1991	39	1917	334
1992	30	1499	-
1993	18	900	-
1994	20	1000	-
1995	22	1098	-
1996	18	900	-
1997	17	845	-
1998	20	999	183
1999	22	1098	-
2000	21	1050	-
2001	16	800	-
2002	10	499	-
2003	10	429	106
2004	6	300	95
2005	6	118	16
2006	21	714	-

Table 5. Parameter assumptions and model configuration of Stock Synthesis II (Ver. 2.00G) for Arrowtooth.

Parameter	Number Estimated	Bounds (low,high)
Natural Mortality - Females	-	Fixed at 0.166
Males		Fixed at 0.274
Stock and recruitment		
Ln(Rzero)	1	(5,25)
Steepness	-	Fixed at 0.902
Sigma R (based on 1975-2003 R devs)	-	Fixed at 0.80
Ln(Recruitment deviations): 1965-2005	41	(-10,10)
Catchability		
Ln(q) - NWFSC shelf/slope survey	-	analytical solution
Ln(q) - Triennial shelf survey	-	analytical solution
Ln(q) - AFSC slope survey	-	analytical solution
Ln(q) - NWFSC slope survey	-	analytical solution
Fishery Selectivity --double normal		
(Fillet fleet is sex specific; bycatch fleet is not; mink food fleet fixed at values from Triennial Survey)		
Peak	2	(14,80)
Width (logit trans.)	-	Fixed at 6
Var-ascending (ln)	2	(1,20)
Var-descending (ln)	-	Fixed at 1
Initial (logit trans)	-	Fixed at -10
Final (logit trans.)	-	Fixed at 50
Male offset, point of divergence from female sel.	-	Fixed at 30cm
Ln(male sel. / female sel.) at min length	-	Fixed at 0
Ln(male sel. / female sel.) at point of divergence	1	(-3, 0)
Ln(male sel. / female sel.) at max length	1	(-3, 0)
Survey Selectivity -- double normal)		
NWFSC Slope parameters mirrored from AFSC Slope, all others estimated		
Peak	3	(14,80)
Width (logit trans.)	-	Fixed at 6
Var-ascending (ln)	3	(-1,10)
Var-descending (ln)	-	Fixed at 1
Intial (logit trans)	-	Fixed at -10
Final (logit trans.)	-	Fixed at 50
Male offset, point of divergence from female sel.	-	Fixed at 30cm
Ln(male sel. / female sel.) at min length	-	Fixed at 0
Ln(male sel. / female sel.) at point of divergence	3	(-3, 0)
Ln(male sel. / female sel.) at max length	3	(-3, 0)
Individual growth		
Separate Sex specification :		
Length at age min (age 1) females	-	Fixed at 8cm
Length at age max (age 30) females	1	(40,90)
von Bertalanffy K females	1	(0.05,0.25)
CV youngest age females	-	Fixed at 0.14
CV oldest age females	-	Fixed at 0.08
Length at age min (age 1) males	-	Fixed at 8cm
Length at age max (age 30) males	1	(30,70)
von Bertalanffy K males	1	(0.05,0.5)
CV youngest age males	-	Fixed at 0.21
CV oldest age males	-	Fixed at 0.08

Table 6. Parameter estimates and standard deviations (SD) for the arrowtooth base model, for two scenarios that bracket the uncertainty in catch and natural mortality, and for three earlier models discussed during the STAR panel. A dash ("--") signifies that the parameter was not estimated in that model.

Model Likelihoods	**Base Case**		**Low Catch Low M**		**High Catch High M**		**Pre-STAR Base**		**Model O**		**Model P**	
Likelihood components	**-2 Ln Likelihood**		**-2 Ln Likelihood**		**-2 Ln Likelihood**		**-2 Ln Likelihood**		**-2 Ln Likelihood**		**-2 Ln Likelihood**	
TOTAL	3680.43		3750.41		3633.71		3916.47		3982.43		3947.40	
Survey indices	6.86		6.75		7.59		7.40		9.52		10.34	
length_comps	1086.06		1102.12		1075.75		1244.19		1258.16		1238.04	
age_comps	2558.86		2585.39		2530.34		2552.97		2613.35		2599.88	
discard fraction							58.78		59.89		60.09	
Parameter	**MLE**	**SD**	**MLE**	**SD**	**MLE**	**SD**	**MLE**	**SD**	**MLE**	**SD**	**MLE**	**SD**
Stock and recruitment												
Ln(Rzero)	10.26	0.08	8.46	0.05	13.23	0.48	10.29	0.08	10.04	0.05	9.99	0.05
Catchability (analytical solution)												
Q - NWFSC shelf/slope survey	0.31	-	0.98	-	0.03	-	0.21	0.24	0.37	-	0.49	-
Q - Triennial shelf survey	0.06	-	0.19	-	0.00	-	0.05	0.22	0.07	-	0.08	-
Q - AFSC slope survey	0.07	-	0.25	-	0.01	-	0.05	0.18	0.10	-	0.12	-
Q - NWFSC slope survey	0.13	-	0.44	-	0.01	-	0.08	0.23	0.17	-	0.21	-
Selectivity (double normal):												
NWFSC shelf/slope												
Peak	38.00	1.29	37.50	1.25	38.43	1.28	63.12	5.76	38.80	1.43	38.93	1.27
Var-ascending (ln)	4.40	0.23	4.38	0.24	4.41	0.22	6.60	0.33	4.54	0.24	4.50	0.22
Ln(male sel./ female sel.) at point of divergence	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	0.00	0.00
Ln(male sel. / female sel.) at max length	-0.88	0.39	-1.11	0.39	-0.64	0.39	-	-	-	-	-2.25	0.39
Triennial shelf												
Peak	31.15	0.68	30.86	0.90	31.58	0.70	31.86	0.69	31.29	0.65	31.48	0.68
Var-ascending (ln)	4.70	0.18	4.79	0.23	4.61	0.16	4.70	0.16	4.76	0.17	4.75	0.17
Ln(male sel./ female sel.) at point of divergence	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	0.00	0.00
Ln(male sel. / female sel.) at max length	-0.10	0.28	-0.47	0.28	0.00	0.00	-	-	-	-	-1.40	0.25
AFSC slope												
Peak	31.82	1.30	31.59	1.26	32.12	1.34	32.34	1.36	31.92	1.32	32.27	1.40
Var-ascending (ln)	3.59	0.37	3.61	0.37	3.58	0.37	3.59	0.37	3.61	0.37	3.63	0.37
Ln(male sel./ female sel.) at point of divergence	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	0.00	0.00
Ln(male sel. / female sel.) at max length	-0.62	0.77	-1.01	0.77	-0.19	0.78	-	-	-	-	-2.10	0.78
Fillet Fishery												
Peak (fixed)	60.00	-	60.00	-	60.00	-	77.68	1.48	80.00	0.00	80.00	0.00
Var-ascending (ln)	5.13	0.03	5.16	0.03	5.11	0.03	6.31	0.06	6.44	0.03	6.45	0.03
Ln(male sel./ female sel.) at point of divergence	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	0.00	0.00
Ln(male sel. / female sel.) at max length	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	-0.28	0.28
Bycatch Fishery												
Peak	35.41	2.48	35.20	2.38	35.69	2.46	36.85	3.86	35.89	2.76	36.11	2.88
Var-ascending (ln)	4.47	0.47	4.51	0.47	4.40	0.45	4.93	0.66	4.64	0.50	4.69	0.51
Fillet fleet retention												
Inflection point	-	-	-	-	-	-	38.31	0.59	38.39	0.58	38.34	0.59
Slope	-	-	-	-	-	-	4.75	0.24	4.72	0.24	4.72	0.24
Individual growth												
Length at age max (age 30) females	72.26	0.41	72.08	0.41	72.28	0.41	70.90	0.41	70.79	0.39	70.86	0.39
von Bertalanffy K females	0.17	0.00	0.17	0.00	0.17	0.00	0.17	0.00	0.18	0.00	0.18	0.00
Length at age max (age 30) males	45.58	0.30	45.51	0.29	45.78	0.30	45.03	0.25	45.20	0.31	45.56	0.32
von Bertalanffy K males	0.39	0.01	0.39	0.01	0.38	0.01	0.39	0.01	0.39	0.01	0.39	0.01
Management quantities												
Bzero	80314	6166	33402	1685	596607	284340	79299	6237	62189	3117	59056	2927
2007 Spawning biomass	63302	11365	21680	3410	561030	323600	135868	22767	49192	5841	40286	5294
2007 Depletion	0.79	0.11	0.65	0.10	0.94	0.11	1.71	0.22	0.79	0.08	0.67	0.07
MSY	5245	402	1434	71	60812	28984	5441	431	4393	221	4173	209
BMSY	30780	2363	12801	646	228650	108970	30387	2390	23834	1195	22633	1122

Table 7. Time series of estimated total biomass, 3+ biomass, spawning biomass, recruitment, and utilization for 1916-2007 from the Arrowtooth ***base model*** *using Stock Synthesis II (Ver. 2.00G). Exploitation rates are calculated as the catch in biomass divided by the vulnerable biomass at the start of the year. Biomass is in metric tons at the start of the year. Recruitment is given in thousands of age-0 fish.*

Year	Total biomass (mt)	3+ Population biomass (mt)	Spawning biomass (mt)	Age 0 Recruits	Depletion % Bzero	Exploitation rate	Year	Total biomass (mt)	3+ Population biomass (mt)	Spawning biomass (mt)	Age 0 Recruits	Depletion % Bzero	Exploitation rate
1916	99,930	98,022	80,314	28,528	100.0%	0.0%	1962	78,772	76,878	61,515	28,294	76.6%	4.2%
1917	99,930	98,022	80,314	28,528	100.0%	0.0%	1963	77,198	75,306	60,050	28,269	74.8%	4.0%
1918	99,930	98,022	80,314	28,528	100.0%	0.0%	1964	75,998	74,108	58,902	28,249	73.3%	4.5%
1919	99,930	98,022	80,314	28,528	100.0%	0.0%	1965	74,239	72,770	57,669	4,038	71.8%	3.8%
1920	99,930	98,022	80,314	28,528	100.0%	0.0%	1966	73,294	72,116	57,003	4,327	71.0%	3.9%
1921	99,930	98,022	80,314	28,528	100.0%	0.0%	1967	71,778	71,489	56,382	4,952	70.2%	3.7%
1922	99,930	98,022	80,314	28,528	100.0%	0.0%	1968	69,220	68,882	55,996	6,737	69.7%	3.3%
1923	99,930	98,022	80,314	28,528	100.0%	0.0%	1969	65,798	65,316	55,104	12,427	68.6%	3.7%
1924	99,930	98,022	80,314	28,528	100.0%	0.0%	1970	61,386	60,759	52,507	12,908	65.4%	3.7%
1925	99,930	98,022	80,314	28,528	100.0%	0.0%	1971	57,873	55,990	48,919	72,809	60.9%	4.0%
1926	99,930	98,022	80,314	28,528	100.0%	0.0%	1972	53,169	51,598	44,833	11,467	55.8%	5.2%
1927	99,930	98,022	80,314	28,528	100.0%	0.0%	1973	50,401	47,228	40,489	18,216	50.4%	6.4%
1928	99,930	98,022	80,314	28,528	100.0%	0.0%	1974	50,394	48,650	36,480	63,146	45.4%	6.0%
1929	99,930	98,022	80,314	28,528	100.0%	0.0%	1975	49,809	48,222	35,129	7,814	43.7%	5.7%
1930	99,925	98,017	80,309	28,528	100.0%	0.0%	1976	51,799	48,086	36,337	72,848	45.2%	6.2%
1931	99,923	98,015	80,308	28,528	100.0%	0.0%	1977	53,303	51,701	36,716	24,287	45.7%	5.0%
1932	99,922	98,014	80,306	28,528	100.0%	0.0%	1978	56,112	52,809	38,218	16,621	47.6%	5.9%
1933	99,910	98,002	80,296	28,528	100.0%	0.0%	1979	60,147	58,070	40,292	55,923	50.2%	6.9%
1934	99,904	97,995	80,290	28,528	100.0%	0.0%	1980	62,379	60,211	42,079	49,907	52.4%	5.2%
1935	99,900	97,992	80,287	28,528	100.0%	0.0%	1981	65,197	61,574	45,578	53,567	56.7%	6.5%
1936	99,892	97,984	80,280	28,528	100.0%	0.0%	1982	68,151	65,311	47,577	18,600	59.2%	10.1%
1937	99,861	97,953	80,254	28,528	99.9%	0.2%	1983	70,902	68,089	47,784	33,847	59.5%	8.8%
1938	99,719	97,811	80,135	28,527	99.8%	0.0%	1984	73,929	72,339	49,910	27,812	62.1%	9.0%
1939	99,722	97,814	80,133	28,527	99.8%	0.5%	1985	76,208	73,749	52,940	49,432	65.9%	9.6%
1940	99,288	97,380	79,770	28,523	99.3%	0.7%	1986	76,450	74,533	55,121	15,832	68.6%	7.7%
1941	98,687	96,780	79,259	28,518	98.7%	0.9%	1987	77,797	75,066	56,448	39,969	70.3%	9.0%
1942	97,914	96,007	78,593	28,511	97.9%	0.4%	1988	78,061	76,136	56,285	48,780	70.1%	6.7%
1943	97,614	95,707	78,305	28,509	97.5%	1.8%	1989	78,026	75,801	57,159	7,858	71.2%	10.2%
1944	96,063	94,157	76,983	28,495	95.9%	0.4%	1990	78,072	74,767	56,396	80,174	70.2%	14.7%
1945	95,883	93,977	76,772	28,493	95.6%	0.1%	1991	74,781	73,204	53,215	17,486	66.3%	13.7%
1946	96,044	94,138	76,849	28,494	95.7%	0.2%	1992	72,758	69,484	51,586	3,868	64.2%	10.7%
1947	96,183	94,278	76,931	28,494	95.8%	0.4%	1993	73,781	72,718	51,479	20,980	64.1%	8.5%
1948	96,088	94,182	76,835	28,493	95.7%	1.0%	1994	75,053	73,766	52,553	51,131	65.4%	9.0%
1949	95,506	93,600	76,343	28,488	95.1%	1.2%	1995	73,568	72,077	54,775	4,749	68.2%	6.9%
1950	94,727	92,822	75,677	28,481	94.2%	0.2%	1996	73,000	70,804	55,758	13,199	69.4%	6.6%
1951	94,942	93,037	75,817	28,483	94.4%	0.4%	1997	72,256	71,786	54,623	7,587	68.0%	6.6%
1952	95,035	93,130	75,869	28,483	94.5%	0.4%	1998	70,859	69,704	53,802	32,876	67.0%	8.0%
1953	95,096	93,191	75,908	28,484	94.5%	1.4%	1999	69,381	66,501	52,962	126,747	65.9%	13.6%
1954	94,244	92,340	75,200	28,476	93.6%	0.1%	2000	62,977	59,802	48,468	22,987	60.3%	10.0%
1955	94,651	92,746	75,512	28,479	94.0%	0.4%	2001	62,559	56,890	44,853	37,831	55.8%	8.5%
1956	94,806	92,902	75,628	28,480	94.2%	5.5%	2002	66,806	64,932	42,330	31,901	52.7%	7.9%
1957	90,253	88,351	71,849	28,437	89.5%	4.2%	2003	71,600	69,707	44,468	5,198	55.4%	8.2%
1958	87,253	85,352	69,246	28,405	86.2%	3.7%	2004	76,987	74,817	51,021	52,878	63.5%	7.6%
1959	84,956	83,056	67,164	28,378	83.6%	4.2%	2005	80,327	78,961	56,486	30,337	70.3%	6.2%
1960	82,558	80,661	64,998	28,347	80.9%	3.7%	2006	82,523	79,822	60,633	20,535	75.5%	4.4%
1961	80,849	78,954	63,396	28,323	78.9%	4.5%	2007	85,175	83,301	63,302	28,322	78.8%	-
							2006 Depletion 5% - 95% Asymptotic Interval					56.3%	94.7%
							2007 Depletion 5% - 95% Asymptotic Interval					58.1%	99.5%

Table 8. Estimates of uncertainty as expressed by asymptotic 95% confidence intervals of spawning biomass and recruitment to age-0 from the Arrowtooth base model. Deviations from log mean recruitment were estimated between 1965-2003 and values given between 2004-2007 represent mean recruitment from the stock recruitment curve.

