Base operating model

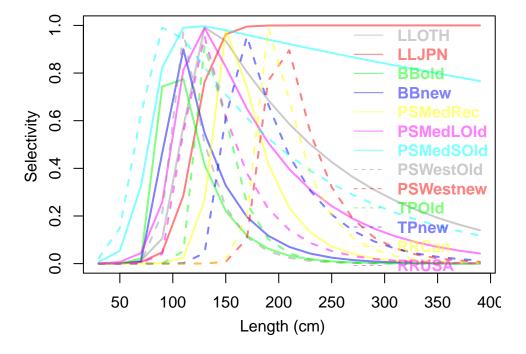
ABT-MSE Operating model fitting report

Tom Carruthers September 20, 2016

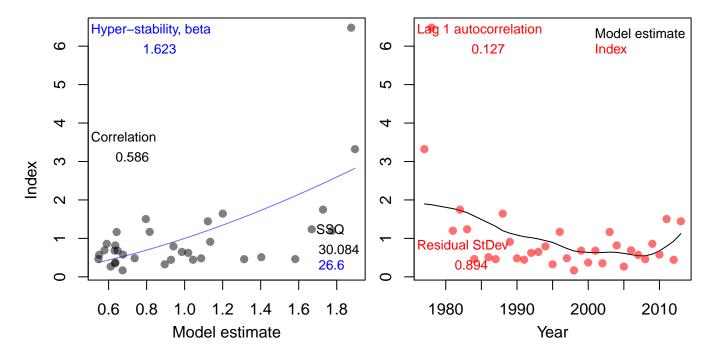
Operating model scenario is

- Level 1: High natural mortality and younger age of maturity for the Eastern stock, Low natural mortality and older age at maturity for the Western stock
- Level 1: Steepness of the Beverton Holt Stock recruitment relationship for both stocks assumed to be 0.7
- Level 1: Master abundance index calculated including Spanish CPUE data
- Level 1: Depletion of both stocks as inferred by the unmodified master index

