

NWFSC Response to Technical Issues Raised in the Hake “Minority Report”

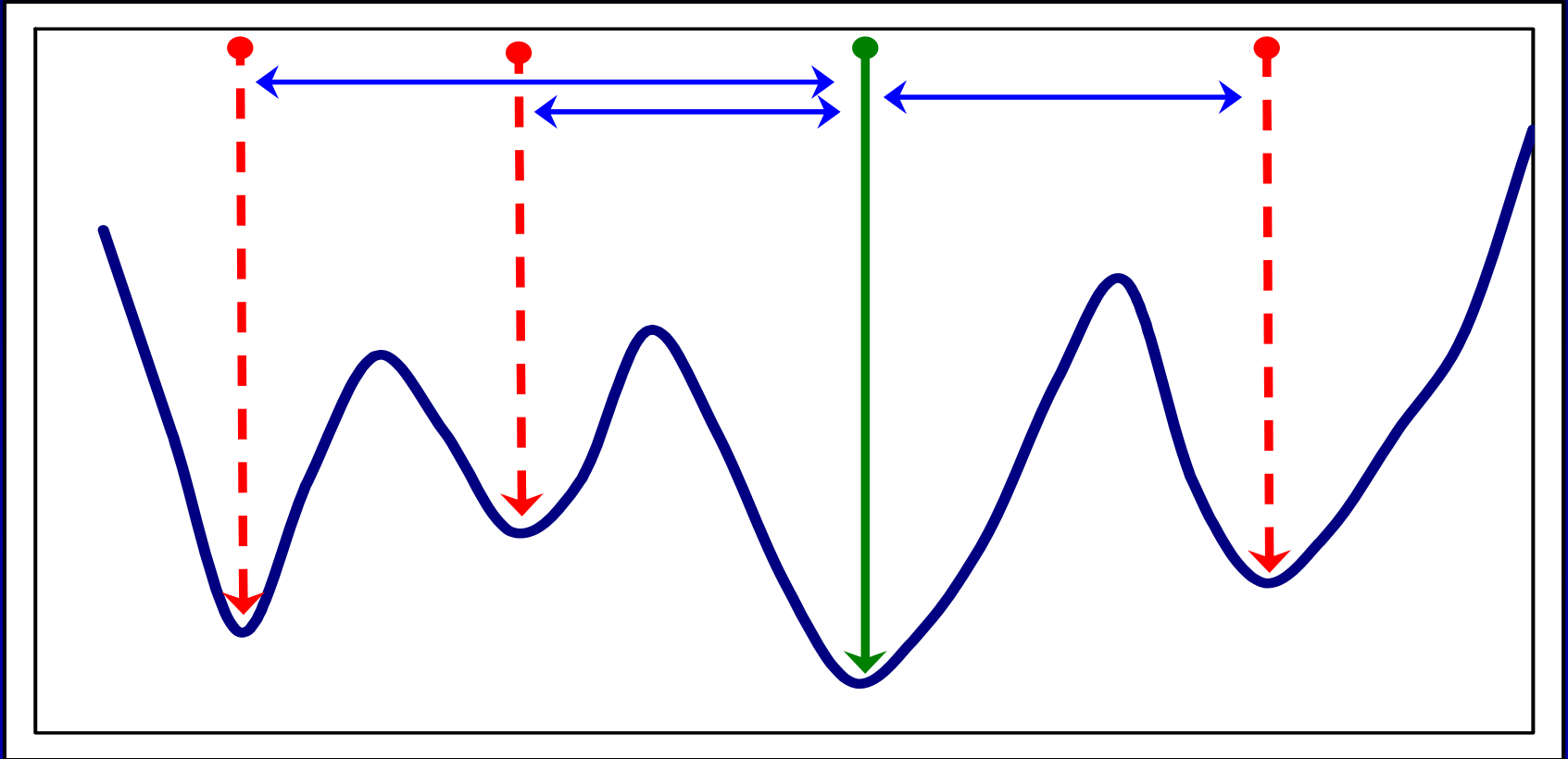
NWFSC Response to Technical Issues Raised in the Hake “Minority Report”

- Stock status and trend
 - Stock is near biomass target
 - There are indications of good recent recruitment
 - The 2005 year class is expected to increase spawning biomass in the near future
- The same data were available to all 3 models; but they were not used in the same manner
 - There are at least six important ways in which data were treated differently between the U.S. and Canadian models

NWFSC Response to Technical Issues Raised in the Hake “Minority Report”