	Spawning biomass (mt)			Age-0 recruitment (thousands)				Spawning biomass (mt)			Age-0 recruitment (thousands)		
		Asymptotic interval			Asymptotic interval				Asymptotic interval			Asymptotic interval	
Year	MLE	5%	95%	MLE	5%	95%		MLE	5%	95%	MLE	5%	95%
1916	80,313	68,228	92,398	28,528	24,565	33,131	1962	61,515	49,420	73,610	28,294	24,324	32,912
1917	80,313	68,228	92,398	28,528	24,565	33,131	1963	60,050	47,946	72,154	28,269	24,297	32,890
1918	80,313	68,228	92,398	28,528	24,565	33,131	1964	58,902	46,787	71,017	28,249	24,276	32,873
1919	80,313	68,228	92,398	28,528	24,565	33,131	1965	57,669	45,542	69,796	4,038	1,330	12,260
1920	80,313	68,228	92,398	28,528	24,565	33,131	1966	57,003	44,858	69,148	4,327	1,417	13,207
1921	80,313	68,228	92,398	28,528	24,565	33,131	1967	56,382	44,219	68,545	4,952	1,581	15,508
1922	80,313	68,228	92,398	28,528	24,565	33,131	1968	55,996	43,818	68,174	6,737	1,957	23,189
1923	80,313	68,228	92,398	28,528	24,565	33,131	1969	55,104	43,025	67,183	12,427	3,373	45,782
1924	80,313	68,228	92,398	28,528	24,565	33,131	1970	52,507	40,781	64,233	12,908	2,458	67,797
1925	80,313	68,228	92,398	28,528	24,565	33,131	1971	48,919	37,736	60,102	72,809	43,463	121,968
1926	80,313	68,228	92,398	28,528	24,565	33,131	1972	44,833	34,298	55,368	11,467	2,231	58,945
1927	80,313	68,228	92,398	28,528	24,565	33,131	1973	40,489	30,659	50,319	18,216	3,344	99,220
1928	80,313	68,228	92,398	28,528	24,565	33,131	1974	36,480	27,245	45,715	63,146	36,360	109,665
1929	80,313	68,228	92,398	28,528	24,565	33,131	1975	35,129	26,708	43,550	7,814	1,936	31,544
1930	80,309	68,224	92,394	28,528	24,565	33,131	1976	36,337	28,851	43,823	72,848	47,555	111,594
1931	80,308	68,223	92,393	28,528	24,565	33,131	1977	36,716	29,661	43,771	24,287	6,619	89,116
1932	80,306	68,221	92,391	28,528	24,565	33,131	1978	38,218	31,477	44,959	16,621	3,565	77,496
1933	80,296	68,211	92,381	28,528	24,565	33,131	1979	40,292	33,983	46,601	55,923	34,299	91,180
1934	80,290	68,205	92,375	28,528	24,565	33,131	1980	42,079	36,024	48,134	49,907	31,197	79,837
1935	80,287	68,202	92,372	28,528	24,565	33,131	1981	45,577	39,614	51,540	53,567	38,463	74,602
1936	80,280	68,195	92,365	28,528	24,565	33,131	1982	47,577	41,677	53,477	18,600	10,547	32,801
1937	80,254	68,169	92,339	28,528	24,565	33,131	1983	47,784	41,880	53,688	33,847	25,423	45,062
1938	80,135	68,050	92,220	28,527	24,564	33,130	1984	49,910	43,871	55,949	27,812	20,023	38,631
1939	80,133	68,048	92,218	28,527	24,564	33,130	1985	52,940	46,640	59,240	49,432	38,949	62,737
1940	79,769	67,684	91,854	28,523	24,560	33,126	1986	55,121	48,556	61,686	15,832	9,086	27,586
1941	79,259	67,174	91,344	28,518	24,555	33,121	1987	56,448	49,688	63,208	39,969	28,535	55,984
1942	78,593	66,509	90,677	28,511	24,548	33,114	1988	56,285	49,355	63,215	48,780	33,987	70,013
1943	78,305	66,221	90,389	28,508	24,545	33,111	1989	57,159	50,016	64,302	7,858	2,639	23,401
1944	76,983	64,900	89,066	28,495	24,532	33,098	1990	56,396	49,004	63,788	80,174	61,832	103,957
1945	76,771	64,687	88,855	28,493	24,530	33,096	1991	53,215	45,596	60,834	17,486	7,994	38,249
1946	76,849	64,765	88,933	28,493	24,530	33,096	1992	51,586	43,604	59,568	3,868	1,324	11,301
1947	76,931	64,847	89,015	28,494	24,531	33,097	1993	51,479	43,067	59,891	20,980	12,847	34,261
1948	76,835	64,751	88,919	28,493	24,530	33,096	1994	52,553	43,586	61,520	51,131	37,275	70,137
1949	76,342	64,258	88,426	28,488	24,525	33,091	1995	54,775	44,965	64,585	4,749	1,741	12,955
1950	75,677	63,593	87,761	28,481	24,518	33,085	1996	55,758	45,393	66,123	13,198	8,019	21,721
1951	75,817	63,732	87,902	28,482	24,519	33,086	1997	54,623	44,024	65,222	7,587	3,410	16,883
1952	75,869	63,784	87,954	28,483	24,520	33,087	1998	53,802	42,819	64,785	32,876	22,763	47,482
1953	75,908	63,822	87,994	28,483	24,520	33,087	1999	52,962	41,411	64,513	126,750	92,237	174,177
1954	75,200	63,115	87,285	28,476	24,513	33,080	2000	48,468	36,642	60,294	22,987	15,281	34,578
1955	75,512	63,425	87,599	28,479	24,516	33,083	2001	44,853	32,986	56,720	37,830	26,236	54,548
1956	75,628	63,541	87,715	28,480	24,517	33,084	2002	42,330	30,343	54,317	31,901	21,348	47,671
1957	71,849	59,765	83,933	28,437	24,473	33,043	2003	44,468	31,080	57,856	5,198	2,256	11,974
1958	69,246	57,162	81,330	28,405	24,441	33,012	2004	51,021	34,823	67,219	52,878	27,723	100,857
1959	67,164	55,079	79,249	28,377	24,412	32,986	2005	56,486	37,773	75,199	30,337	8,505	108,216
1960	64,997	52,910	77,084	28,347	24,380	32,959	2006	60,633	39,837	81,429	20,535	5,147	81,934
1961	63,396	51,305	75,487	28,323	24,355	32,937	2007	63,302	41,027	85,577	28,321	7,099	113,001

Table 9a. Profile on steepness of the stock recruit relationship. Steepness was 0.902 in the base case.

Steepness	**0.5**	**0.55**	**0.6**	**0.65**	**0.7**	**0.75**	**0.8**	**0.85**	**0.902**	**0.95**	**0.99**
Bo	85405	84561	83786.5	83066	82407	81807	81262.9	80773	80313.5	79930	79639
2007 Depletion	0.72	0.73	0.74	0.75	0.76	0.77	0.77	0.78	0.79	0.79	0.80
Likelihood	3689.01	3687.09	3685.54	3684.28	3683.24	3682.37	3681.63	3680.99	3680.43	3679.97	3679.63
Abund. indices	6.97	6.95	6.94	6.92	6.90	6.89	6.88	6.87	6.86	6.85	6.84
Age comps	2561.88	2561.40	2560.94	2560.50	2560.10	2559.74	2559.42	2559.13	2558.86	2558.63	2558.47
Length comps	1084.51	1084.83	1085.10	1085.32	1085.52	1085.68	1085.82	1085.95	1086.06	1086.15	1086.22
Likelihood of all data	3653.36	3653.18	3652.98	3652.74	3652.52	3652.31	3652.12	3651.95	3651.78	3651.63	3651.53

Table 9b. Profile on natural mortality

Male M	**0.214**	**0.234**	**0.254**	**0.274**	**0.294**	**0.314**	**0.334**	**0.354**
Female M	**0.106**	**0.126**	**0.146**	**0.166**	**0.186**	**0.206**	**0.226**	**0.246**
Bo	66728.4	69058	73530	80313.5	91174.3	110530	152947	298315
2007 Depletion	0.65	0.70	0.74	0.79	0.84	0.88	0.91	0.94
Likelihood	3749.82	3721.52	3698.89	3680.43	3665.27	3652.76	3642.38	3633.71
Abund. indices	6.74	6.75	6.79	6.86	6.97	7.15	7.36	7.59
Age comps	2584.44	2575.41	2567.16	2558.86	2550.89	2543.36	2536.54	2530.34
Length comps	1102.23	1095.93	1090.56	1086.06	1082.36	1079.59	1077.40	1075.75
Likelihood of all data	3693.41	3678.09	3664.51	3651.78	3640.22	3630.10	3621.30	3613.68

Table 10. Spawning biomass and 2007 depletion for base case and scenarios with high and low catch

	1/2x Base	Base Case	2x Base		1/2x Base	Base Case	2x Base
Year		**Spawning Biomass**		**Year**		**Spawning Biomass**	
Virgin	40156	80314	160626	**1961**	31697	63396	126791
Initial	40156	80314	160626	**1962**	30756	61515	123029
1916	40156	80314	160626	**1963**	30024	60050	120099
1917	40156	80314	160626	**1964**	29450	58902	117804
1918	40156	80314	160626	**1965**	28833	57669	115337
1919	40156	80314	160626	**1966**	28501	57003	114005
1920	40156	80314	160626	**1967**	28190	56382	112764
1921	40156	80314	160626	**1968**	27997	55996	111991
1922	40156	80314	160626	**1969**	27551	55104	110208
1923	40156	80314	160626	**1970**	26253	52507	105013
1924	40156	80314	160626	**1971**	24459	48919	97837
1925	40156	80314	160626	**1972**	22416	44833	89666
1926	40156	80314	160626	**1973**	20244	40489	80978
1927	40156	80314	160626	**1974**	18239	36480	72959
1928	40156	80314	160626	**1975**	17564	35129	70257
1929	40156	80314	160626	**1976**	18168	36337	72673
1930	40153	80309	160617	**1977**	18358	36716	73432
1931	40153	80308	160614	**1978**	19109	38218	76436
1932	40152	80306	160611	**1979**	20146	40292	80583
1933	40147	80296	160592	**1980**	21039	42079	84159
1934	40144	80290	160580	**1981**	22789	45578	91155
1935	40142	80287	160573	**1982**	23788	47577	95153
1936	40139	80280	160558	**1983**	23892	47784	95567
1937	40126	80254	160507	**1984**	24955	49910	99818
1938	40067	80135	160269	**1985**	26470	52940	105879
1939	40066	80133	160265	**1986**	27560	55121	110240
1940	39884	79770	159538	**1987**	28224	56448	112895
1941	39628	79259	158517	**1988**	28142	56285	112569
1942	39295	78593	157184	**1989**	28579	57159	114317
1943	39151	78305	156608	**1990**	28197	56396	112790
1944	38491	76983	153965	**1991**	26607	53215	106428
1945	38385	76772	153542	**1992**	25792	51586	103170
1946	38423	76849	153696	**1993**	25739	51479	102957
1947	38464	76931	153861	**1994**	26276	52553	105104
1948	38417	76835	153670	**1995**	27387	54775	109548
1949	38170	76343	152684	**1996**	27878	55758	111514
1950	37837	75677	151353	**1997**	27311	54623	109244
1951	37907	75817	151633	**1998**	26900	53802	107601
1952	37933	75869	151737	**1999**	26480	52962	105922
1953	37953	75908	151814	**2000**	24233	48468	96933
1954	37599	75200	150399	**2001**	22426	44853	89704
1955	37755	75512	151023	**2002**	21164	42330	84659
1956	37813	75628	151255	**2003**	22233	44468	88935
1957	35923	71849	143696	**2004**	25509	51021	102040
1958	34622	69246	138490	**2005**	28242	56486	112970
1959	33581	67164	134328	**2006**	30315	60633	121264
1960	32498	64998	129994	**2007**	31649	63302	126600
				2007 Depletion	**0.79**	**0.79**	**0.79**

Table 11. Forecasts of stock size, catch, and depletion for 2007-2018.

Year	Total Catch (mt)	Spawning Biomass	95% CI			Depletion	95% CI		
2007	2,913	63,302	41,027	-	85,577	0.79	0.58	-	1.00
2008	2,913	64,214	40,896	-	87,532	0.80	0.58	-	1.02
2009	11,267	65,625	41,066	-	90,184	0.82	0.58	-	1.05
2010	10,112	59,139	37,073	-	81,205	0.74	0.52	-	0.95
2011	9,109	52,993	33,077	-	72,909	0.66	0.46	-	0.86
2012	8,241	47,804	29,517	-	66,091	0.60	0.41	-	0.78
2013	7,518	43,686	26,396	-	60,976	0.54	0.36	-	0.73
2014	6,950	40,517	23,745	-	57,289	0.50	0.32	-	0.69
2015	6,523	38,125	21,597	-	54,653	0.47	0.29	-	0.66
2016	6,207	36,341	19,938	-	52,744	0.45	0.27	-	0.64
2017	5,975	35,015	18,697	-	51,333	0.44	0.25	-	0.62
2018	5,804	34,026	17,785	-	50,267	0.42	0.24	-	0.61

Table 12. Decision table showing the consequences of management action given a state of nature. States of nature include the base model, a model with low historical catches and low natural mortality, and a model with high historical catches and high natural mortality. These states of nature are bounding cases for depletion and Bo. Management actions consist of harvesting the optimum yield (OY) estimated from models that assume each state of nature.

			State of Nature					
			Model A Catch = 1/2x Base Model M=0.106 female, 0.214 male		**Base Model M=0.166 female, 0.274 male**		**Model B Catch = 2x Base Model M=0.246 female, 0.354 male**	
Management action	Year	Total Catch (mt)	Spawning Biomass	Depletion	Spawning Biomass	Depletion	Spawning Biomass	Depletion
2009-2018 catch = OY estimated from Model A	2007	1,457	21,680	0.65	63,302	0.79	561,030	0.94
	2008	1,457	22,833	0.68	65,462	0.82	547,141	0.92
	2009	2,668	24,091	0.72	68,087	0.85	542,726	0.91
	2010	2,639	23,875	0.71	68,912	0.86	538,509	0.90
	2011	2,574	23,144	0.69	68,694	0.86	533,054	0.89
	2012	2,476	22,163	0.66	68,155	0.85	531,780	0.89
	2013	2,357	21,095	0.63	67,575	0.84	534,153	0.90
	2014	2,233	20,029	0.60	67,028	0.83	538,438	0.90
	2015	2,115	19,023	0.57	66,559	0.83	543,600	0.91
	2016	2,009	18,107	0.54	66,191	0.82	549,022	0.92
	2017	1,915	17,296	0.52	65,928	0.82	554,317	0.93
	2018	1,834	16,590	0.50	65,765	0.82	559,257	0.94
2009-2018 catch = OY estimated from base model	2007	2,913	21,680	0.65	63,302	0.79	561,030	0.94
	2008	2,913	21,549	0.65	64,214	0.80	545,940	0.92
	2009	11,267	21,488	0.64	65,625	0.82	540,449	0.91
	2010	10,112	13,629	0.41	59,139	0.74	529,402	0.89
	2011	9,109	6,454	0.19	52,993	0.66	518,869	0.87
	2012	8,241	455	0.01	47,804	0.60	514,013	0.86
	2013	7,518	997	0.03	43,686	0.54	514,014	0.86
	2014	6,950	0	0.00	40,517	0.50	516,846	0.87
	2015	6,523	0	0.00	38,125	0.47	521,202	0.87
	2016	6,207	0	0.00	36,341	0.45	526,247	0.88
	2017	5,975	0	0.00	35,015	0.44	531,435	0.89
	2018	5,804	0	0.00	34,026	0.42	536,427	0.90
2009-2018 catch = OY estimated from Model B	2007	5,826	21,680	0.65	63,302	0.79	561,030	0.94
	2008	5,826	18,981	0.57	61,716	0.77	543,536	0.91
	2009	142,422	16,310	0.49	60,707	0.76	535,893	0.90
	2010	110,290	0	0.00	0	0.00	417,209	0.70
	2011	89,743	0	0.00	0	0.00	338,487	0.57
	2012	77,015	0	0.00	0	0.00	291,344	0.49
	2013	69,569	0	0.00	0	0.00	265,174	0.44
	2014	65,551	0	0.00	0	0.00	251,268	0.42
	2015	63,486	0	0.00	0	0.00	243,887	0.41
	2016	62,382	0	0.00	0	0.00	239,682	0.40
	2017	61,559	0	0.00	0	0.00	236,952	0.40
	2018	60,936	0	0.00	0	0.00	235,059	0.39

Appendix A. Control File for Stock Synthesis 2 Arrowtooth Model

```
#  Control file (CTL) for arrowtooth flounder assessent. For SS2 2.0g

# Morph and area setup

1        # N growth patterns

1        # N sub morphs

1        # N Areas

1 1 1 1 1 1 1 1 1 # Area for each fleet

1        # rec dist design

0        # rec interaction

0        # Do migration: 0=no migration, 1=for nareas>1 models

0 0 0    # migration matrix


# Time block setup

2        # Number of time block designs for time varying parameters

4        # Blocks in design 1

4        # Blocks in design 2

1981 1985 # Block design 1

1986 1990

1991 1995

1996 2006

1961 1970 # Block desin 2

1971 1980
```

1981 1990

1991 2006

Mortality and growth specifications

0.5 # Fraction female at birth

1000 # Ratio of between to within growth morph variance

-1 # Vector of submorph distribution (-1=normal approx)

0 # Last age for M young

1 # First age for M old

1 # Age for growth Lmin

30 # Age for growth Lmax

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 maturity at age for each growth pattern

1 # First age allowed to mature

1 # mg parm offset option: 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

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

-50 # Mortality and growth parameter dev phase

0.01	0.8	0.166	0.166	-1	99	-2	0	0	0	0	0.5	0	0	#	female	M, min
0.01	0.8	0.166	0.166	-1	99	-3	0	0	0	0	0.5	0	0	#	female	M, max
5	25	8	10	-1	99	-2	0	0	0	0	0.5	0	0	#	female	Length at
40	90	70.0	76.82	-1	99	2	0	0	0	0	0.5	0	0	#	female	Length at

0.05 0.25 0.18 0.1402 -1 99 2 0 0 0 0 0.5 0 0 # female von B k

0.05 0.25 0.14 0.1 -1 99 -3 0 0 0 0 0.5 0 0 # female CV young

0.05 0.25 0.08 0.1 -1 99 -3 0 0 0 0 0.5 0 0 # female CV old

0.01 0.8 0.274 0.274 -1 99 -2 0 0 0 0 0.5 0 0 # male M, minage

0.01 0.8 0.274 0.274 -1 99 -3 0 0 0 0 0.5 0 0 # male M, maxage

5 25 8 10 -1 99 -2 0 0 0 0 0.5 0 0 # male Length at min age

30 70 45 48.26 -1 99 2 0 0 0 0 0.5 0 0 # male Length max age

0.05 0.50 0.4 0.3123 -1 99 2 0 0 0 0 0.5 0 0 # male von B k

0.05 0.25 0.21 0.1 -1 99 -3 0 0 0 0 0.5 0 0 # male CV young

0.05 0.25 0.08 0.1 -1 99 -3 0 0 0 0 0.5 0 0 # male CV old

0 0.5 3.78538E-06 3.78538E-06 -1 99 -3 0 0 0 0 0.5 0 0# female LW scale

0 5 3.24547 3.24547 -1 99 -3 0 0 0 0 0.5 0 0 # female LW exponent

0 50 37.3 37.3 -1 99 -3 0 0 0 0 0.5 0 0 #female maturity inflection

-1 1 -0.5 -0.5 -1 99 -3 0 0 0 0 0.5 0 0 #female maturity slope

0 1 1 1 -1 99 -3 0 0 0 0 0.5 0 0 #eggs/kilo intercept

0 1 0 0 -1 99 -3 0 0 0 0 0.5 0 0 #eggs/kilo slope

0 0.5 3.48474E-06 3.48474E-06 -1 99 -3 0 0 0 0 0.5 0 0 #male L-
W scale

0 5 3.25607 3.25607 -1 99 -3 0 0 0 0 0.5 0 0 #male L-W exponent

-4 4 0 1 -1 99 -3 0 0 0 0 0.5 0 0 #recruitment by morph

-4 4 0 1 -1 99 -3 0 0 0 0 0.5 0 0 #recruitment by area

-4	4	0	1	-1	99	-3	0	0	0	0	0.5	0	0	#recruitment by season
-1	2	1	1	-1	99	-3	0	0	1980	1983	0.5	0	0	#cohort growh dev

0 # Custom environmental linkage setup for mg parameters: 0=Read one line apply all, 1=read one line each parameter

1 # Custom block setup for mg parameters: 0=Read one line apply all, 1=read one line each parameter

# Lo	Hi	Init		Prior	P_type	SD	Phase

Spawner-recruit parameters

1 # S-R function: 1=B-H w/flat top, 2=Ricker, 3=standard B-H, 4=no steepness or bias adjustment

# Lo	Hi	Init	Prior	Prior	Prior	Param	
# bnd	bnd	value	mean	type	SD	phase	
5	25	12.50	13	-1	50	1	# Ln(R0)
0.2	1	0.902	0.902	-1	0.082	-2	# Steepness w/ diffuse prior
0	2	0.8	0	-1	50	-50	# Sigma R
-5	5	0	0	-1	50	-50	# Environmental link coefficient
-5	5	0	0	-1	50	-50	# Initial equilibrium offset to virgin
0	2	0	1	-1	50	-50	# Autocorrelation placeholder (Future implementation)

0 # index of environmental variable to be used

1 # env target parameter: 1=rec devs, 2=R0, 3=steepness

1 # rec dev type: 0=none, 1=devvector (zero-sum), 2=simple deviations (no sum constraint)

Recruitment residuals

1965 # Start year recruitment residuals

2003 # End year recruitment residuals

-10 # Lower bound

10 # Upper bound

1 # Phase

1960 # first year of full bias correction (linear ramp up from this year minus the plus-age to this year)

Initial F setup by fleet

# Lo	Hi	Init	Prior	P_type	SD	Phase	
0	1	0	0.01	-1	50	-50	# Fleet 1: Mink food
0	1	0	0.01	-1	50	-50	# Fleet 2: Fillet fishery
0	1	0	0.01	-1	50	-50	# trawl discard fishery
0	1	0	0.01	-1	50	-50	# Dummy fleet

Catchability (Q) setup

A=do power: 0=skip, survey is prop. to abundance, 1= add par for non-linearity

B=env. link: 0=skip, 1= add par for env. effect on Q

C=extra SD: 0=skip, 1= add par. for additive constant to input SE (in ln space)

D=type: <0=mirror lower abs(#) fleet, 0=no par Q is median unbiased, 1=no par Q is mean unbiased, 2=estimate par for ln(Q)

3=ln(Q) + set of devs about ln(Q) for all years. 4=ln(Q) + set of devs about Q for indexyr-1

```
# E=Units: 0=numbers, 1=biomass
# F=err_type 0=lognormal, >0=T-dist. DF=input value
# A B C D E F
 0 0 0      0 1 0      # Fleet 1: Mink food
 0 0 0      0 1 0      # Fleet 2: Fillet fishery
 0 0 0      -1 1 0  # fleet 3: trawl discard fleet
 0 0 0      -2 1 0  # fleet 4: dummy fleet
 0 0 0      0 1 0      # Survey 1: FRAM slope shelf 2003-2006
 0 0 0      0 1 0      # Survey 2: Triennial
 0 0 0      0 1 0      # Survey 3: AKC slope survey
 0 0 0      0 1 0      # Survey 4: FRAM slope shelf 99-02
 0 0 0      2 1 0      # Survey 5: ghost of FRAM slope shelf 2003-2006


# Catchability (Q) parameters
# Lo     Hi     Init     Prior     P_type     SD     Phase
-5       0      -0.528   -1        -1         50     -2       # Ln(Q) ghost of FRAM slope/shelf 2002-2006
# Selectivity section
# Size-based setup
# A=Selex option: 1-24
# B=Do_retention: 0=no, 1=yes
# C=Male offset to female: 0=no, 1=yes
```

D=Mirror selex (#)

A B C D

24 0 0 0   # Fleet 1: Mink food

24 0 1 0   # Fleet 2: Fillet

24 0 0 0   # Fleet 3: Discard fishery

5 1 0 2   # Fleet 4: dummy fishery

24 0 1 0   # Survey5: FRAM slope shelf 2003-2006

24 0 1 0   # Survey 6: Triennial.