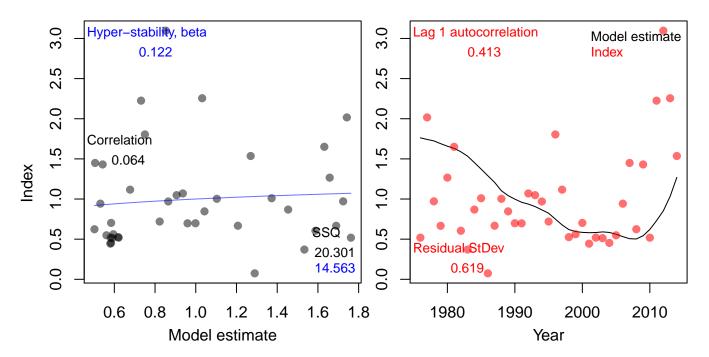
Estimated selectivities

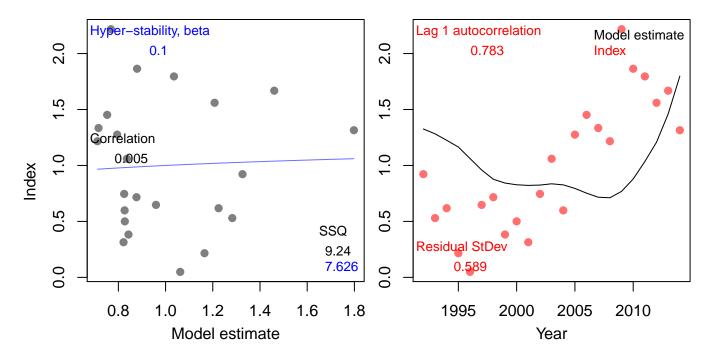


Index fit and statistical properties for GOM Larval

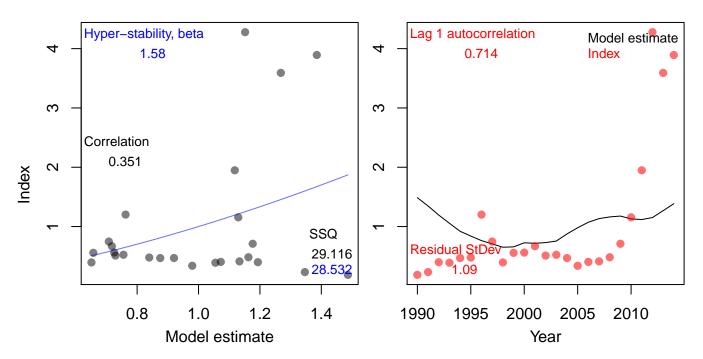


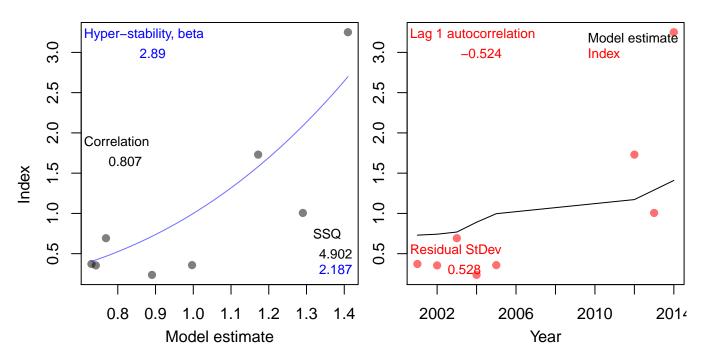
Index fit and statistical properties for JP LL W