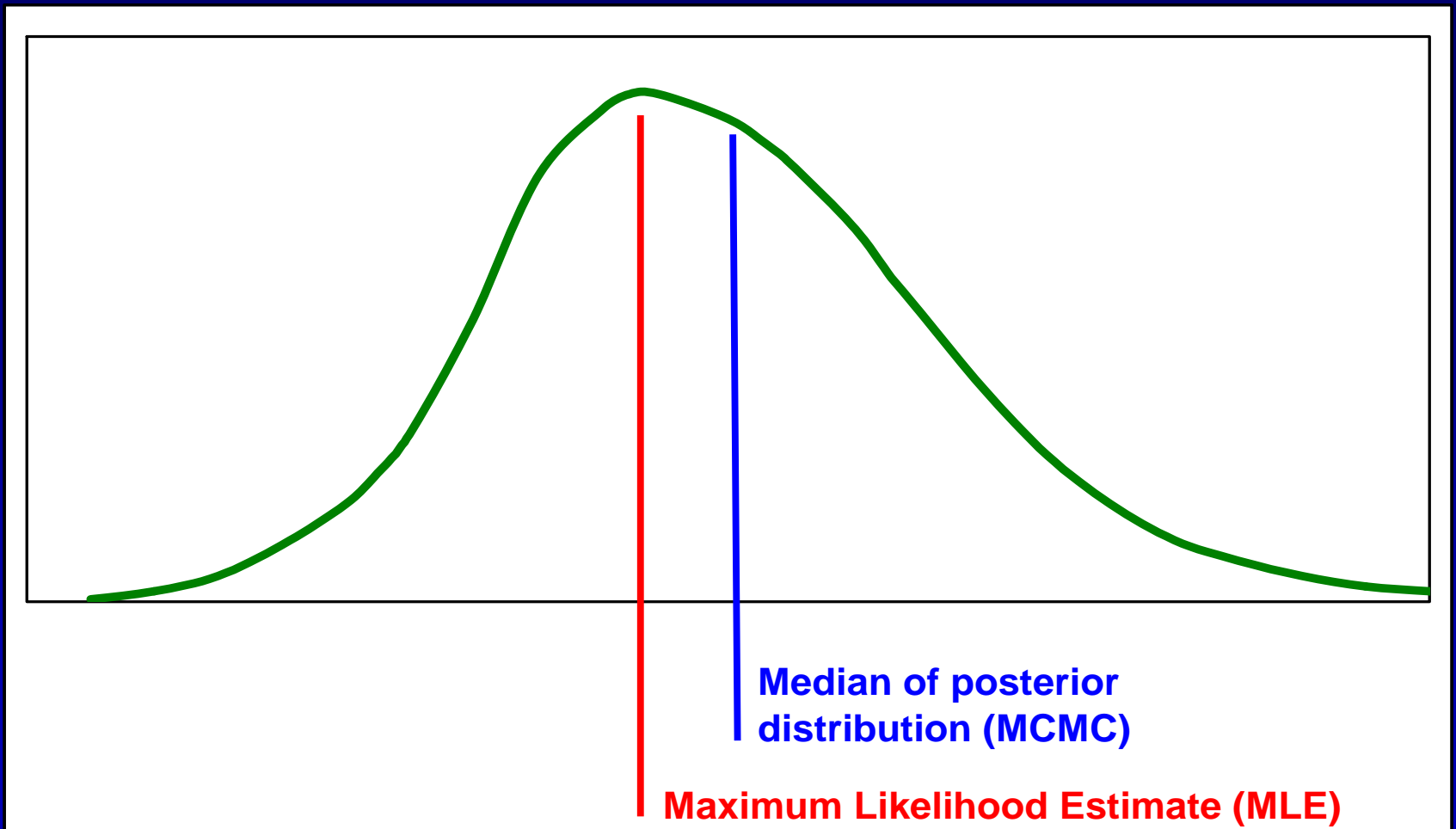
- SS2 model did not reach global convergence
 - The model was tested, using standard methods, with no indication that convergence had not been achieved
 - The MCMC results include the full range of uncertainty incorporated in the model
- SS2 model was subject to a severely biased retrospective pattern
 - The retrospective pattern in estimated ‘q’ reflects a survey time series that has only recently become adequate for models to estimate ‘q’ (q has been fixed, previously)

Searching for the most likely solution



Model starting values are jittered to ensure that a global optimum is reached

Difference between MLE and MCMC results



MLE = Most Likely Single Value

Median of posterior = 50% of values above and below