24 0 1 0   # Survey7: AKC slope

5 0 0 7   # Survey 8 FRAM slope survey

5 0 0 5   # Survey 9 ghost of FRAM slope shelf 2003-2006

Age-based setup

10 0 0 0   # Fleet 1: 10 = flat (0 params)

10 0 0 0   # Fleet 2:

10 0 0 0   # Fleet3

10 0 0 0   # Fleet 4

10 0 0 0   # Survey 5 10 = flat (0 params)

10 0 0 0   # Survey 6 10 = flat (0 params)

10 0 0 0   # Survey7

10 0 0 0   # Survey 8

10 0 0 0   # Survey 9

Selectivity and retention parameters

# Lo	Hi	Init	Prior	Prior	Prior	Param	Env	Use	Dev	Dev	Dev	Block	block	
# bnd	bnd	value	mean	type	SD	phase	var	dev	minyr	maxyr	SD	design	switch	
# Fleet 1 Mink food size based selectivity (using option 24)														
14	46	30.43	29.5	-1	50	-2	0	0	0	0	0	0	0	# peak
-6.0	6.0	6.0	6.0	-1	50	-50	0	0	0	0	0	0	0	# width
-1.0	10.0	4.63	4.0	-1	50	-2	0	0	0	0	0	0	0	# var-ascending
-5.0	9.0	1.0	1.0	-1	50	-50	0	0	0	0	0	0	0	# var-descending
-10.0	10.0	-10.0	-10.0	-1	50	-50	0	0	0	0	0	0	0	# initial
0.0	50.0	50.0	50.0	-1	50	-50	0	0	0	0	0	0	0	# final
# Fleet 2 (Fillet fishery) size based selectivity (using option 24)														
14	80	60.0	60.0	-1	50	-4	0	0	0	0	0	0	0	# peak
-6.0	6.0	6.0	6.0	-1	50	-50	0	0	0	0	0	0	0	# width
-1.0	10.0	5.17858	4.0	-1	50	4	0	0	0	0	0	0	0	# var-ascending
-5.0	9.0	1.0	1.0	-1	50	-50	0	0	0	0	0	0	0	# var-descending
-10.0	10.0	-10.0	-10.0	-1	50	-50	0	0	0	0	0	0	0	# initial
0.0	50.0	50.0	50.0	-1	50	-4	0	0	0	0	0	0	0	# final
# Fleet 2 (Fillet Fishery) retention parameters														
#23	70	41.0	27	-1	50	4	0	0	0	0	0	0	0	# Inflection
#0	10	2.5	1.4	-1	50	4	0	0	0	0	0	0	0	# Slope
#0.8	1	1.0	1	-1	50	-50	0	0	0	0	0	0	0	# Asymptote
#-10	10	0	0	-1	50	-50	0	0	0	0	0	0	0	# Male offset on inflection

```
# Fleet 2 sex offset (Fillet fishery) size based selectivity (using option 24)
 14    80    30.0     29.5   -1   50   -4    0   0   0   0   0   0   0   # peak
 -3.0  0.0   0.0      6.0    -1   50   -50   0   0   0   0   0   0   0   # width
 -3.0  0.0   -.02     4.0    -1   50   4     0   0   0   0   0   0   0   # var-ascending
 -3.0  0.0   -.02     1.0    -1   50   4     0   0   0   0   0   0   0   # var-descending
# Fleet 3 (discard fishery) size based selectivity (using option 24)
 14    80    30       30     -1   50   4     0   0   0   0   0   0   0   # peak
 -6.0  4.0   -5.0     -5.0   -1   50   -50   0   0   0   0   0   0   0   # width
 -1.0  9.0   5.17858  4.0    -1   50   4     0   0   0   0   0   0   0   # var-ascending
 -1.0  9.0   5.0      1.0    -1   50   -3    0   0   0   0   0   0   0   # var-descending
 -5.0  9.0   -5.0     -10.0  -1   50   -50   0   0   0   0   0   0   0   # initial
 -5.0  9.0    9.0     50.0   -1   50   -2    0   0   0   0   0   0   0   # final
# Fleet 3 (Trawl Discard fleet) mirror
# -2   0     -1       44     -1   50   -50   0   0   0   0   0   0   0   # min bin mirror
# -2   0     -1       18     -1   50   -50   0   0   0   0   0   0   0   # max bin mirror
# Fleet  4 (ghost of Fleet 2 Fillet fishery)
 -2    0     -1       44     -1   50   -50   0   0   0   0   0   0   0   # min bin mirror
 -2    0     -1       18     -1   50   -50   0   0   0   0   0   0   0   # max bin mirror
# Fleet 4 (ghost of Fillet Fishery) retention parameters
 23    70    41.0     27     -1   50   -4    0   0   0   0   0   0   0   # Inflection
 0     10    2.5      1.4    -1   50   -4    0   0   0   0   0   0   0   # Slope
 0.8   1     1.0      1      -1   50   -50   0   0   0   0   0   0   0   # Asymptote
```

```
-10	10	0	0	-1	50	-50	0	0	0	0	0	0	0	# Male offset on inflection
# Fleet 5 (FRAM Slope Shelf 2003-2006) size based selectivity (using option 24)
14	70	32.0	29.5	-1	50	4	0	0	0	0	0	0	0	# peak
-6.0	6.0	6.0	6.0	-1	50	-50	0	0	0	0	0	0	0	# width
-1.0	10.0	3.58	4.0	-1	50	4	0	0	0	0	0	0	0	# var-ascending
-5.0	9.0	1.0	1.0	-1	50	-50	0	0	0	0	0	0	0	# var-descending
-10.0	10.0	-10.0	-10.0	-1	50	-50	0	0	0	0	0	0	0	# initial
0.0	50.0	50.0	50.0	-1	50	-4	0	0	0	0	0	0	0	# final
# Fleet 5 sex offset (FRAM Slope Shelf 2003-2006) size based selectivity (using option 24)
14	80	30.0	29.5	-1	50	-4	0	0	0	0	0	0	0	# peak
-3.0	0.0	0.0	6.0	-1	50	-50	0	0	0	0	0	0	0	# width
-3.0	0.0	-.02	4.0	-1	50	4	0	0	0	0	0	0	0	# var-ascending
-3.0	0.0	-.02	1.0	-1	50	4	0	0	0	0	0	0	0	# var-descending
# Fleet 6 Triennial size based selectivity (using option 24)
14	80	30	30	-1	50	4	0	0	0	0	0	0	0	# peak
-6.0	4.0	-5.0	-5.0	-1	50	-50	0	0	0	0	0	0	0	# width
-1.0	9.0	5.17858	4.0	-1	50	4	0	0	0	0	0	0	0	# var-ascending
-1.0	9.0	5.0	1.0	-1	50	-3	0	0	0	0	0	0	0	# var-descending
-5.0	9.0	-5.0	-10.0	-1	50	-50	0	0	0	0	0	0	0	# initial
-5.0	9.0	9.0	50.0	-1	50	-2	0	0	0	0	0	0	0	# final
# Fleet 6 sex offset (Triennial) size based selectivity (using option 24)
14	80	30.0	29.5	-1	50	-4	0	0	0	0	0	0	0	# peak
```

```
-3.0    0.0    0.0    6.0    -1    50    -50    0    0    0    0    0    0    0    # width
-3.0    0.0    -.02    4.0    -1    50    4    0    0    0    0    0    0    0    # var-ascending
-3.0    0.0    -.02    1.0    -1    50    4    0    0    0    0    0    0    0    # var-descending
# Survey 7 AKC slope, size based selectivity (using option 24)
14    80    30    30    -1    50    4    0    0    0    0    0    0    0    # peak
-6.0    4.0    -5.0    -5.0    -1    50    -50    0    0    0    0    0    0    0    # width
-1.0    9.0    5.17858    4.0    -1    50    4    0    0    0    0    0    0    0    # var-ascending
-1.0    9.0    5.0    1.0    -1    50    -3    0    0    0    0    0    0    0    # var-descending
-5.0    9.0    -5.0    -10.0    -1    50    -50    0    0    0    0    0    0    0    # initial
-5.0    9.0    9.0    50.0    -1    50    -2    0    0    0    0    0    0    0    # final
# Fleet 7 sex offset (AKC Slope) size based selectivity (using option 24)
14    80    30.0    29.5    -1    50    -4    0    0    0    0    0    0    0    # peak
-3.0    0.0    0.0    6.0    -1    50    -50    0    0    0    0    0    0    0    # width
-3.0    0.0    -.02    4.0    -1    50    4    0    0    0    0    0    0    0    # var-ascending
-3.0    0.0    -.02    1.0    -1    50    4    0    0    0    0    0    0    0    # var-descending
# Fleet  8 (FRAM Slope mirrored to AKC slope)
-2    0    -1    44    -1    50    -50    0    0    0    0    0    0    0    # min bin mirror
-2    0    -1    18    -1    50    -50    0    0    0    0    0    0    0    # max bin mirror
# Fleet  9 (ghost of fleet 5 FRAM slope shefl 2003-2006 survey)
-2    0    -1    44    -1    50    -50    0    0    0    0    0    0    0    # min bin mirror
-2    0    -1    18    -1    50    -50    0    0    0    0    0    0    0    # max bin mirror
1    # Selex parm adjust method 1=do V1.23 approach, 2=use new logistic approach
```

0 # Selex environmental setup: 0=Read one line apply all, 1=read one line each parameter

1 # Selex block setup: 0=Read one line apply all, 1=read one line each parameter

# Lo	Hi	Init	Prior	P_type	SD	Phase

-50 # Phase for selex parameter deviations

Likelihood related quantities

variance/sample size adjustment by fleet

0 0 0 0 0 0.358 0.07 0 0 # constant added to survey CV

0 0 0 0 0 0 0 0 0 # constant added to discard SD

0 0 0 0 0 0 0 0 0 # constant added to body weight SD

1 5.44 1.2 1 1 1 1.16 1 1 # multiplicative scalar for length comps

1 1 1 1 1 1 1 1 1 # multiplicative scalar for agecomps

1 1 1 1 1 1 1 1 1 # multiplicative scalar for length at age obs

1000 # df discard

1000 # df weight

1 # Max number of lambda phases: read this number of values for each component below

0 # SD offset (CPUE, discard, mean body weight, recruitment devs): 0=omit log(s) term, 1=include

Lambda values by fleet

0 0 0 0 1 1 1 1 0 # CPUE lambdas

0 0 0 0 0 0 0 0 0 # Discard lambdas

0 # Mean body weight data lambda

0 1 1 0 1 1 1 0 0 # Length frequency lambdas

0 1 0 0 1 0 0 0 0 # Age frequency lambdas

0 0 0 0 0 0 0 0 0 #size at age lambda

0 # Initial F lambda

1 # Recruitment residual lambda

1 # Parameter prior lambda

1 # Parameter deviation lambda

10 # crashpen lambda

1.2 # max F threshold

999 # end file marker

Appendix B. Data File for Stock Synthesis 2 Arrowtooth Model

DAT file for Arrowtooth flounder assessement

Global model specifications

1916 # Start year

2006 # End year

1 # Number of seasons/year

12 # Number of months/season(vectory, by season)

1 # Spawning occurs at beginning of season

4 # Number of fishing fleets

5 # Number of surveys

Mink_food_fishery%Fillet_fishery%Trawl_fishery_excluding_arrowtooth_target%GhostOfFillet%FRAMslope_shelf%Triennial%AKC_slope_survey%FRAM_slope_survey%GhostOfFRAMslope_shelf # Fleet names separated by %

Fleet timing (proportion of season)

0.5417 # Mink food fishery (middle of july)

0.5417 # Fillet Fishery

0.5417 # Trawl_fishery_excluding_arrowtooth_target

0.5417 # Dummy fishery

0.5417 # FRAM slope shelf 2003-2006

0.5417 # triennial survey 1980-2004

0.5417 # AKC slope survey

0.5417 # FRAM slope survey 1999-2002

0.5417 # ghost of FRAM shelf slope survey 2003-2006

2 # Number of genders (1/2)

35 # Accumulator age

Catch section

#Initial equ catch (landings + discard in MT, by fishing fleet)

0 # mink food fishery

0 # fillet fishery

0 # trawl discard fishery

0 # DUMMY

#Minkfood	Fillet	TrawlDiscard	GhostofFillet	#	Year
0	0	0	0	#	1916
0	0	0	0	#	1917
0	0	0	0	#	1918
0	0	0	0	#	1919
0	0	0	0	#	1920
0	0	0	0	#	1921
0	0	0	0	#	1922
0	0	0	0	#	1923
0	0	0	0	#	1924
0	0	0	0	#	1925
0	0	0	0	#	1926
0	0	0	0	#	1927

0.019	0	0	0	#	1928
5.5877	0	0	0	#	1929
1.75	0	0	0	#	1930
1.78	0	0	0	#	1931
12.39	0	0	0	#	1932
7.82	0	0	0	#	1933
5.18	0	0	0	#	1934
10.36	0	0	0	#	1935
33.7	0	0	0	#	1936
147.8	0	0	0	#	1937
7.45	0	0	0	#	1938
453.18	0	0	0	#	1939
640.54	0	0	0	#	1940
846.25	0	0	0	#	1941
411.863	0	0	0	#	1942
1716.88	0	0	0	#	1943
407.2592	0	0	0	#	1944
113.436	0	0	0	#	1945
166.85	0	0	0	#	1946
425.41	0	0	0	#	1947
936.17	0	0	0	#	1948
1165.5	0	0	0	#	1949

202	0	0	0	#	1950
345	0	0	0	#	1951
390	0	0	0	#	1952
1322	0	0	0	#	1953
80	0	0	0	#	1954
339	0	0	0	#	1955
3674	0	1449	0	#	1956
2137	0	1578	0	#	1957
1595	0	1598	0	#	1958
1878	0	1611	0	#	1959
1260	0	1738	0	#	1960
1920	0	1638	0	#	1961
1487	0	1748	0	#	1962
1225	0	1804	0	#	1963
1649	0	1669	0	#	1964
1085	0	1677	0	#	1965
1096	0	1752	0	#	1966
1088	0	1512	0	#	1967
598	0	1684	0	#	1968
486	0	1873	0	#	1969
212	0	1957	0	#	1970
256	0	1921	0	#	1971

144	0	2460	0	#	1972
662	0	2398	0	#	1973
549	0	2361	0	#	1974
145	0	2613	0	#	1975
286	0	2779	0	#	1976
202	0	2383	0	#	1977
515	0	2735	0	#	1978
876	0	3231	0	#	1979
609	0	2590	0	#	1980
0	1158	2193	0	#	1981
0	2531	2543	0	#	1982
0	2235	2373	0	#	1983
0	2561	2190	0	#	1984
0	2884	2344	0	#	1985
0	2398	1939	0	#	1986
0	3038	2154	0	#	1987
0	2090	1934	0	#	1988
0	3826	2008	0	#	1989
0	6299	1503	0	#	1990
0	5373	1660	0	#	1991
0	3896	1484	0	#	1992
0	2963	1383	0	#	1993

0 3543 939 0 # 1994

0 2515 1079 0 # 1995

0 2347 1223 0 # 1996

0 2493 1076 0 # 1997

0 3413 671 0 # 1998

0 5939 639 0 # 1999

0 3941 582 0 # 2000

0 3124 495 0 # 2001

0 2709 609 0 # 2002

0 2870 542 0 # 2003

0 2852 465 0 # 2004

0 2562 453 0 # 2005

0 2012 395 0 # 2006

Abundance indices

21 # Total number of observations (all fleets)

#FRAM slope 1999-2002 survey series N=4 doubled variance estimates

#Year	Seas	Type	Value	s(log space)
1999	1	8	8217.338721	0.336
2000	1	8	9207.751228	0.345
2001	1	8	6361.744275	0.311
2002	1	8	7209.33129	0.390

AKC slope survey series N=4

```
#Year	Seas	Type	Value		s(log space)
1997	1	7	3294.65		0.269
1999	1	7	4164.47		0.187
2000	1	7	4839.46		0.242
2001	1	7	6738.45		0.312
#	triennial	survey	series	(N=9)
#Year	Seas	Type	Value		s(log space)
1980	1	6	3000.51277		0.395
1983	1	6	2274.083408		0.323
1986	1	6	3829.542799		0.290
1989	1	6	7058.615703		0.368
1992	1	6	1828.467382		0.321
1995	1	6	1848.889435		0.308
1998	1	6	4430.744089		0.361
2001	1	6	6967.007377		0.386
2004	1	6	20640.23624		0.434
#	FRAM slope/shelf 2003-2006	triennial	survey	series	N=4
#Year	Seas	Type	Value		s(log space)
2003	1	5	23976.05642		0.252
2004	1	5	19570.53597		0.270
2005	1	5	22602.87529		0.283
2006	1	5	22551.34203		0.295
```