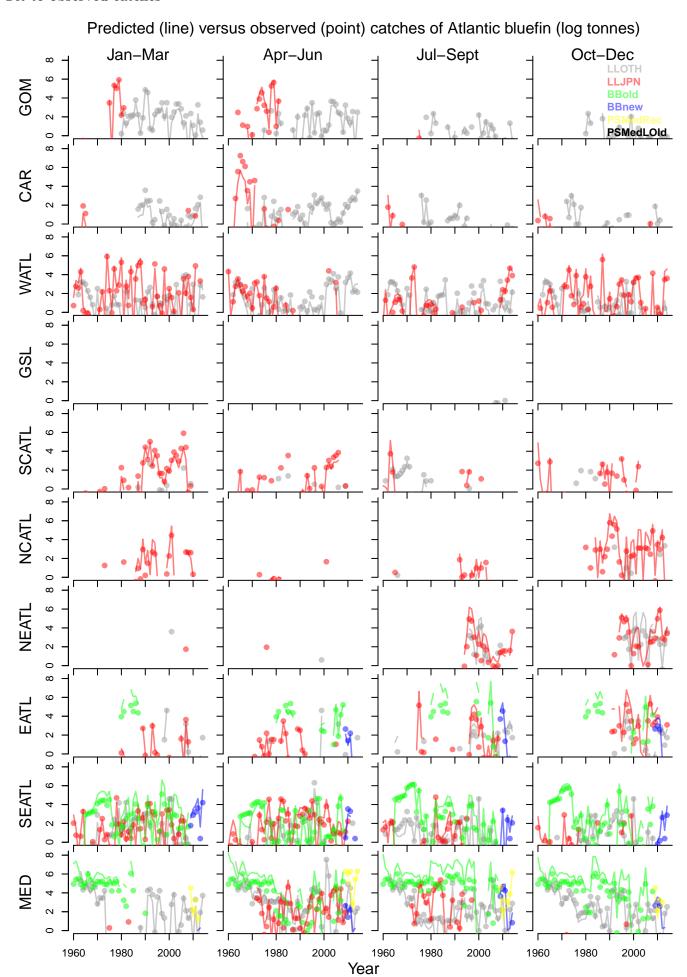


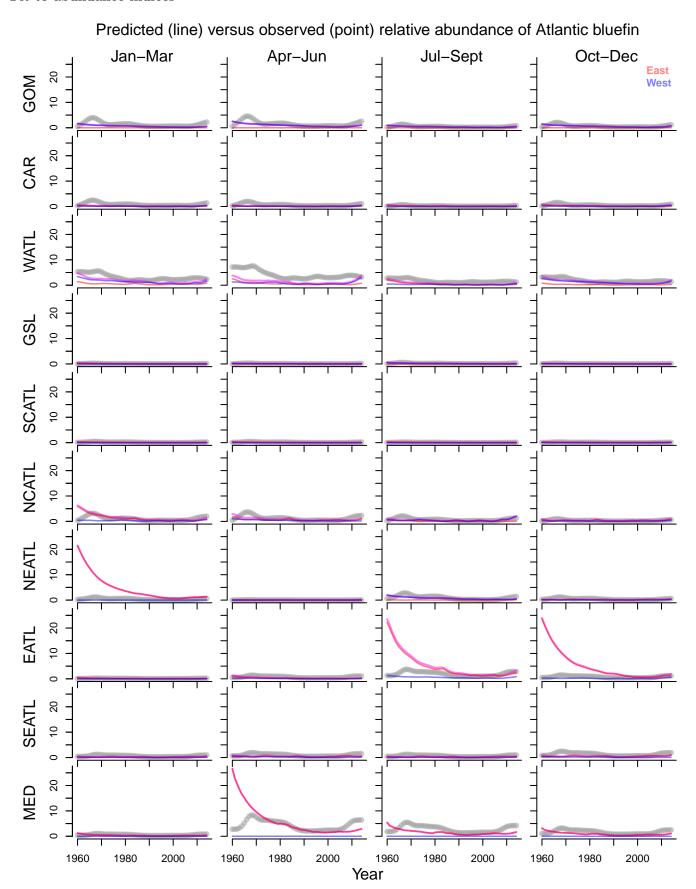


Index fit and statistical properties for JP LL NE



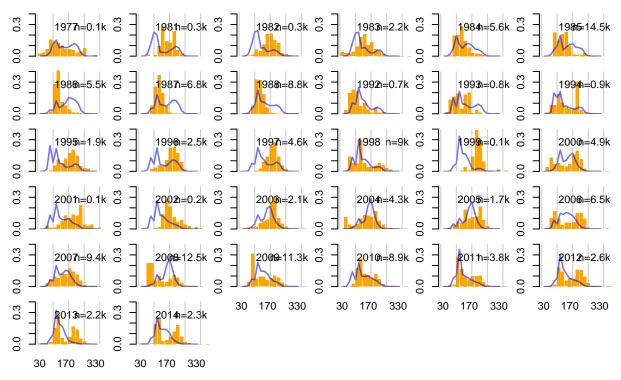






Catch composition fit for LLOTH

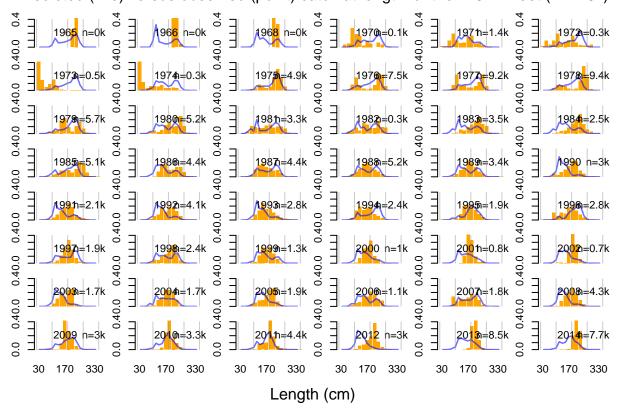
Predicted (line) versus observed (point) catch at length for the LLOTH fleet (n=137k)



Length (cm)