Discard section

Discard observation setup

2 # # Type: 1 = biomass (mt),2 = fraction (D/(D+R)) by weight

0 # # Total number of discard observations all fleets and years

Mean body weight observations

0 # Total number of mean body weight observations

Partition: 1=discarded catch, 2=retained catch, 0=whole catch (R+D)

Year Seas Type Partition Value (kg) CV

-1 # Minimum proportion for compressing tails of observed compositional data

0.0001 # Constant added to expected frequencies

35 # Number of length bins for data inputs

Lower edge of length bins by bin

12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44
46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78
80

39 # Total number of length observations all fleets and years

PacFIN length comps, for Fillet Fishery (2)

#Year Seas Type Gender Partition Nsamp 12 14 16 18 20 22 24 26 28 30 32
34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66
68 70 72 74 76 78 80 12 14 16 18 20 22 24 26 28 30
32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64
66 68 70 72 74 76 78 80

1986 1 2 3 0 19 0 0 0 0 0 0 0 0 0 0.322616759
0 0.025307179 0.012272448 0.298357456 0.675884307 1.595683423 2.295722691 2.581804251 5.372000631
5.163591603 5.068094339 6.72840564 5.661255294 3.621801964 3.271065636 2.830514118 2.615472684
5.76127423 4.077296762 3.044514377 1.394015205 0.920584871 0.133014616 0 0.458691577 0 0
0 0 0 0 0 0 0 0 0 0.125568619 0.020771949 1.485799391 8.041438803

10.20326425 7.674716445 5.580874907 1.626333031 0.38378309 0.210266842 0.024443274 0.370880576
0.322616759 0 0 0 0 0 0 0 0 0 0 0

1987 1 2 3 0 22 0 0 0 0 0 0 0 0 0 0
0.04082794 0.161402645 0.878942621 1.059706086 0.315772284 1.146471244 0.776573212 1.77393455
5.000399571 7.325055211 6.702977254 8.39143266 7.00117646 4.771080512 4.558779567 4.688775947
5.452280659 5.91675382 3.643371776 3.537936515 2.268747448 0.890902013 0.486783032 0.27587296
0.042782932 0 0 0 0 0 0 0 0 0.059678232 0.197472171
0.116506424 0.653338875 2.147800628 6.20253725 6.798449764 4.68146736 1.67557257 0.16108504
0.007409132 0 0.007409132 0 0.155566452 0 0 0 0 0.02696805 0 0 0
0 0

1988 1 2 3 0 16 0 0 0 0 0 0 0 0 0 0 0
0.153167451 0.726127102 2.601320277 3.136700346 2.024889819 3.374979039 4.065715013 3.177230053
4.225249052 7.434085877 5.055246023 10.24106067 5.103428035 4.98476194 2.975264193 3.5086012 2.626494831
2.671127549 1.422517468 1.005641947 0.969591435 0.053112999 0.25046684 0.503097852 0 0 0
0 0 0 0 0 0 0.312506271 0.949369796 1.133274107 1.27107327 0.85981243
2.204866624 6.065492046 8.578437095 4.237931404 1.884374107 0 0.009398938 0.203586898 0 0
0 0 0 0 0 0 0 0 0 0 0

1989 1 2 3 0 17 0 0 0 0 0 0 0 0 0 0
0.066349481 0.506965102 0.625842727 0.986177827 2.946424791 2.706703683 2.914534887 4.647125198
3.907806278 3.075782745 4.512296533 7.208496566 7.458223093 6.900850872 7.515608016 4.876592374
2.623766566 3.511471685 2.369390897 1.120113926 2.533129133 1.195983426 0.677393669 0.008557149
0.668260811 0 0 0 0 0 0 0 0 0.030575486 0 0.648291935
0.629623584 0.51874709 1.37481249 4.920497436 3.477033055 4.812859306 3.080746973 2.202285456
1.690497145 0.261175534 0.133618873 0.527934044 0.127454158 0 0 0 0 0 0 0
0 0 0

1990 1 2 3 0 19 0 0 0 0 0 0 0.077139143 0 0 0
0 0.427395494 0.275974436 0.206978821 1.247724245 0.902746573 1.110190108 1.629809736 0.937580372
2.444509619 3.211153719 5.806631671 9.497875649 8.018430786 10.10429932 9.096641933 13.17817897
5.445159977 6.518372443 4.156243029 3.658942563 2.5790598 1.188437116 1.869282367 0.252529733 0 0
0 0 0 0 0 0 0 0 0 0.35345183 0.202310425 0.482811548 0.054319557
1.232161044 1.722872977 0.384846355 1.212098494 0.482329685 0.031510455 0 0 0 0 0
0 0 0 0 0 0 0 0 0

1991 1 2 3 0 39 0 0 0 0 0 0 0 0 0 0
0.045810072 0.021473169 0.110356576 0.735089711 1.04815544 1.844604892 2.570694259 1.940707083
2.268237654 2.72566344 3.049630722 4.29332413 5.608405149 6.325676016 10.24680882 8.107200492
8.062021006 7.978898931 7.800357422 7.828386597 3.715440608 2.945646761 3.693295723 0.621665523
1.155825156 0 0 0 0 0 0 0 0 0 0.047128644 0.038873001 0.064893191
0.292289856 1.250033854 0.755574252 0.571823161 0.536512278 1.05301455 0.455424761 0.191057104 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0

1992 1 2 3 0 30 0 0 0 0 0 0 0 0 0 0.036260217
0.149004015 0.426619352 0.802435492 1.558846527 2.028853598 4.081318771 3.207414047 3.65046076
3.739915947 2.948776332 7.589894148 5.580641473 4.973854065 4.596625518 4.744902061 3.417802797

6.109995022 4.989397679 5.194474731 5.172544503 5.353063524 3.118598088 2.834724744 2.895945578
1.023808656 0 0 0 0 0 0 0 0 0 0 0.144051333 0.540750324
0.397089351 1.643086104 0.962612959 0.984006544 1.597399252 0.923824561 0.930713263 0.862267214
0.434864683 0.002472048 0.145040868 0.205643853 0 0 0 0 0 0 0 0 0
0 0

1993 1 2 3 0 18 0 0 0 0 0 0 0 0 0 0 0
0.120541008 1.443109871 2.015751376 2.219839668 3.339645655 4.264215743 2.78564742 2.28240279
4.392902911 5.168225859 6.373804988 4.735481468 6.188322231 4.693123221 8.357412507 5.90378986
5.624048093 4.559861429 3.248561006 5.550348706 0.696954501 0.875549558 1.1876941 0.296542733 0 0
0 0 0 0 0 0 0 0 0.495722747 1.004042965 1.48552686 0.309456996
1.553824386 2.331882905 1.582834396 3.608046686 1.23436517 0 0.015678541 0 0 0 0
0 0 0 0 0.054841647 0 0 0 0 0

1994 1 2 3 0 20 0 0 0 0 0 0 0 0 0 0 0
0 0.218614185 0.002718026 1.143978639 0.564383815 1.006692834 0.791067797 2.510136766 2.022182896
3.455201756 6.394437307 7.592582315 7.418545511 11.67137569 7.752478258 10.99729798 4.655522774
5.328704315 5.667498291 2.874656302 2.340645257 1.500045434 0.571182853 1.067047943 0 0 0
0 0 0 0 0 0 0 0.010818345 0.053899386 0.092532896 0.069331137 0.495015122
2.5829435 2.27495876 2.0726312 3.199947436 0.997631732 0.046404899 0.009459332 0.281339909 0 0
0.001359013 0.048463335 0 0.216267054 0 0 0 0 0 0

1995 1 2 3 0 22 0 0 0 0 0 0 0 0 0 0 0
0.052409197 0.144987733 1.343806504 0.762845874 1.698978538 1.157478853 1.590307847 2.692887857
3.848747616 3.467067798 4.604106466 8.270180435 10.32813244 9.003724736 6.46283848 8.461492752
4.834875262 4.666510292 2.918954364 2.118883319 2.666429946 2.279582179 0.112039025 0.211906224 0
0 0 0 0 0 0 0 0 0 0 0.109408774 0.563591849 0.711441845
1.293739273 1.79248128 2.425403671 6.045998726 2.366200514 0.829434776 0.163125555 0 0 0
0 0 0 0 0 0 0 0 0 0 0

1996 1 2 3 0 18 0 0 0 0 0 0 0 0 0 0
0.065082017 0 0 0.067531574 0.147625401 0.457579074 1.553762716 2.148166462 2.511448937
4.181873696 5.856340714 7.285692066 5.566515889 6.212585576 8.105695085 9.108004214 6.755656137
5.242809344 4.657837532 2.997638581 1.549894062 1.145011279 1.760178744 0.888558084 0.208082505 0
0 0 0 0 0 0 0 0 0 0 0.016599964 0.029553162 0.109138054
0.801220185 1.258282439 3.674179766 7.613812567 5.736442239 1.616967195 0.439852445 0.165300278 0
0 0 0 0.065082017 0 0 0 0 0 0 0 0

1997 1 2 3 0 17 0 0 0 0 0 0 0 0 0 0.11389769
0.34169307 0.941911868 1.298890337 0.7294808 0.460998219 0.966025611 1.087008557 1.709785299 2.6274202245
3.362135486 4.92701694 8.72853692 8.129680029 9.146090592 9.762833553 5.969574696 8.201601417
4.738641084 6.73898347 2.84855068 1.638130852 1.833649295 0.943486698 0.276221123 0.286800832 0
0 0 0 0 0 0 0 0 0.333441753 0.189463731 0 0.033367798 0.117982809
0.875914095 1.040864266 2.440681681 2.838348035 2.091787792 0.948417682 0.284703685 0.26826991
0.385488293 0 0.26826991 0 0 0 0 0 0.073953196 0 0 0

1998 1 2 3 0 20 0 0 0 0 0 0 0 0 0 0
0.013402054 0.432231191 0.157347256 0.869535844 1.283043091 1.074944945 1.130746458 1.472945285
2.146539186 1.865731432 4.307088873 9.356012315 12.85092967 10.53244845 10.68617851 4.803797558

8.473846915 5.925263557 5.687408135 4.009764225 1.91415597 1.081860811 0.450032289 0.314116437
0.184311978 0 0 0 0 0 0 0 0 0 0.021177626 0.325524544 0.062930969
0.317748972 0.298677859 0.551278341 0.868920379 1.210920079 2.764675035 1.053578751 0.742344585
0.515151775 0.064397384 0.044747817 0 0 0 0.044747817 0 0.089495634 0 0 0
0 0 0

1999 1 2 3 0 22 0 0 0 0 0 0 0 0 0 0 0
0 0.039287372 0.182179305 0.511233198 0.762995824 1.849873152 1.748772215 2.927781129 5.203632462
6.374103442 15.13088457 19.02831179 13.74626514 8.380226398 3.12930524 5.243469995 2.116648711
2.054874882 0.54195536 1.019712631 0.713385604 0.370925696 0.012611044 0.079469309 0 0 0
0 0 0 0 0 0 0 0 0 0.404128667 0.75925025 0.813876009 0.896009919
1.260798256 2.446186305 1.265944054 0.793929648 0.085133827 0 0.101174086 0 0 0 0
0.005664518 0 0 0 0 0 0 0

2000 1 2 3 0 21 0 0 0 0 0 0 0 0 0 0 0
0.06132857 0.032148937 0.426121926 0.769317967 1.658592324 2.40525405 2.303230123 3.429839938
3.52300296 5.634090927 8.818620789 12.77707677 11.68281011 12.00510344 6.008881189 7.027155505
2.751297323 1.681604699 1.326868858 0.128662786 0.413768411 0.051768256 0 0 0 0 0
0 0 0 0 0 0 0 0.06132857 0.12265714 1.098766498 1.991544407 1.562565467
2.594075068 2.861995462 1.958050783 1.679720396 0.564199469 0.060232108 0.01199463 0.0733232 0.08531783
0.01199463 0.34568847 0 0 0 0 0 0 0 0 0

2001 1 2 3 0 16 0 0 0 0 0 0 0 0 0 0 0
0 0.243440871 0 0.046270524 0.710795285 1.285302055 2.033338656 3.905218546 5.536519365
7.351671769 7.609607195 11.64427906 15.60933146 11.6832685 6.010674528 5.631727976 3.94052159
2.224883547 1.484714461 0.446787144 0.13088122 0.421910597 0.155193589 0 0 0 0 0
0 0 0 0 0 0 0 0 0.352363936 0.382582961 1.605957304 0.735699904
1.553723726 2.515952732 3.621492705 0.973079361 0 0 0.152809436 0 0 0 0 0
0 0 0 0 0 0 0

2002 1 2 3 0 10 0 0 0 0 0 0 0 0 0 0
0.252961317 0.479153403 2.161650234 5.358220303 4.009750129 1.608266475 0.627540872 0.296041174
1.244645544 1.158404865 1.058944593 3.776518344 7.841454729 11.1345761 7.359777494 6.733550476
6.044573197 4.221991243 6.820533288 4.444778423 2.812538505 3.128968193 3.033572857 2.070440824
1.382578296 0 0 0 0 0 0 0 0 0 0 0.493664514 1.950876603
1.216734895 0.219700998 0.317874091 1.514648527 1.196177422 0.340835557 3.023884942 0.664171571 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0

2003 1 2 3 0 10 0 0 0 0 0 0 0 0 0 0 0
0.282180713 0.738255536 2.195909199 3.437880587 6.926809335 5.064438788 2.213913547 1.573606237
2.693640535 3.13086208 2.586257476 3.178294313 4.182222188 3.644540201 4.995665441 5.78552467
4.974816113 5.513657241 2.173647351 2.705621223 0.929865569 1.195317034 0.220350205 0 0 0
0 0 0 0 0 0 0 0.231839776 0.499794124 3.705258924 7.34754253 2.642499318
3.026651658 1.503611742 4.363467386 3.095933984 2.375579317 0.265451464 0.10902883 0 0 0
0 0 0 0.490065365 0 0 0 0 0 0 0

2004 1 2 3 0 6 0 0 0 0 0 0 0 0 0 0
0.292872789 0.136544996 0.292872789 1.500950647 1.189764144 2.658388144 6.68669405 6.107590601

3.640054772 3.591085707 4.050179227 9.236895378 5.510675258 12.1344797 12.2324418 8.504518285
4.185182962 3.718723539 2.839218625 0.654197792 0.038745028 0 0 0 0 0 0 0
0 0 0 0 0 0 1.24800224 0.136544996 0.194910692 1.806564589 1.338563905
0.576707736 0.038745028 1.426505464 0.156327793 0.997087679 2.877963653 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0

2005 1 2 3 0 6 0 0 0 0 0 0 0 0 0 0 0
0.220558216 0 0 0.066515461 0.441116431 2.062808156 1.842249941 10.53560889 5.580461821
10.44187322 6.377648408 2.23988252 16.9338386 0.062401388 5.659780744 7.368999763 9.211249704
3.684499882 3.942333578 9.211249704 1.842249941 0 0 1.842249941 0 0 0 0 0
0 0 0 0 0 0 0.088537182 0 0.277371049 0.066515461 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

2006 1 2 3 0 21 0 0 0 0 0 0 0 0 0 0
0.405603371 0.405603371 0.276719532 1.427655039 2.279924462 4.18559686 6.090908321 6.048396709
7.361535975 12.00558713 7.944274093 5.891192062 6.52813737 7.835836661 3.889627335 3.110899123
2.239342875 2.554179011 1.33843839 0.924504416 0.862025132 0.631021622 0.597448424 0.150296496
0.103132339 0 0 0 0 0 0 0 0 0 0 0.405603371 0.470769816
0.880846819 2.456256379 4.446417172 1.440208541 2.560936284 0.460461931 1.21141175 0.230230965
0.115115483 0 0.115115483 0 0 0 0 0 0 0 0 0 0 0
0.118739884

47.5_155m FRAM slope/shelf 2003-2006

Season Type Gender Partition 12 14 16 18 20 22 24 26 28 30 32
34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66
68 70 72 74 76 78 80 #12 14 16 18 20 22 24 26 28 30
32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64
66 68 70 72 74 76 78 80

2003 1 5 3 0 193 0.00000 0.00000 0.00000 0.00000 0.00095 0.00239 0.00465 0.01209 0.01610 0.01156 0.01365
0.02297 0.01732 0.02705 0.05888 0.07384 0.05025 0.01941 0.00623 0.01060 0.01042 0.02471 0.01932 0.05023 0.03550 0.04110 0.02587 0.02309
0.01995 0.01546 0.01443 0.00488 0.00519 0.00238 0.00021 0.00000 0.00000 0.00000 0.00057 0.00169 0.00202 0.00734 0.01440 0.01520 0.01891
0.04528 0.10221 0.06835 0.01787 0.00937 0.01562 0.01471 0.01044 0.00287 0.00735 0.00490 0.00021 0.00000 0.00000 0.00000 0.00000 0.00000
0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000

2004 1 5 3 0 170 0.00000 0.00000 0.00000 0.00000 0.00025 0.00063 0.00334 0.00812 0.01365 0.01778 0.01916
0.02390 0.02848 0.02234 0.02737 0.05362 0.08789 0.10403 0.06307 0.03633 0.02542 0.03300 0.02051 0.01501 0.01195 0.00833 0.00394 0.00432
0.00237 0.00078 0.00109 0.00211 0.00000 0.00000 0.00023 0.00000 0.00000 0.00000 0.00000 0.00022 0.00137 0.00429 0.01194 0.01957 0.02902
0.03351 0.06370 0.08832 0.04510 0.01656 0.01034 0.01963 0.00863 0.00481 0.00112 0.00051 0.00000 0.00039 0.00000 0.00039 0.00000 0.00000
0.00077 0.00077 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000