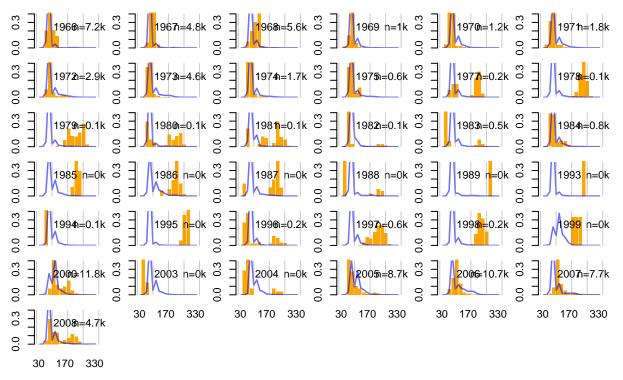
Catch composition fit for LLJPN

Predicted (line) versus observed (point) catch at length for the LLJPN fleet (n=146k)



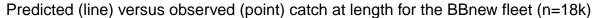
Catch composition fit for BBold

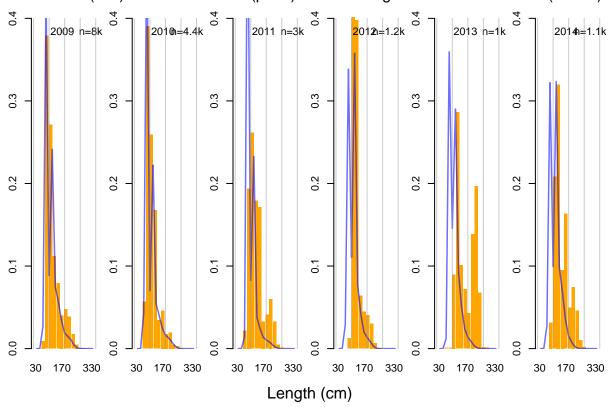
Predicted (line) versus observed (point) catch at length for the BBold fleet (n=78k)



Length (cm)

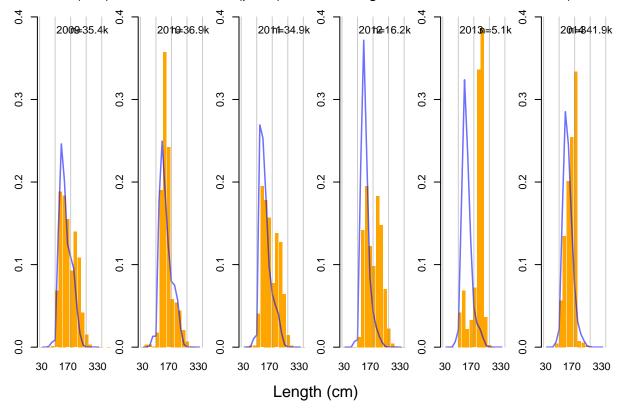
Catch composition fit for BBnew





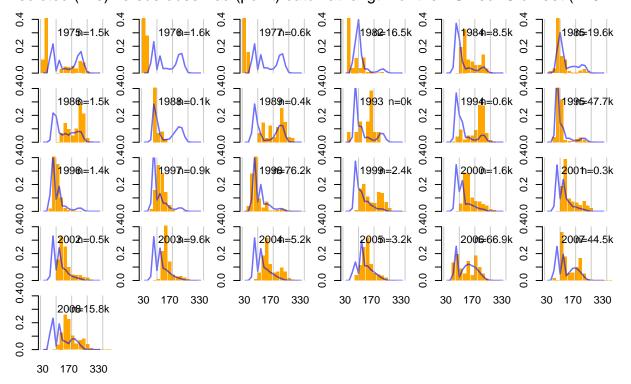
Catch composition fit for PSMedRec

Predicted (line) versus observed (point) catch at length for the PSMedRec fleet (n=470k