2005 1 5 3 0 217 0.00000 0.00000 0.00000 0.00057 0.00081 0.00000 0.00244 0.00216 0.00371 0.00714 0.01599
0.01769 0.03922 0.03902 0.03354 0.03870 0.04723 0.05457 0.06250 0.04634 0.04368 0.03159 0.03140 0.02106 0.01646 0.00879 0.00869 0.00667
0.00348 0.00346 0.00268 0.00223 0.00020 0.00094 0.00000 0.00000 0.00000 0.00000 0.00017 0.00028 0.00019 0.00245 0.00595 0.00859 0.02464
0.04868 0.06099 0.08506 0.08093 0.03154 0.01624 0.01987 0.01250 0.00384 0.00148 0.00192 0.00110 0.00054 0.00012 0.00000 0.00000 0.00000
0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000

```
2006 1 5 3 0 189 0.00000 0.00000 0.00000 0.00000 0.00021 0.00202 0.00595 0.00642 0.00431 0.00279 0.00195
0.00586 0.01495 0.02304 0.03215 0.06161 0.04632 0.05574 0.06232 0.06300 0.04970 0.03842 0.02958 0.03063 0.01860 0.00879 0.00963 0.01452
0.02356 0.02239 0.01856 0.01442 0.00783 0.00041 0.00196 0.00000 0.00000 0.00000 0.00067 0.00041 0.00249 0.00763 0.00694 0.00454 0.00516
0.01427 0.03262 0.05496 0.06885 0.04622 0.03678 0.02225 0.00949 0.00354 0.00053 0.00170 0.00038 0.00026 0.00033 0.00037 0.00000 0.00000
0.00000 0.00196 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000

# AKC Triennial Shelf #Season Type Gender Partition #Nsamp

12.00000 14.00000 16.00000 18.00000 20.00000 22.00000 24.00000 26.00000 28.00000 30.00000 32.00000 34.00000 36.00000 38.00000 40.00000 42.00000 44.00000
46.00000 48.00000 50.00000 52.00000 54.00000 56.00000 58.00000 60.00000 62.00000 64.00000 66.00000 68.00000 70.00000 72.00000 74.00000 76.00000 78.00000
80.00000 12.00000 14.00000 16.00000 18.00000 20.00000 22.00000 24.00000 26.00000 28.00000 30.00000 32.00000 34.00000 36.00000 38.00000 40.00000 42.00000
44.00000 46.00000 48.00000 50.00000 52.00000 54.00000 56.00000 58.00000 60.00000 62.00000 64.00000 66.00000 68.00000 70.00000 72.00000 74.00000 76.00000
78.00000 80.00000

1980 1 6 3 0 15 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.07458 0.07458 0.09400
0.82989 0.81587 0.34308 1.55078 4.12381 4.09550 5.74692 4.07405 3.69743 4.99590 7.81868 3.50362 4.02737 2.64826 1.13814 1.55120 0.16335
0.00000 0.00000 0.20041 0.00000 0.20041 0.00000 0.22643 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 1.06648 0.26662 0.48899 0.45240
0.59180 1.25901 2.93299 5.46539 6.75748 9.82460 10.08823 6.23652 1.29973 0.54234 0.47443 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000
0.05830 0.00000 0.20041 0.00000 0.00000 0.00000 0.00000 0.00000

1983 1 6 3 0 2 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.47251 0.00000 0.00000
0.00000 0.47251 0.00000 3.08636 7.00713 5.33830 5.51925 3.26731 3.85042 4.68484 2.72445 2.07099 0.94502 0.65346 0.65346 0.47251 0.00000
0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.47251 0.00000
0.00000 0.65346 1.12597 5.22770 12.88829 19.71447 12.23483 5.99176 0.00000 0.00000 0.00000 0.47251 0.00000 0.00000 0.00000 0.00000 0.00000
0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000

1986 1 6 3 0 136 0.06034 0.39581 0.48353 3.09622 3.24257 1.59127 0.67598 1.36585 3.90444 3.47887 4.43571
1.14397 1.30838 1.80649 1.33514 0.97722 2.07644 1.46898 2.61308 2.91633 2.22331 1.93506 1.75031 1.40909 1.38227 0.88753 0.80749 0.47243
0.30984 0.17033 0.08082 0.18215 0.07319 0.01119 0.00695 0.03017 0.39755 0.43144 1.53021 2.63817 1.43360 0.94094 3.35349 5.79978 6.12526
1.32671 1.10854 1.90055 2.37461 5.91249 6.01531 5.45847 2.11486 0.76647 0.06808 0.17427 0.00000 0.00000 0.00000 0.01667 0.00374 0.00000
0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000

1989 1 6 3 0 211 0.02412 0.06929 0.21711 2.49406 3.93214 0.62384 0.98703 1.62508 1.54089 1.00213 1.73555
2.77009 4.12187 5.01414 4.03221 4.04444 2.15287 1.93604 1.03470 1.10199 1.55902 2.80110 3.41140 2.93127 2.80407 1.56948 0.80145 0.62605
0.47488 0.38922 0.42877 0.15791 0.10565 0.03614 0.00800 0.01112 0.06852 0.32952 5.43043 3.67104 1.34153 1.18009 1.93675 1.34218 1.73591
4.09519 4.79016 4.27136 2.87694 1.46579 1.46457 1.95582 1.95416 1.05223 0.24082 0.07201 0.04102 0.02581 0.02598 0.02158 0.02203 0.00000
0.01022 0.00590 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000

1992 1 6 3 0 210 0.00000 0.00000 0.16014 1.87701 7.06178 5.04729 1.35425 1.17785 2.75460 3.21882 3.12899
1.98295 3.15788 3.28569 2.95474 2.64863 2.99766 1.74117 1.09423 0.97700 0.76040 0.72073 0.48074 0.86916 0.60674 0.32639 0.27876 0.15959
0.18006 0.20734 0.16219 0.01747 0.01758 0.03210 0.00000 0.00000 0.00887 0.09792 2.94816 8.93415 4.40968 1.37963 2.45734 4.11668 3.54654
3.03379 4.90529 4.84985 2.75469 1.52899 1.29020 0.72372 0.75453 0.49070 0.23454 0.00000 0.03937 0.02539 0.03002 0.00000 0.00000 0.00000
0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000

1995 1 6 3 0 173 0.00000 0.00000 0.77690 1.41758 1.28133 0.51408 0.20169 0.02797 0.11717 0.09224 0.19920
0.79706 1.72756 3.19873 5.96504 6.28436 5.33020 2.81437 2.25895 2.73798 2.46052 3.04784 3.37417 4.04909 3.38352 3.48706 2.09235 1.71697
0.93572 1.15782 1.19239 0.70409 0.41843 0.26364 0.13070 0.00000 0.00000 0.10059 1.98834 1.89752 0.55901 0.16057 0.01841 0.11543 0.23896
```

0.95568 3.89615 7.98090 4.59722 2.74044 2.35905 2.96841 2.78511 1.42863 0.70512 0.27242 0.02127 0.06866 0.00431 0.00000 0.00000 0.00000
0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000

1998 1 6 3 0 259 0.00000 0.00000 0.00000 0.00000 0.00000 0.00363 0.11599 0.05470 0.19746 0.42885 1.92397
3.18608 3.36560 5.50045 5.47059 6.84320 3.81824 2.31725 1.66022 3.30704 3.74003 4.21920 4.84877 3.33572 1.80300 1.18396 1.04780 0.46309
0.30810 0.29664 0.14000 0.14219 0.11171 0.03083 0.03300 0.00000 0.00000 0.00000 0.00000 0.00675 0.03059 0.03058 0.28762 0.56391 1.74332
2.98111 5.09963 6.60912 4.17522 3.40329 3.88119 3.72642 3.63060 2.55179 0.79505 0.24410 0.06118 0.23537 0.02971 0.01854 0.00000 0.00000
0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000

2001 1 6 3 0 321 0.00000 0.00000 0.03095 0.15938 0.19530 0.18273 1.06792 6.19088 12.53765 9.72977 3.15900
0.45063 0.23299 0.35399 0.23620 0.09416 0.19457 0.20564 0.35958 0.65704 0.98476 1.04686 1.27971 1.33720 1.47832 1.25683 0.83937 0.49935
0.30396 0.19017 0.13034 0.07323 0.03362 0.03097 0.01108 0.00000 0.04105 0.10058 0.41252 0.44719 0.46445 2.86074 14.54663 20.06862 9.29763
1.87864 0.47502 0.18902 0.36056 0.53977 0.69196 0.70954 0.50474 0.41199 0.26094 0.06887 0.01631 0.04677 0.01248 0.00000 0.00731 0.00428
0.04412 0.00726 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000

2004 1 6 3 0 247 0.00000 0.00899 0.00451 0.01504 0.03385 0.11897 0.29556 1.63119 3.03614 2.72631 2.23426
2.82417 2.90614 2.20873 2.26281 3.02689 5.04882 5.61356 4.38017 2.33424 1.41043 1.59804 1.56744 1.70073 2.91040 2.49104 2.19353 1.12037
0.41792 0.29143 0.24299 0.16224 0.07514 0.03539 0.00598 0.00000 0.00000 0.00000 0.03939 0.01414 0.25094 0.63427 4.19704 5.19071 3.77429
4.76354 6.95080 8.64924 4.47634 0.94391 0.68318 0.72349 0.50052 0.43987 0.66452 0.02557 0.11243 0.00000 0.00576 0.01000 0.00000 0.00832
0.00000 0.00000 0.00000 0.00000 0.00832 0.00000 0.00000 0.00000

#AKC Slope Survey

#Season Type Gender Partition #Nsamp #12

14.00000 16.00000 18.00000 20.00000 22.00000 24.00000 26.00000 28.00000 30.00000 32.00000 34.00000 36.00000 38.00000 40.00000 42.00000 44.00000 46.00000
48.00000 50.00000 52.00000 54.00000 56.00000 58.00000 60.00000 62.00000 64.00000 66.00000 68.00000 70.00000 72.00000 74.00000 76.00000 78.00000 80.00000
12.00000 14.00000 16.00000 18.00000 20.00000 22.00000 24.00000 26.00000 28.00000 30.00000 32.00000 34.00000 36.00000 38.00000 40.00000 42.00000 44.00000
46.00000 48.00000 50.00000 52.00000 54.00000 56.00000 58.00000 60.00000 62.00000 64.00000 66.00000 68.00000 70.00000 72.00000 74.00000 76.00000 78.00000
80.00000

1997 1 7 3 0 37 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.01068 0.05160 0.07295 0.02847
0.03737 0.10854 0.10320 0.08541 0.03737 0.01246 0.01246 0.02135 0.01601 0.01068 0.01779 0.00712 0.00178 0.00178 0.00178 0.00178 0.00000
0.00178 0.00000 0.00000 0.00000 0.00178 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.03737 0.08363 0.05516
0.09075 0.03203 0.01423 0.00890 0.01423 0.00534 0.00712 0.00178 0.00000 0.00000 0.00178 0.00178 0.00000 0.00000 0.00178 0.00000 0.00000
0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000

1999 1 7 3 0 43 0.00226 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00226 0.00226
0.01129 0.00677 0.02483 0.05643 0.04966 0.05869 0.04740 0.06321 0.04966 0.06772 0.05418 0.08352 0.04063 0.03160 0.01580 0.01580 0.00226
0.00226 0.00226 0.00677 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000
0.00677 0.05869 0.06321 0.05643 0.03612 0.02483 0.01354 0.01806 0.00677 0.00451 0.00903 0.00451 0.00000 0.00000 0.00000 0.00000 0.00000
0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000

2000 1 7 3 0 35 0.00000 0.00000 0.00000 0.00000 0.00635 0.03492 0.01905 0.00000 0.00317 0.00317 0.00317
0.00635 0.00317 0.00000 0.00317 0.00000 0.00317 0.00952 0.02857 0.01270 0.05079 0.04762 0.04762 0.06349 0.06667 0.04127 0.03810 0.01587
0.01270 0.02222 0.00635 0.00635 0.00317 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.02540 0.09206 0.01270 0.00000 0.00000 0.00000

0.00317	0.01270	0.05079	0.06984	0.08889	0.03175	0.02222	0.00635	0.00317	0.00952	0.00000	0.00000	0.00000	0.00317	0.00317	0.00635	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000									

2001	1	7	3	0	41	0.00138	0.00000	0.00000	0.00000	0.00000	0.00000	0.00138	0.00414	0.07597	0.12017	0.05249
0.00829	0.00000	0.00552	0.00414	0.00000	0.00552	0.00691	0.01519	0.01105	0.02072	0.01519	0.02210	0.01796	0.01657	0.01934	0.01105	0.01519
0.00829	0.00276	0.00138	0.00276	0.00138	0.00138	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00138	0.03315	0.11326	0.12017
0.03591	0.02762	0.02072	0.05249	0.06354	0.03453	0.00829	0.00829	0.00829	0.00138	0.00138	0.00000	0.00138	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000									

Fillet Fishery, from Observer 2006 length comps.

# Year	Season	Type	Gender	Partition	Nsamp	12	14	16	18	20	22	24	26	28	30	32
34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66
68	70	72	74	76	78	80	12	14	16	18	20	22	24	26	28	30
32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64
66	68	70	72	74	76	78	80									

#2006	1	2	0	0	34	0	0	0	0	0	4	4	2	5	24	19
27	24	27	21	18	15	10	10	12	7	2	1	2	5	1	4	2
1	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									

Trawl Discard Fishery, from Observer 2006 length comps.

#Year	Season	Type	Gender	Partition	Nsamp	12	14	16	18	20	22	24	26	28	30	32
34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66
68	70	72	74	76	78	80	12	14	16	18	20	22	24	26	28	30
32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64
66	68	70	72	74	76	78	80									

2006	1	3	0	0	142	0	0	3	14	15	10	14	27	44	53	52
88	121	158	120	90	73	62	64	57	62	42	36	25	27	18	20	5
6	1	2	4	1	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									

#

30 # Number of age bins for data inputs

#Lower edge of age bins (first is a minus group, last is a plus group)

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

2 # Number of ageing error types

Vectors of: Average age at true age (to accumulator age)

SD of ageing precision at true age

#Type 1: break and burn.Assume unbiased. SD is from english.

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

0.001 0.001 0.2336773 0.3703697 0.4673546 0.5425818 0.604047 0.6560151 0.7010318 0.7407394 0.7762591 0.8083906 0.8377243 0.8647087 0.8896923 0.9129516 0.9347091
0.9551472 0.9744167 0.9926441 1.0099364 1.0263848 1.0420678 1.0570536 1.0714015 1.0851637 1.098386 1.1111092 1.1233696 1.1351998 1.1466288 1.1466288 1.1466288
1.1466288 1.1466288 1.1466288

Type 2: surface reads. SD is from english, but bias is from 1989 cross reads.

1.04 1.99 2.94 3.89 4.84 5.79 6.74 7.70 8.65 9.60 10.55 11.50 12.45 13.40 14.35 15.30 16.25
17.20 18.15 19.10 20.05 21.00 21.95 22.91 23.86 24.81 25.76 26.71 27.66 28.61 29.56 30.51 31.46 32.41
33.36 34.31

0.001 0.001 0.2336773 0.3703697 0.4673546 0.5425818 0.604047 0.6560151 0.7010318 0.7407394 0.7762591 0.8083906 0.8377243 0.8647087 0.8896923 0.9129516 0.9347091
0.9551472 0.9744167 0.9926441 1.0099364 1.0263848 1.0420678 1.0570536 1.0714015 1.0851637 1.098386 1.1111092 1.1233696 1.1351998 1.1466288 1.1466288
1.1466288 1.1466288 1.1466288 1.1466288

#

538 # 511+27ghost marginals: Total number of age observations

#Pacfin Age-Length Data sorted by year, gender, age-at-length bin observations

#Year Season Type Gender Partition ageerr Lbin_lo Lbin_hi Nsamp Data: females then males

#year	season	fleet	gender	mkt	age err	lbin	lbin	samp	1.0000	2.0000	3.0000	4.0000	5.0000	6.0000	7.0000	8.0000
9.0000	10.0000	11.0000	12.0000	13.0000	14.0000	15.0000	16.0000	17.0000	18.0000	19.0000	20.0000	21.0000	22.0000	23.0000	24.0000	25.0000
26.0000	27.0000	28.0000	29.0000	30.0000	1.0000	2.0000	3.0000	4.0000	5.0000	6.0000	7.0000	8.0000	9.0000	10.0000	11.0000	12.0000
13.0000	14.0000	15.0000	16.0000	17.0000	18.0000	19.0000	20.0000	21.0000	22.0000	23.0000	24.0000	25.0000	26.0000	27.0000	28.0000	29.0000
30.0000																
#year	season	fleet	gender	mkt	age err	lbin	lbin	samp	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	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																
1986	1	2	1	0	2	10	10	1	0.00000	0.00000	100.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	1	0	2	12	12	1	0.00000	0.00000	9.58674	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	1	0	2	13	13	1	0.00000	0.00000	0.00000	37.13927	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	1	0	2	14	14	4	0.00000	0.00000	0.00000	0.00000	9.71770	0.00000	0.00000	0.68607
0.00000	6.27538	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	1	0	2	15	15	4	0.00000	0.00000	0.00000	5.08634	2.13367	0.14118	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	1	0	2	16	16	9	0.00000	0.00000	0.00000	1.89856	4.26269	3.88892	2.42479	0.96401
0.10539	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1986	1	2	1	0	2	17	17	10	0.00000	0.00000	0.00000	0.05866	0.54668	10.09655	10.17388	1.75072
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	1	0	2	18	18	13	0.00000	0.00000	0.00000	0.00000	1.75642	5.65871	8.99809	7.56992
4.07799	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.68280	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	1	0	2	19	19	14	0.00000	0.00000	0.00000	0.00000	2.63363	3.78951	39.99525	9.91450
15.95905	2.10884	2.16429	0.17799	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	1	0	2	20	20	17	0.00000	0.00000	0.00000	0.00000	0.13624	6.17965	44.80127	12.80113
7.43856	6.92366	11.93682	3.17562	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	1	0	2	21	21	15	0.00000	0.00000	0.00000	0.00000	0.00000	5.95353	20.08477	19.76706
18.19696	17.34095	15.25199	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	1	0	2	22	22	16	0.00000	0.00000	0.00000	0.00000	0.20301	0.97665	10.66028	22.88745
21.21307	26.62657	6.94534	0.65901	9.82862	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	1	0	2	23	23	14	0.00000	0.00000	0.00000	0.00000	0.00000	1.08288	13.00091	5.29118
27.67430	22.43278	15.69293	4.60796	2.25067	2.52278	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	1	0	2	24	24	15	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	5.17172	11.46037
19.40046	9.69576	25.44485	0.80278	5.65013	9.68609	4.44264	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1986	1	2	1	0	2	25	25	14	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	6.93778	2.65359
5.70068	19.40296	12.88227	6.97575	5.45511	15.04459	0.00000	21.42453	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	3.52273	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1986	1	2	1	0	2	26	26	14	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	4.12219
12.59166	17.44274	22.72385	9.48046	16.50587	2.04860	15.08462	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1986	1	2	1	0	2	27	27	13	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
8.73770	39.67047	20.19919	16.65202	10.15712	0.71524	0.00000	3.34203	0.52623	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1986	1	2	1	0	2	28	28	15	0.00000	0.00000	0.00000	0.00000	0.00000	2.35255	0.00000	0.00000
2.24105	14.04848	22.73912	22.00447	1.54371	12.05839	4.56603	0.00000	7.06617	5.69001	0.00000	5.69001	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1986	1	2	1	0	2	29	29	11	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
6.80965	11.48636	8.10097	16.60115	14.77589	10.43899	30.70730	0.76554	0.31414	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1986	1	2	1	0	2	30	30	11	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2.82229	14.97727	4.61194	26.38569	4.96020	31.68310	7.41925	4.00414	0.00000	2.13790	0.99821	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1986	1	2	1	0	2	31	31	9	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
6.45902	6.45902	19.61642	8.27030	0.00000	0.00000	54.47934	0.00000	4.27101	0.44489	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1986	1	2	1	0	2	32	32	8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	5.71921	3.52989	0.00000	11.42876	5.71921	24.04682	38.00438	1.57147	9.98026	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1986	1	2	1	0	2	33	33	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	36.42933	0.00000	0.00000	63.57067	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	1	0	2	35	35	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	74.14975	0.00000	25.85025	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	11	11	2	0.00000	0.00000	0.00000	40.93496	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	12	12	3	0.00000	0.00000	0.00000	18.48983	19.31583	7.33162	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	13	13	8	0.00000	0.00000	0.00000	78.10066	9.78206	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	14	14	11	0.00000	0.00000	1.75785	29.18044	38.33694	4.53317	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	15	15	9	0.00000	0.00000	0.00000	9.86302	6.18507	1.17756	11.12919	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	16	16	11	0.00000	0.00000	0.00000	2.44618	11.94606	2.13758	4.53819	0.00000
0.00000	0.00000	3.67415	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1987	1	2	1	0	2	17	17	14	0.00000	0.00000	0.00000	1.41883	6.37472	5.84252	1.48800	0.14484
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	18	18	15	0.00000	0.00000	0.00000	0.00000	4.53735	12.99621	7.06339	0.74417
0.00000	10.13816	0.89533	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	19	19	15	0.00000	0.00000	0.00000	0.00000	0.69681	24.07271	48.36713	3.03378
16.36930	0.46395	0.00000	0.43491	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	20	20	20	0.00000	0.00000	0.00000	0.00000	7.38790	9.92291	38.81172	26.96821
4.35162	1.42712	8.53286	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	21	21	19	0.00000	0.00000	0.00000	0.00000	0.00000	16.27893	32.72465	14.98546
16.06361	13.68530	4.86610	1.28025	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	22	22	20	0.00000	0.00000	0.00000	0.00000	1.15218	8.03723	40.20261	14.52341
20.08965	11.18881	3.47826	0.74819	0.47688	0.00000	0.10278	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	23	23	19	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	27.58654	16.88622
7.09513	15.97009	10.82238	11.00035	2.47192	0.00000	0.00000	0.00000	8.04016	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	24	24	18	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	22.19790	15.83504
23.42636	12.95390	16.16714	4.98135	0.16663	3.49857	0.16663	0.60649	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1987	1	2	1	0	2	25	25	17	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	8.80952	14.54756
9.96931	11.86277	16.71875	14.90796	5.29569	13.64817	0.65002	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	26	26	18	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	4.41708
3.56418	11.10570	9.35301	14.00882	28.74954	0.86443	25.49120	2.12572	0.00000	0.00000	0.00000	0.32031	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	27	27	15	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3.58105	28.64258	31.78933	7.90025	5.39026	4.59571	6.46024	0.78480	10.85577	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	28	28	18	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	3.51809
3.69089	15.73402	17.32053	17.60405	16.73911	6.86788	3.35610	1.17556	0.88725	12.46957	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.63695	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	29	29	15	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	7.09213	9.33479	15.38540	2.18489	34.14696	24.11488	5.24569	0.98930	0.00000	0.32723	0.00000	1.17874	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	30	30	13	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	9.11556	16.46695	12.36191	12.49521	25.53913	9.11556	11.00750	1.61570	0.40293	0.96018	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	31	31	14	0.00000	0.00000	0.00000	0.00000	11.25932	0.00000	0.00000	0.00000
0.00000	10.59293	12.24390	0.00000	24.71568	1.31903	10.09881	22.27470	4.50771	2.98793	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	32	32	5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	92.96301	0.00000	0.00000	0.00000	3.67205	0.00000	0.00000	0.00000	0.00000	3.36494	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1987	1	2	1	0	2	33	33	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	20.99878	0.00000	48.12745	24.56812	6.30565	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	34	34	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	2.82883	0.00000	86.98132	10.18985	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	1	0	2	35	35	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
100.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	1	0	2	12	12	2	0.00000	0.00000	9.29226	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	1	0	2	13	13	3	0.00000	0.00000	5.82783	24.69006	5.82783	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	1	0	2	14	14	6	0.00000	0.00000	6.55973	41.69511	12.41706	3.94755	8.80335	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	1	0	2	15	15	8	0.00000	0.00000	0.00000	18.48063	31.15081	7.38703	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	1	0	2	16	16	8	0.00000	0.00000	0.00000	0.52985	10.36540	2.87013	3.35570	3.12754
3.85180	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1988	1	2	1	0	2	17	17	12	0.00000	0.00000	0.00000	2.99156	7.24341	12.22197	4.85303	1.39549
0.00000	0.00000	1.01919	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

0.00000

1988	1	2	1	0	2	18	18	11	0.00000	0.00000	0.00000	0.00000	8.56086	14.61984	12.61309	6.35838
0.00000	2.79019	2.79019	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

0.00000

1988	1	2	1	0	2	19	19	12	0.00000	0.00000	0.00000	0.00000	0.00000	6.66270	10.83985	41.69873
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

0.00000

1988	1	2	1	0	2	20	20	12	0.00000	0.00000	0.00000	0.00000	0.00000	6.33402	31.21699	62.13867
0.00000	0.31032	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

0.00000

1988	1	2	1	0	2	21	21	14	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	22.12697	62.43075
12.68823	1.48491	1.10245	0.16670	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

0.00000

1988	1	2	1	0	2	22	22	11	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	2.71127	51.30389
27.59162	7.99290	0.50752	5.31214	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

0.00000

1988	1	2	1	0	2	23	23	15	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	4.92920	36.09862
24.34862	15.69638	10.14354	8.78364	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

0.00000

1988	1	2	1	0	2	24	24	11	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.54026	1.31599
15.61929	29.88225	16.35614	18.80250	0.00000	11.27416	0.00000	6.20942	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

0.00000

1988	1	2	1	0	2	25	25	12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.57632
13.17934	32.67753	34.21618	15.16240	2.53007	1.08184	0.00000	0.57632	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	1	0	2	26	26	12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	8.82236
0.00000	11.57826	4.15489	29.63567	26.94034	6.72867	12.13980	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	1	0	2	27	27	11	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	9.27100
9.27100	0.00000	0.00000	43.20872	29.82077	8.07692	0.35158	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	1	0	2	28	28	12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	1.05480	22.96131	29.46759	22.32193	22.52670	0.00000	1.66767	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	1	0	2	29	29	10	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	23.76161	31.50474	4.53246	16.65073	12.61408	9.87793	0.00000	1.05846	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	1	0	2	30	30	6	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	21.28063	27.48721	1.95299	25.53423	23.74495	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	1	0	2	31	31	5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	5.35904	0.00000	55.80302	33.43366	4.23638	0.00000	1.16789	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	1	0	2	32	32	8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	24.84783	0.00000	7.20881	0.00000	39.97670	26.74931	0.00000	0.00000	0.00000	0.00000	1.21735	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1988	1	2	1	0	2	33	33	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	50.00000	50.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	1	0	2	34	34	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	95.32958	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	4.67042
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	1	0	2	35	35	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	5.38417	0.00000	0.00000	66.17605	5.38417	23.05560	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	11	11	1	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	12	12	4	0.00000	0.00000	0.89490	37.70067	5.81186	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	13	13	7	0.00000	0.00000	0.00000	41.35940	3.41940	5.07089	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	14	14	6	0.00000	0.00000	0.00000	45.45657	20.63222	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	15	15	13	0.00000	0.00000	0.62884	64.64647	10.92450	5.81079	0.00000	0.00000
0.54394	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1989	1	2	1	0	2	16	16	12	0.00000	0.00000	0.00000	5.01761	18.02911	6.09956	4.57735	12.39891
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	17	17	11	0.00000	0.00000	0.00000	11.88875	14.53490	5.45205	0.84734	3.84210
0.14797	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	18	18	14	0.00000	0.00000	0.00000	0.68032	13.57860	21.18422	0.87892	1.78808
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	19	19	11	0.00000	0.00000	0.00000	0.00000	2.83261	21.29896	6.22143	12.92488
13.07475	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	20	20	13	0.00000	0.00000	0.00000	0.00000	0.61158	18.66536	4.53113	6.84203
7.25399	2.87759	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	21	21	14	0.00000	0.00000	0.00000	0.00000	0.00000	3.51858	34.38481	29.17830
17.90386	4.17055	3.74839	0.00000	0.00000	0.00000	0.00000	0.34425	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	22	22	16	0.00000	0.00000	0.00000	0.00000	0.33210	0.00000	15.80886	42.92558
15.72289	8.13483	12.31016	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	23	23	16	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.67637	40.97548
22.63710	19.48600	11.38573	0.94463	0.99232	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1989	1	2	1	0	2	24	24	14	0.00000	0.00000	0.00000	0.00000	0.04116	0.00000	7.18280	16.61338
16.21061	32.11647	9.18421	4.51734	3.53795	0.00000	3.45857	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	25	25	13	0.00000	0.00000	0.00000	0.08125	0.00000	0.00000	0.38518	22.31307
32.08390	20.51660	18.06043	4.70779	0.17192	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	26	26	13	0.00000	0.00000	0.00000	0.00000	0.00000	0.41142	0.06257	17.92550
22.73645	16.18291	18.56344	14.18700	9.93071	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	27	27	13	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.11615	30.65049
18.23270	19.93395	28.53833	1.97603	0.55234	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	28	28	12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	20.59023
5.46539	24.34812	11.28082	7.77101	11.44565	0.00000	0.00000	9.54939	0.00000	9.54939	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	29	29	8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	45.67028	28.46088	2.69176	18.33403	2.94164	1.90142	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	30	30	9	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.26908
0.00000	6.17551	1.69786	53.42480	29.53365	3.85552	0.00000	0.00000	5.04358	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	31	31	8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.24591	10.20466	11.35961	24.87537	0.00000	26.65722	13.32861	0.00000	13.32861	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1989	1	2	1	0	2	32	32	5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	3.75626	0.00000	30.23726	2.37876	0.00000	0.00000	30.23726	27.85850	0.00000	5.53196	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	33	33	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	49.32588	0.00000	0.00000	0.00000	0.89882	49.77529	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	34	34	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	1	0	2	35	35	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	50.00000	0.00000	0.00000	50.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	7	7	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	100.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	12	12	2	0.00000	0.00000	52.94095	1.79388	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	13	13	5	0.00000	0.00000	6.08817	40.76642	7.80217	3.04409	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	14	14	7	0.00000	0.00000	0.00000	11.58944	17.52615	0.89045	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1990	1	2	1	0	2	15	15	12	0.00000	0.00000	1.58994	25.96789	58.85415	7.62596	1.79020	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	16	16	11	0.00000	0.00000	0.65538	14.48866	15.14844	4.38173	0.00000	0.00000
7.67563	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	17	17	13	0.00000	0.00000	0.00000	1.31718	20.50099	17.36875	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	18	18	11	0.00000	0.00000	0.00000	0.72010	13.02493	32.77738	14.44482	0.00000
19.87977	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	19	19	11	0.00000	0.00000	0.00000	1.06105	3.23628	13.74834	24.46726	0.38354
0.71844	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	20	20	11	0.00000	0.00000	0.00000	0.00000	0.00000	21.61522	32.28342	0.00000
29.13829	0.49704	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	21	21	15	0.00000	0.00000	0.00000	0.00000	1.13454	16.41938	28.88590	34.75051
15.71413	2.12451	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	22	22	18	0.00000	0.00000	0.00000	0.00000	2.81584	13.70323	20.20892	6.76231
24.71551	8.26583	3.33644	11.34057	8.85134	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1990	1	2	1	0	2	23	23	18	0.00000	0.00000	0.00000	0.00000	4.34365	11.87393	22.30093	0.40720
33.40388	13.25047	11.20287	1.88073	0.00000	0.00000	0.00000	1.33635	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	24	24	18	0.00000	0.00000	0.00000	0.00000	0.00000	0.47843	17.28215	5.56643
56.02248	9.62703	4.36020	0.94860	5.41780	0.29689	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	25	25	18	0.00000	0.00000	0.00000	0.00000	0.00000	2.18539	14.06934	8.30029
33.62107	9.47243	19.39087	4.31763	0.96745	7.44330	0.00000	0.23224	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	26	26	18	0.00000	0.00000	0.00000	0.00000	0.00000	1.19620	8.97675	8.03658
24.34399	19.32794	15.34122	16.27920	4.59394	1.64814	0.00000	0.00000	0.25604	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	27	27	18	0.00000	0.00000	0.00000	0.00000	0.00000	0.82607	9.04994	5.81233
35.32364	14.68894	13.90843	4.42873	4.20601	11.75592	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	28	28	17	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	4.10727	3.41209
33.24215	18.12878	13.87759	11.26470	10.02706	4.52557	0.00000	0.00000	1.41478	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	29	29	16	0.00000	0.00000	0.00000	0.00000	3.04075	6.68443	1.05648	0.00000
44.35477	2.15170	16.95368	10.52549	5.46261	6.63901	1.18211	0.00000	0.00000	0.00000	1.94897	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	30	30	13	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	2.62017
29.98723	22.66255	0.66460	3.57221	15.14700	4.73153	0.56082	4.47615	9.94619	5.07073	0.00000	0.00000	0.56082	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1990	1	2	1	0	2	31	31	10	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
15.83744	13.10424	11.00014	13.44723	15.02300	2.97044	10.40352	3.46907	0.00000	3.46907	11.27583	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	32	32	8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
14.73296	22.42670	0.00000	17.72393	8.09786	16.49243	11.16263	4.22249	4.98116	0.15984	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	33	33	6	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
9.16334	31.97239	11.12466	5.80104	22.80905	6.49081	0.00000	12.29184	0.34687	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	34	34	5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	14.50135	26.21633	0.00000	0.00000	20.32715	20.32715	18.62802	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	1	0	2	35	35	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	9.30575	0.00000	0.00000	30.54656	0.00000	0.00000	27.30041	0.00000	32.84727	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	12	12	1	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	13	13	2	0.00000	0.00000	0.00000	0.00000	27.89071	0.00000	20.97370	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	14	14	7	0.00000	0.00000	0.00000	2.62465	41.36818	1.62582	0.00000	0.00000
0.00000	2.24119	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1991	1	2	1	0	2	15	15	10	0.00000	0.00000	0.00000	8.83470	29.49810	14.89862	3.49863	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	16	16	12	0.00000	0.00000	0.00000	6.93385	18.41193	15.93378	10.79612	12.14889
0.00000	2.47588	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	17	17	14	0.00000	0.00000	0.00000	0.00000	20.69210	41.99522	17.34413	5.67082
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	18	18	13	0.00000	0.00000	0.00000	0.00000	12.53401	26.20980	9.69609	2.88535
4.77157	1.67603	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	19	19	13	0.00000	0.00000	0.00000	0.00000	0.69282	16.03180	50.09802	13.38202
10.31556	0.00000	0.00000	2.17391	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	20	20	14	0.00000	0.00000	0.00000	0.00000	1.84594	20.32830	37.69054	9.22454
10.40785	0.00000	0.00000	14.42290	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	21	21	14	0.00000	0.00000	0.00000	0.00000	2.01365	6.26637	21.11386	25.28530
35.78425	9.35707	0.17950	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	22	22	14	0.00000	0.00000	0.00000	0.00000	0.00000	15.45604	28.26535	5.74314
8.77303	27.50501	5.58991	7.70801	0.95952	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1991	1	2	1	0	2	23	23	16	0.00000	0.00000	1.20605	0.00000	0.00000	1.33173	7.37923	23.78926
17.14304	13.96607	33.05622	2.12841	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	24	24	15	0.00000	0.00000	0.00000	0.00000	0.00000	1.89995	10.62881	8.32778
9.63203	11.19063	3.16052	36.94167	0.00000	10.27490	7.94371	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	25	25	15	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	12.46389	6.27953
11.61332	17.56235	12.57360	30.33329	4.44863	3.89898	0.00000	0.35722	0.00000	0.46917	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	26	26	17	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	17.13890
14.05103	20.93839	9.82339	32.32361	0.30359	0.30359	0.54966	0.00000	0.00000	0.00000	0.00000	4.56783	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	27	27	18	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	3.73487	10.96014
13.55434	26.88630	5.57231	19.41832	7.76420	4.87386	5.42065	1.81502	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	28	28	18	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.67103	4.31414
5.76029	12.05613	13.06690	23.47576	10.39458	0.79004	11.34372	10.15570	7.36067	0.00000	0.61103	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	29	29	18	0.00000	0.00000	0.00000	0.00000	0.79302	0.79302	0.07069	0.00000
12.84908	14.71112	15.83078	38.29170	3.30102	10.27629	1.00206	1.68237	0.39884	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	30	30	17	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
5.30074	21.30428	12.84153	26.13075	2.69101	13.99716	5.10038	2.08814	0.62688	0.00000	0.00000	0.00000	7.11550	2.80363	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1991	1	2	1	0	2	31	31	9	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2.66141	2.66141	10.66241	51.50251	2.26052	1.13690	4.31890	0.00000	17.10579	0.00000	0.00000	0.00000	7.69014	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	32	32	12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	2.53232	0.00000	14.14101	23.59317	7.75935	29.35781	15.29921	7.31712	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	33	33	11	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	1.59071	45.84381	5.03718	7.83096	2.24851	12.03725	6.85998	0.00000	6.51435	12.03725	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	34	34	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	33.24071	0.00000	0.00000	21.47605	25.70896	19.57429	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	1	0	2	35	35	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	7.99705	0.00000	0.00000	7.99705	0.00000	5.54434	69.04626	9.41530	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	1	0	1	12	12	4	0.00000	0.00000	60.53476	24.12087	15.34437	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	1	0	1	13	13	1	0.00000	0.00000	0.00000	59.16127	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	1	0	1	14	14	5	0.00000	0.00000	0.00000	80.39218	19.60782	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1998	1	2	1	0	1	15	15	5	0.00000	0.00000	0.00000	85.15436	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1998	1	2	1	0	1	16	16	2	0.00000	0.00000	0.00000	66.66667	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1998	1	2	1	0	1	17	17	2	0.00000	0.00000	0.00000	0.00000	4.77793	0.00000	0.00000	20.00850
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1998	1	2	1	0	1	18	18	6	0.00000	0.00000	0.00000	6.74284	6.74284	6.74284	3.25602	11.78415
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1998	1	2	1	0	1	19	19	6	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	14.37765	28.59101
14.37765	14.37765	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1998	1	2	1	0	1	20	20	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	52.58478	0.00000
0.00000	5.05741	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1998	1	2	1	0	1	21	21	7	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	11.61443	11.61443
25.86961	27.67267	23.22886	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1998	1	2	1	0	1	22	22	13	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	9.16770	13.44596
10.26230	36.31284	9.16770	9.16770	4.58385	4.58385	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1998	1	2	1	0	1	23	23	16	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	9.77926
21.18212	22.00333	20.14233	12.22407	4.88963	4.88963	2.44481	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	1	0	1	24	24	13	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
9.64056	28.60032	23.36215	19.17095	9.58547	4.82028	4.82028	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	1	0	1	25	25	14	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
6.37937	21.50998	20.89938	26.26567	16.79938	4.25284	3.89340	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	1	0	1	26	26	13	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	36.97744	6.34735	25.25483	18.57895	6.42072	6.42072	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	1	0	1	27	27	12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
6.02057	12.04114	23.22775	28.67649	12.04114	6.02057	5.95177	6.02057	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	1	0	1	28	28	11	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	5.16408	4.81981	20.16585	25.08745	34.43465	0.00000	5.16408	0.00000	0.00000	5.16408	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	1	0	1	29	29	10	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	13.78994	27.57989	5.91634	13.05628	20.60613	12.15644	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	1	0	1	30	30	5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	10.60191	30.30095	21.20381	9.09714	0.00000	28.79619	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1998	1	2	1	0	1	31	31	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	24.00724	24.00724	0.00000	0.00000	27.97829	24.00724	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	1	0	1	32	32	8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	23.74400	0.00000	0.00000	11.87200	10.74441	23.74400	11.87200	9.01180	9.01180	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	1	0	1	34	34	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	50.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	50.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	1	0	1	35	35	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	13	13	1	0.00000	0.00000	0.00000	0.00000	0.00000	4.68624	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	14	14	2	0.00000	0.00000	0.00000	32.97251	3.00815	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	15	15	2	0.00000	0.00000	0.00000	38.21505	2.39427	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	16	16	2	0.00000	0.00000	0.00000	66.00417	2.71830	0.00000	0.00000	2.71830
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2003	1	2	1	0	1	17	17	3	0.00000	0.00000	0.00000	8.34351	16.30150	2.08588	0.00000	6.92585
0.00000	0.00000	0.00000	0.00000	0.00000	2.08588	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	18	18	4	0.00000	0.00000	0.00000	0.00000	0.00000	26.15700	0.00000	0.00000
0.00000	2.53437	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	19	19	3	0.00000	0.00000	0.00000	0.00000	18.63122	7.03009	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	12.61070	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	20	20	3	0.00000	0.00000	0.00000	0.00000	12.17026	16.47509	0.00000	52.98588
9.18438	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	21	21	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	26.53080	8.50641
19.77828	41.78973	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	22	22	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	10.43837	0.00000
13.83192	49.31281	8.41918	4.16579	0.00000	13.83192	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	23	23	5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	8.53333	23.84054
0.00000	45.43626	22.18987	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	24	24	6	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
41.97464	8.69864	0.00000	41.41227	5.29467	0.00000	2.61979	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2003	1	2	1	0	1	25	25	6	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
41.23919	0.00000	14.83449	15.81109	14.71552	7.41725	0.00000	5.98246	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	26	26	5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	5.77892
0.00000	5.77892	22.16801	31.58659	24.17160	0.00000	4.73704	0.00000	5.77892	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	27	27	5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	4.67541	0.00000
0.00000	9.35082	16.17284	17.87436	21.76739	21.69118	8.46801	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	28	28	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
4.05305	0.00000	8.99754	4.05305	13.94203	23.05861	22.93958	4.05305	0.00000	9.88899	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	29	29	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	4.84820	18.53493	18.59773	14.62362	13.74954	7.94822	3.97411	9.77542	0.00000	3.97411	3.97411	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	30	30	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	10.10135	0.00000	0.00000	0.00000	12.52397	12.32309	10.10135	34.74753	10.10135	10.10135	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	31	31	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	4.00677	0.00000	22.14448	0.00000	0.00000	37.89543	0.00000	19.75773	16.19560	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	1	0	1	32	32	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	23.69700	0.00000	0.00000	0.00000	0.00000	0.00000	23.69700	0.00000	0.00000	52.60601	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2003	1	2	1	0	1	33	33	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	18.31577	22.70846	0.00000	0.00000	18.31577	18.31577	0.00000	22.34422	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2003	1	2	1	0	1	34	34	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	11	11	2	0.00000	0.00000	0.00000	59.19054	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	13	13	1	0.00000	0.00000	0.00000	0.00000	8.22319	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	14	14	3	0.00000	0.00000	4.33861	20.14697	31.29045	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	15	15	4	0.00000	0.00000	2.30118	9.15173	54.78551	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	16	16	5	0.00000	0.00000	0.00000	28.54935	60.21421	7.97959	1.62843	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	17	17	6	0.00000	0.00000	0.00000	0.96109	71.05178	0.47681	5.09922	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	18	18	5	0.00000	0.00000	0.00000	0.61701	90.78744	5.52469	0.61701	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	19	19	4	0.00000	0.00000	0.87136	9.31875	67.70698	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	20	20	5	0.00000	0.00000	0.00000	0.00000	35.41240	15.67420	2.55263	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	21	21	6	0.00000	0.00000	0.00000	0.00000	18.00437	0.92216	38.23472	4.60403
9.86202	0.00000	0.00000	0.00000	28.37270	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	22	22	3	0.00000	0.00000	0.00000	0.00000	13.48870	13.48870	13.93398	31.66592
27.42269	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	23	23	4	0.00000	0.00000	0.00000	0.00000	0.00000	44.98312	23.23403	22.49156
7.81780	0.74247	0.73101	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	24	24	6	0.00000	0.00000	0.00000	0.00000	9.79438	0.00000	0.00000	19.90709
19.91208	11.38371	39.00274	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	25	25	5	0.00000	0.00000	0.00000	0.00000	9.82566	0.00000	3.41528	19.65132
0.00000	24.66100	12.96977	9.82566	19.65132	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	26	26	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.46216
0.00000	0.00000	0.00000	14.21969	42.65907	14.21969	28.43938	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	27	27	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	17.45921	27.51360	0.00000	0.00000	0.00000	55.02719	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	28	28	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	23.67493	32.51212	0.00000	43.81295	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	29	29	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	42.59691	0.00000	0.00000	0.00000	0.00000	14.80618	42.59691	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	30	30	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	29.89113	70.10887	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004	1	2	1	0	1	31	31	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2005	1	2	1	0	1	17	17	1	0.00000	0.00000	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2005	1	2	1	0	1	18	18	1	0.00000	0.00000	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2005	1	2	1	0	1	19	19	1	0.00000	0.00000	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2005	1	2	1	0	1	20	20	1	0.00000	0.00000	0.00000	0.00000	0.00000	50.00000	50.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2005	1	2	1	0	1	21	21	1	0.00000	0.00000	0.00000	0.00000	0.00000	40.00000	20.00000	20.00000
20.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2005	1	2	1	0	1	22	22	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	66.66667
33.33333	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2005	1	2	1	0	1	23	23	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
100.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2005	1	2	1	0	1	24	24	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	11.11111
22.22222	22.22222	11.11111	22.22222	11.11111	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2005	1	2	1	0	1	26	26	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	33.33333
0.00000	33.33333	0.00000	33.33333	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2005	1	2	1	0	1	27	27	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	25.00000	0.00000	25.00000	50.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2005	1	2	1	0	1	28	28	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	20.00000	0.00000	20.00000	0.00000	40.00000	0.00000	0.00000	20.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2005	1	2	1	0	1	29	29	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	50.00000	0.00000	50.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2005	1	2	1	0	1	30	30	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	50.00000	0.00000	50.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2005	1	2	1	0	1	31	31	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	20.00000	20.00000	20.00000	20.00000	0.00000	0.00000	20.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2005	1	2	1	0	1	32	32	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2005	1	2	1	0	1	35	35	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	2	0	2	12	12	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	90.41326	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	2	0	2	13	13	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	40.29229	0.00000	22.56844	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1986	1	2	2	0	2	14	14	6	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	36.03582	14.04334	33.24169	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	2	0	2	15	15	13	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	11.88975	4.18841	37.52281	23.03370	11.42182	1.99967	2.58265	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	2	0	2	16	16	15	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.89856	1.96260	7.27118	28.52546	25.84734	0.96401	8.31167	8.58295	3.04184	0.00000
0.00000	0.00000	0.00000	0.00000	0.05002	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	2	0	2	17	17	12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	7.59945	3.24292	6.41590	37.51837	5.15780	5.78287	8.96975	2.68645	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	2	0	2	18	18	12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	5.25796	2.05415	23.05097	7.58512	8.30323	7.44969	4.07012	3.37170
1.41893	1.41893	0.00000	6.27527	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	2	0	2	19	19	5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.10816	7.87644	7.53497	3.86868	0.00000	0.00000	3.86868	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	2	0	2	20	20	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	2.56831	4.03874	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1986	1	2	2	0	2	21	21	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	3.40474	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1986	1	2	2	0	2	23	23	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	5.44360	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1986	1	2	2	0	2	24	24	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	8.24521	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1987	1	2	2	0	2	11	11	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	59.06504	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1987	1	2	2	0	2	12	12	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	47.62854	7.23417	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1987	1	2	2	0	2	13	13	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.77059	8.63854	2.70815	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1987	1	2	2	0	2	14	14	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	4.78790	1.87525	7.04756	12.48088	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1987	1	2	2	0	2	15	15	8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	7.41258	49.88465	8.04480	5.12558	1.17756	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1987	1	2	2	0	2	16	16	10	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	6.42086	31.77426	17.17319	19.88952	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1987	1	2	2	0	2	17	17	12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.63136	5.89695	45.26944	23.82875	3.29339	1.76998	0.00000	3.04124	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	2	0	2	18	18	12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.50598	2.51501	31.49272	19.09122	3.68222	0.65948	0.47430	0.00000	0.00000
5.20446	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	2	0	2	19	19	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	5.95672	0.60470	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	2	0	2	20	20	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	2.59766	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	2	0	2	21	21	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.11570	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	2	0	2	23	23	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.12720	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	2	0	2	25	25	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	3.59026	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1987	1	2	2	0	2	30	30	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.91937	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1988	1	2	2	0	2	10	10	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	2	0	2	11	11	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	32.91723	65.83447	1.24830	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	2	0	2	12	12	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	18.58451	72.12323	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	2	0	2	13	13	5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	63.65428	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	2	0	2	14	14	5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	3.27986	22.62964	0.33384	0.33384	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	2	0	2	15	15	7	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	11.76039	9.20501	10.39757	5.86093	5.75763	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	2	0	2	16	16	10	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	12.12085	16.74489	13.61734	29.56468	0.00000	3.85180	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	2	0	2	17	17	12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	5.50710	10.25848	30.07963	6.75691	17.67324	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1988	1	2	2	0	2	18	18	11	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	3.62837	7.13751	16.54200	13.36874	11.59083	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	2	0	2	19	19	7	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	5.19796	6.50252	6.66270	15.02248	0.00000	0.91053	6.50252	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1988	1	2	2	0	2	22	22	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	4.58066	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	2	0	2	10	10	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	2	0	2	12	12	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	50.23607	2.67825	2.67825	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	2	0	2	13	13	7	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.59142	22.95545	12.56832	7.29300	0.00000	5.74212	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	2	0	2	14	14	7	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.08754	8.16895	2.06695	0.00000	22.58777	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	2	0	2	15	15	5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	14.03793	0.12695	3.28059	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1989	1	2	2	0	2	16	16	10	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	20.02253	16.28101	7.26831	8.45521	0.00000	0.16309	0.00000	1.68732	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1989	1	2	2	0	2	17	17	9	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	4.02272	12.59657	36.85593	1.75667	6.44754	0.00000	0.00000	1.60745
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1989	1	2	2	0	2	18	18	10	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	2.19869	8.87286	28.32221	1.37420	10.09801	11.02390	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1989	1	2	2	0	2	19	19	8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.11367	7.53810	16.66192	9.78193	0.00000	9.55175	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1989	1	2	2	0	2	20	20	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	8.92960	32.93361	16.35921	0.00000	0.99589	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1989	1	2	2	0	2	21	21	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	6.75126	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1989	1	2	2	0	2	22	22	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	3.60184	0.00000	0.00000	0.00000
0.00000	1.16374	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1989	1	2	2	0	2	23	23	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.08777	1.81459	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1989	1	2	2	0	2	24	24	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.72314	0.00000	0.00000	4.51734
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.89703	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1989	1	2	2	0	2	25	25	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.67985	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	2	0	2	12	12	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.86456	43.40060	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	2	0	2	13	13	7	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	6.58822	12.56099	17.77473	4.51330	0.86191	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	2	0	2	14	14	6	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	4.56812	11.32644	44.96315	4.56812	4.56812	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	2	0	2	15	15	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	4.17187	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	2	0	2	16	16	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	7.02025	37.36994	7.02025	6.23971	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	2	0	2	17	17	7	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	10.17094	12.25324	25.82851	1.11224	0.00000	0.00000	11.44814	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1990	1	2	2	0	2	18	18	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	10.14191	6.29032	1.55849	0.00000	0.00000	0.00000	0.00000	1.16229
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	2	0	2	19	19	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	6.97985	15.08751	0.00000	15.08751	19.23022	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	2	0	2	20	20	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	2.35357	0.00000	0.00000	14.11247	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1990	1	2	2	0	2	21	21	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.97103	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	2	0	2	10	10	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	26.44533	73.55467	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	2	0	2	13	13	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	33.72098	5.83026	11.58435	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	2	0	2	14	14	7	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	7.03859	7.91453	4.19529	10.99725	21.99450	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	2	0	2	15	15	8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	15.47674	13.13401	14.65919	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1991	1	2	2	0	2	16	16	6	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	12.99044	2.58513	8.67552	0.00000	9.04846	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	2	0	2	17	17	7	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.51738	6.02595	5.41280	0.00000	0.00000	0.00000	0.00000	2.34160
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	2	0	2	18	18	8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	19.37820	5.11806	0.84353	8.44368	8.44368	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	2	0	2	19	19	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	3.13561	1.57702	0.79369	1.79956	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1991	1	2	2	0	2	20	20	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	6.07992	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	2	0	1	11	11	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	2	0	1	13	13	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	40.83873	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	2	0	1	15	15	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	2.39922	0.00000	0.00000	0.00000	10.04720	2.39922	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

1998	1	2	2	0	1	16	16	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	33.33333	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	2	0	1	17	17	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	20.00850	55.20507	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	2	0	1	18	18	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	19.77901	13.03616	6.29332	6.29332	6.29332	13.03616
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	2	0	1	19	19	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	6.70957	7.18882	14.37765	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	2	0	1	20	20	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	21.17890	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	21.17890	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	2	0	1	22	22	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	2.21347	0.00000	0.00000	0.00000	0.00000	1.09460
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	2	0	1	23	23	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	2.44481	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
1998	1	2	2	0	1	29	29	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	6.89497	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2003	1	2	2	0	1	11	11	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	2	0	1	12	12	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	2	0	1	13	13	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	95.31376	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	2	0	1	14	14	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	42.96064	7.53761	13.52109	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	2	0	1	15	15	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	10.76180	7.94982	10.76180	10.76180	16.76119	2.39427	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	2	0	1	16	16	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	19.02960	2.71830	0.00000	0.00000	0.00000
0.00000	0.00000	6.81133	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	2	0	1	17	17	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	18.75129	9.37565	16.30150	14.60230	5.22665	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	2	0	1	18	18	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	13.92591	28.22155	20.27636	6.35045	0.00000	2.53437
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2003	1	2	2	0	1	19	19	3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	15.41630	7.03009	0.00000	0.00000	19.64079	7.03009
0.00000	12.61070	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	2	0	1	20	20	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	9.18438	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	2	0	1	21	21	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	3.39478	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2003	1	2	2	0	1	28	28	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	9.01410	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2004	1	2	2	0	1	10	10	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	100.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2004	1	2	2	0	1	11	11	1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	40.80946	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2004	1	2	2	0	1	12	12	2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	20.09252	0.00000	79.90748	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																
2004	1	2	2	0	1	13	13	4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	48.59316	43.18365	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000																

2004 1 2 2 0 1 14 14 2 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000
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2004 1 2 2 0 1 17 17 3 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000
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2004 1 2 2 0 1 18 18 1 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000
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2004 1 2 2 0 1 19 19 2 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000
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2004 1 2 2 0 1 20 20 2 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000
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FRAM slope/shelf 2003-2006

# year	season	fleet	gender	mkt	age err	lbin	lbin	samp	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	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																
2003	1	5	1	0	1	7	7	2	0.000000	0.883746	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2003	1	5	1	0	1	8	8	4	0.000000	0.232477	0.029846	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2003	1	5	1	0	1	9	9	14	0.000000	0.364532	0.245694	0.067361	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2003	1	5	1	0	1	10	10	6	0.000000	0.061532	0.081322	0.026381	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2003	1	5	1	0	1	11	11	8	0.000000	0.062451	0.204627	0.049395	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2003	1	5	1	0	1	12	12	6	0.000000	0.000000	0.123222	0.045562	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2003	1	5	1	0	1	13	13	9	0.000000	0.000000	0.000000	0.076371	0.004186	0.020181	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2003	1	5	1	0	1	14	14	16	0.000000	0.000000	0.034641	0.424906	0.025973	0.015774	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2003	1	5	1	0	1	15	15	34	0.000000	0.000000	0.000000	0.538990	0.236437	0.000000	0.029619	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2003	1	5	1	0	1	16	16	43	0.000000	0.031855	0.006543	0.525080	0.136732	0.016389	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2003	1	5	1	0	1	17	17	24	0.000000	0.000000	0.000000	0.527592	0.072192	0.103021	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2003	1	5	1	0	1	18	18	15	0.000000	0.000000	0.000000	0.429362	0.133972	0.034784	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2003	1	5	1	0	1	19	19	5	0.000000	0.000000	0.000000	0.364089	0.101258	0.109883	0.148446	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2003	1	5	1	0	1	20	20	2	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.040541	0.000000
0.248426	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2003	1	5	1	0	1	21	21	5	0.000000	0.000000	0.000000	0.000000	0.000000	0.214264	0.494190	0.118772
0.000000	0.000000	0.172774	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2003	1	5	1	0	1	22	22	5	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.229179	0.770821	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2003	1	5	1	0	1	23	23	10	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.523360
0.012959	0.171951	0.269682	0.022048	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2003	1	5	1	0	1	24	24	8	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.030611	0.091011	0.066984	0.030257	0.000000	0.000000	0.781137	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2003	1	5	1	0	1	25	25	4	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.434666	0.000000	0.000000	0.489074	0.076260	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2003	1	5	1	0	1	26	26	7	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.148941	0.820625	0.000000	0.000000	0.000000	0.030434	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2003	1	5	1	0	1	27	27	4	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.968103	0.031897	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2003	1	5	1	0	1	28	28	5	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.052995	0.049384	0.897620	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2003	1	5	1	0	1	29	29	3	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.011105	0.010087	0.978808	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
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2003 1 5 1 0 1 30 30 1 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2004 1 5 1 0 1 7 7 2 0.000000 0.375616 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2004 1 5 1 0 1 8 8 3 0.000000 0.420455 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2004 1 5 1 0 1 9 9 4 0.000000 0.051372 0.124150 0.000000 0.000000 0.000000 0.000000 0.000000
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2004	1	5	1	0	1	10	10	11	0.000000	0.267288	0.179152	0.030561	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2004	1	5	1	0	1	11	11	10	0.000000	0.081150	0.052642	0.049386	0.077787	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2004	1	5	1	0	1	12	12	8	0.000000	0.000000	0.092284	0.025486	0.036915	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2004	1	5	1	0	1	13	13	7	0.000000	0.000000	0.036296	0.005755	0.028313	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2004	1	5	1	0	1	14	14	7	0.000000	0.000000	0.031576	0.058102	0.025698	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2004	1	5	1	0	1	15	15	19	0.000000	0.000000	0.000000	0.329919	0.543756	0.040385	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2004	1	5	1	0	1	16	16	21	0.000000	0.013378	0.010650	0.133693	0.703599	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2004	1	5	1	0	1	17	17	36	0.000000	0.000000	0.000000	0.043123	0.797733	0.041921	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2004	1	5	1	0	1	18	18	30	0.000000	0.000000	0.000000	0.035507	0.903472	0.013527	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	1	0	1	19	19	18	0.000000	0.000000	0.000000	0.000000	0.399081	0.089017	0.053465	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	1	0	1	20	20	19	0.000000	0.000000	0.000000	0.016697	0.637742	0.055937	0.031450	0.220098
0.038075	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	1	0	1	21	21	13	0.000000	0.000000	0.000000	0.000000	0.303809	0.000000	0.072687	0.183908
0.264975	0.048840	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	1	0	1	22	22	2	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	1	0	1	23	23	4	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.005927	0.455840
0.020837	0.455840	0.061556	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	1	0	1	24	24	3	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.086397
0.000000	0.142117	0.771486	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	1	0	1	25	25	2	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.141449
0.858551	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2004	1	5	1	0	1	26	26	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	1	0	1	27	27	3	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.535096	0.000000	0.000000	0.332785	0.132118	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	1	0	1	28	28	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	1	0	1	29	29	5	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.415317	0.109444	0.000000	0.000000	0.205952	0.269287	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	1	0	1	30	30	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	1	0	1	31	31	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	1	0	1	35	35	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2005	1	5	1	0	1	5	5	1	0.000000	0.733922	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2005	1	5	1	0	1	5	5	1	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2005	1	5	1	0	1	7	7	1	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2005	1	5	1	0	1	8	8	1	0.000000	0.000000	0.184615	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2005	1	5	1	0	1	9	9	6	0.000000	0.248403	0.288277	0.174693	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2005	1	5	1	0	1	10	10	9	0.000000	0.097958	0.142089	0.046951	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2005	1	5	1	0	1	11	11	9	0.000000	0.000000	0.087065	0.027612	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2005	1	5	1	0	1	12	12	12	0.000000	0.000000	0.117900	0.086931	0.007277	0.022227	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2005	1	5	1	0	1	13	13	30	0.000000	0.000000	0.073801	0.038081	0.006470	0.046494	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2005 1 5 1 0 1 14 14 27 0.000000 0.000000 0.016727 0.127302 0.060944 0.020851 0.000000 0.020985
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2005 1 5 1 0 1 15 15 19 0.000000 0.000000 0.000000 0.288331 0.145392 0.062630 0.007745 0.000000
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2005 1 5 1 0 1 16 16 34 0.000000 0.000000 0.045416 0.056750 0.323353 0.149397 0.090733 0.000000
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2005 1 5 1 0 1 17 17 41 0.000000 0.000000 0.000000 0.011992 0.313603 0.229646 0.080666 0.000000
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2005 1 5 1 0 1 18 18 41 0.000000 0.000000 0.000000 0.018361 0.119883 0.298546 0.067926 0.031425
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2005 1 5 1 0 1 19 19 62 0.000000 0.000000 0.000000 0.000000 0.118492 0.783175 0.062977 0.012963
0.004648 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 1 0 1 20 20 46 0.000000 0.000000 0.000000 0.059927 0.053298 0.299304 0.037049 0.103291
0.004721 0.129610 0.176197 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 1 0 1 21 21 49 0.000000 0.000000 0.000000 0.000000 0.025661 0.377647 0.033004 0.353157
0.041841 0.128804 0.005247 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 1 0 1 22 22 24 0.000000 0.000000 0.000000 0.000000 0.112859 0.033407 0.254332 0.387774
0.099314 0.006438 0.097266 0.004512 0.004099 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 1 0 1 23 23 31 0.000000 0.000000 0.000000 0.000000 0.000000 0.051684 0.148639 0.189092
0.506711 0.040558 0.000000 0.003603 0.056299 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 1 0 1 24 24 13 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.028571
0.169411 0.299129 0.375843 0.018627 0.000000 0.000000 0.000000 0.000000 0.026894 0.081525 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 1 0 1 25 25 9 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.125806 0.000000
0.023647 0.135883 0.201179 0.021520 0.491965 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 1 0 1 26 26 5 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
0.252737 0.000000 0.000000 0.272868 0.000000 0.000000 0.120608 0.000000 0.353787 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 1 0 1 27 27 5 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
0.000000 0.180634 0.180634 0.000000 0.022381 0.000000 0.265283 0.000000 0.351068 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 1 0 1 28 28 7 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
0.000000 0.008923 0.000000 0.164644 0.013178 0.059278 0.753977 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 1 0 1 29 29 1 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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0.000000

2005	1	5	1	0	1	30	30	9	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.124414	0.000000	0.166118	0.123204	0.000000	0.150698	0.000000	0.000000	0.435566	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2005	1	5	1	0	1	31	31	2	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.081241	0.000000	0.000000	0.918759	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2005	1	5	1	0	1	32	32	4	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.039086	0.025173	0.649120	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.286621	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2005	1	5	1	0	1	34	34	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	1	0	1	6	6	1	0.000000	0.104482	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	1	0	1	7	7	2	0.000000	0.128764	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	1	0	1	8	8	1	0.000000	0.173817	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	1	0	1	9	9	5	0.000000	0.518630	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	1	0	1	10	10	2	0.000000	0.611428	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	1	0	1	12	12	6	0.000000	0.000000	0.105782	0.075932	0.000000	0.012635	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	1	0	1	13	13	6	0.000000	0.000000	0.131508	0.119072	0.067392	0.003287	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	1	0	1	14	14	6	0.000000	0.000000	0.000000	0.121818	0.009887	0.000000	0.035929	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	1	0	1	15	15	17	0.000000	0.000000	0.000000	0.174016	0.076754	0.070847	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	1	0	1	16	16	16	0.000000	0.000000	0.000000	0.061423	0.068264	0.062402	0.056386	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	1	0	1	17	17	16	0.000000	0.000000	0.020620	0.150911	0.057068	0.051701	0.014764	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	1	0	1	18	18	17	0.000000	0.000000	0.000000	0.063860	0.042538	0.115173	0.585480	0.016838
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	1	0	1	19	19	28	0.000000	0.000000	0.000000	0.000000	0.004542	0.112144	0.789933	0.026697
0.000000	0.018457	0.000000	0.028143	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2006	1	5	1	0	1	20	20	21	0.000000	0.000000	0.000000	0.000000	0.000000	0.027099	0.805986	0.161696
0.005219	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2006	1	5	1	0	1	21	21	28	0.000000	0.000000	0.000000	0.000000	0.000000	0.114960	0.275999	0.038585
0.237819	0.269834	0.000000	0.018308	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2006	1	5	1	0	1	22	22	17	0.000000	0.000000	0.000000	0.000000	0.014655	0.101975	0.816881	0.000000
0.032847	0.000000	0.008878	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2006	1	5	1	0	1	23	23	10	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.333142	0.018976
0.000000	0.350613	0.087232	0.000000	0.060698	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2006	1	5	1	0	1	24	24	11	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.539094	0.113347
0.000000	0.079790	0.120620	0.126043	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2006	1	5	1	0	1	25	25	10	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.012700	0.066664
0.014135	0.049848	0.155570	0.650302	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2006	1	5	1	0	1	26	26	5	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.387484	0.000000	0.000000	0.000000	0.121673	0.000000	0.490843	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006 1 5 1 0 1 27 27 2 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
0.306179 0.387642 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.306179 0.000000 0.000000 0.000000 0.000000
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2006 1 5 1 0 1 29 29 2 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
0.000000 0.000000 0.000000 0.000000 0.000000 0.097677 0.000000 0.902323 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2003 1 5 2 0 1 11 11 26 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2003	1	5	2	0	1	13	13	40	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.892038	0.007224	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2003	1	5	2	0	1	14	14	8	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.008952	0.489755	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2003	1	5	2	0	1	15	15	7	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.100366	0.072489	0.009117	0.012982	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2003	1	5	2	0	1	16	16	13	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.102130	0.014113	0.027986	0.040777	0.011728	0.086667	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2003	1	5	2	0	1	17	17	6	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.113258	0.027987	0.155950	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2003	1	5	2	0	1	18	18	6	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.150930	0.000000	0.000000	0.000000	0.000000	0.250952	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2003	1	5	2	0	1	19	19	2	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.223403	0.052921	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2003	1	5	2	0	1	20	20	3	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.053259	0.000000	0.373483	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.284291	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2004	1	5	2	0	1	6	6	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.285713	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	2	0	1	7	7	2	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.624384	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	2	0	1	8	8	10	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.256909	0.322636	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	2	0	1	9	9	16	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.391433	0.406875	0.026171	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	2	0	1	10	10	17	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.058086	0.397463	0.067451	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	2	0	1	11	11	24	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.331200	0.190696	0.217139	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	2	0	1	12	12	43	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.021880	0.167502	0.655933	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	2	0	1	13	13	44	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.007918	0.134863	0.786856	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2004	1	5	2	0	1	14	14	32	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.014975	0.181631	0.436113	0.251906	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	2	0	1	15	15	2	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.085940	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	2	0	1	16	16	7	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.070859	0.006559	0.029678	0.000000	0.000000	0.031583	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	2	0	1	17	17	7	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.046703	0.000000	0.000000	0.065908	0.000000	0.000000	0.000000	0.004612
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	2	0	1	18	18	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.047495	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	2	0	1	19	19	2	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.012059	0.000000	0.446378	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2004	1	5	2	0	1	21	21	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.125781	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2005	1	5	2	0	1	5	5	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.266078	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2005 1 5 2 0 1 8 8 2 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.600565 0.000000 0.214820 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 2 0 1 9 9 5 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.258148 0.030480 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 2 0 1 10 10 14 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 2 0 1 11 11 28 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 2 0 1 12 12 30 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 2 0 1 13 13 54 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.011281 0.142910 0.234820 0.441067 0.005075 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 2 0 1 14 14 46 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2005 1 5 2 0 1 15 15 12 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.003039 0.058082 0.008674 0.104291 0.000000 0.050041 0.271774 0.000000 0.000000 0.000000
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0.000000

2005	1	5	2	0	1	16	16	13	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.007165	0.014264	0.090162	0.155009	0.000000	0.000000	0.045926	0.021825	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2005	1	5	2	0	1	17	17	9	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.057663	0.112189	0.046280	0.000000	0.016456	0.087852	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2005	1	5	2	0	1	18	18	11	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.224084	0.017794	0.007371	0.066011	0.000000	0.148599	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2005	1	5	2	0	1	19	19	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.017745	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2005	1	5	2	0	1	20	20	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.136603	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2005	1	5	2	0	1	21	21	4	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.011491	0.002933	0.006466	0.000000	0.013749	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2005	1	5	2	0	1	23	23	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.003415	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	2	0	1	4	4	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	2	0	1	6	6	0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.062554	0.832964	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2006	1	5	2	0	1	7	7	5	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.871236	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2006	1	5	2	0	1	8	8	4	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.826183	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2006	1	5	2	0	1	9	9	4	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.448577	0.032793	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2006	1	5	2	0	1	10	10	7	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.204905	0.000000	0.183667	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2006	1	5	2	0	1	11	11	2	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.025454	0.030265	0.495850	0.448431	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2006	1	5	2	0	1	12	12	11	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.261190	0.191271	0.244122	0.019653	0.089415	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																
2006	1	5	2	0	1	13	13	24	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.116494	0.212946	0.101981	0.047346	0.199974	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006 1 5 2 0 1 14 14 33 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.022968 0.310158 0.181636 0.269791 0.047812 0.000000 0.000000 0.000000 0.000000
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2006 1 5 2 0 1 15 15 45 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.097410 0.239542 0.170015 0.159912 0.011503 0.000000 0.000000 0.000000 0.000000
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2006 1 5 2 0 1 16 16 18 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.017380 0.003908 0.561872 0.131206 0.015807 0.017931 0.000000 0.003421 0.000000
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2006 1 5 2 0 1 17 17 20 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.025795 0.000000 0.000000 0.592180 0.012072 0.069479 0.002288 0.003122 0.000000 0.000000
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2006 1 5 2 0 1 18 18 8 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2006 1 5 2 0 1 19 19 2 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2006 1 5 2 0 1 21 21 0 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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2006 1 5 2 0 1 22 22 4 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
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0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.024764 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
0.000000

2006	1	5	2	0	1	23	23	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.149339	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	2	0	1	24	24	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.021106	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

2006	1	5	2	0	1	25	25	1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.017656	0.000000	0.000000	0.000000	0.033124	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000																

Ghost of FRAM slope shelf survey, age conditionals

#Year	Season	Type	Gender	Partition	ageerr	Lbin_lo	Lbin_hi	Nsamp	#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	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																

2003	1	9	1	0	1	-1	-1	1	0.00	21.00	17.00	127.00	30.00	13.00	5.00	4.00
6.00	8.00	10.00	9.00	6.00	5.00	2.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																

2004	1	9	1	0	1	-1	-1	1	1.00	17.00	20.00	23.00	138.00	11.00	6.00	13.00
5.00	4.00	4.00	1.00	3.00	1.00	1.00	3.00	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																

2005	1	9	1	0	1	-1	-1	1	0.00	6.00	37.00	56.00	87.00	192.00	41.00	55.00
25.00	22.00	11.00	7.00	12.00	3.00	10.00	2.00	4.00	3.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00
0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																

2006	1	9	1	0	1	-1	-1	1	0.00	11.00	5.00	24.00	21.00	38.00	92.00	13.00
11.00	11.00	7.00	6.00	3.00	2.00	4.00	2.00	0.00	0.00	0.00	1.00	2.00	1.00	0.00	1.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																

2003	1	9	2	0	1	-1	-1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	3.00	19.00	29.00	169.00	7.00	2.00	6.00	4.00	11.00	1.00	0.00	0.00
0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																

2004	1	9	2	0	1	-1	-1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	20.00	39.00	61.00	108.00	5.00	2.00	4.00	1.00	1.00	1.00	1.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																

2005	1	9	2	0	1	-1	-1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	1.00	1.00	49.00	45.00	41.00	111.00	15.00	9.00	5.00	4.00	6.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																

2006	1	9	2	0	1	-1	-1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	4.00	23.00	9.00	32.00	32.00	31.00	64.00	14.00	4.00	2.00	2.00	2.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																

Ghost of Fillet fishery

#Year	Season	Type	Gender	Part	ageerr	Lbin_lo	Lbin_hi	Nsamp	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	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																

1986	1	4	1	2	2	-1	-1	1	0.00	0.00	520.63	1055.94	1939.25	4773.52	15701.97	8911.97
12192.75	13715.51	11699.95	6599.39	4174.24	4987.21	4767.23	1943.49	1744.11	759.02	351.38	499.03	0.00	0.00	173.97	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																

1987	1	4	1	2	2	-1	-1	1	0.00	0.00	23.39	1611.22	2753.29	4857.05	14504.27	7006.02
6326.26	7822.49	7318.84	4355.51	4104.66	3071.47	2800.67	1230.67	1499.28	699.48	38.42	13.77	30.07	12.62	0.00	0.00	0.00
7.91	30.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																

1988	1	4	1	2	2	-1	-1	1	0.00	0.00	592.51	4253.77	5888.98	5072.44	7868.10	21422.12
8771.29	7346.42	5973.46	8859.15	4386.12	3759.43	3020.32	1264.87	697.95	380.97	0.00	0.00	0.00	0.00	15.08	0.00	15.08
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																
1989	1	4	1	2	2	-1	-1	1	0.00	0.00	26.45	4118.08	2801.54	3023.35	3552.19	13490.61
9530.58	9730.72	7011.59	3197.94	3133.78	497.65	1013.25	718.69	1154.34	1048.03	0.00	69.37	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																
1990	1	4	1	2	2	-1	-1	1	0.00	0.00	577.20	1223.30	3597.77	6858.78	13447.22	5707.40
34222.89	13360.76	11749.20	7118.65	5630.56	5254.73	1390.60	1374.05	781.86	514.05	653.83	0.00	28.19	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																
1991	1	4	1	2	2	-1	-1	1	0.00	0.00	68.18	307.32	2424.20	4016.32	7660.79	7378.38
9207.45	12985.62	8630.01	21451.44	3458.61	3833.41	3468.64	2735.79	1701.71	52.73	289.89	876.45	697.01	197.01	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																
1998	1	4	1	2	1	-1	-1	1	0.00	0.00	285.75	2986.15	485.98	150.00	1194.87	2198.72
2941.97	5321.50	5174.10	4910.89	3360.17	3174.00	1632.33	978.93	600.00	686.13	263.86	263.86	0.00	0.00	0.00	0.00	0.00
0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																
2003	1	4	1	2	1	-1	-1	1	0.00	0.00	0.00	1493.69	562.16	585.58	413.77	831.98
1180.46	1413.17	1041.38	1678.26	1399.16	1074.34	1078.58	395.91	442.93	431.99	164.05	109.37	54.68	188.11	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																
2004	1	4	1	2	1	-1	-1	1	0.00	0.00	81.25	1011.31	10202.84	2155.74	2151.78	3787.43
2380.60	1852.57	2667.32	1000.00	3898.42	1554.39	1500.00	0.00	673.79	1173.79	500.00	0.00	0.00	16.51	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																
2005	1	4	1	2	1	-1	-1	1	0.00	0.00	0.00	0.00	0.00	3242.67	648.53	1621.33
1621.33	972.80	648.53	1297.07	648.53	972.80	1945.60	648.53	972.80	324.27	0.00	324.27	324.27	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																

1986	1	4	2	2	2	-1	-1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	342.63	3146.12	4225.42	12684.98	18312.27	4192.53	3677.35	4689.65	1874.80	413.40
173.97	173.97	0.00	1038.81	509.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																
1987	1	4	2	2	2	-1	-1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	432.41	966.30	6179.42	3943.42	1382.78	159.09	23.39	166.09	0.00
256.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																
1988	1	4	2	2	2	-1	-1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	693.84	6106.90	5503.07	9035.67	4675.02	8191.63	0.00	764.49	390.58	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																
1989	1	4	2	2	2	-1	-1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.89	2061.55	1246.93	1960.97	4696.82	1594.83	1103.55	1099.69	66.68	416.03
0.00	66.68	0.00	0.00	0.00	0.00	69.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																
1990	1	4	2	2	2	-1	-1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	93.83	758.54	2144.37	902.79	1309.05	430.40	500.00	392.29	892.29	28.42
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																
1991	1	4	2	2	2	-1	-1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.90	383.77	826.03	702.89	600.79	899.15	179.97	0.00	0.00	57.91
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																
1998	1	4	2	2	1	-1	-1	1 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	150.00	185.82	0.00	0.00	812.43	853.86	315.82	290.00	590.00	325.82	0.00
150.00	0.00	0.00	0.00	150.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	1	4	2	2	1	-1	-1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3348.58	400.88	364.86	630.44	937.37	338.39	67.80	216.48	94.86
0.00	121.62	135.60	0.00	0.00	121.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																

2004	1	4	2	2	1	-1	-1	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	532.50	590.03	1765.06	64.63	460.77	64.63	64.63	500.00	238.42	173.79
0.00	173.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																

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0 # Total number of size-at-age observations

0 # Total number of environmental variables

0 # Total number of environmental observations

999 # End file marker