${\bf Catch\ composition\ fit\ for\ PSMedLOld}$

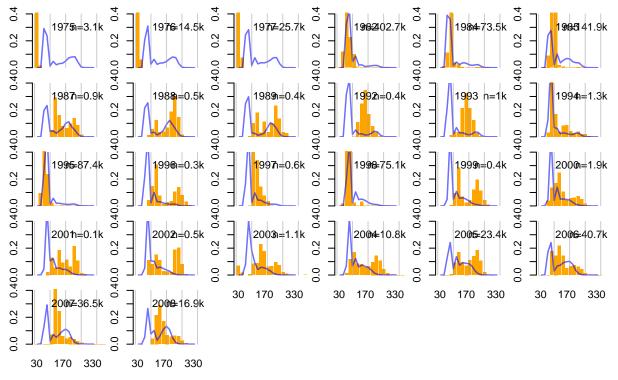
Predicted (line) versus observed (point) catch at length for the PSMedLOld fleet (n=327k



Length (cm)

Catch composition fit for PSMedSOld

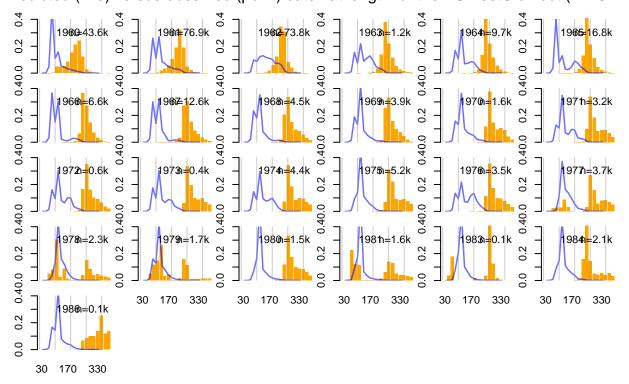
Predicted (line) versus observed (point) catch at length for the PSMedSOld fleet (n=961k



Length (cm)

Catch composition fit for PSWestOld

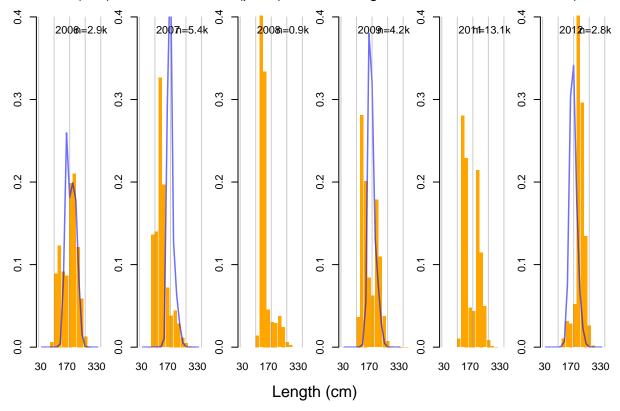
Predicted (line) versus observed (point) catch at length for the PSWestOld fleet (n=281k



Length (cm)

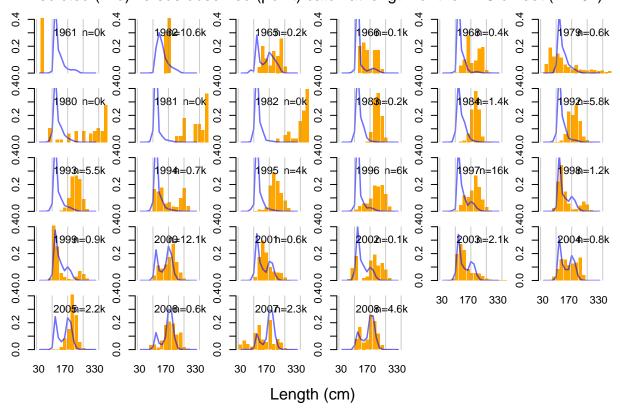
Catch composition fit for PSWestnew

Predicted (line) versus observed (point) catch at length for the PSWestnew fleet (n=29k)



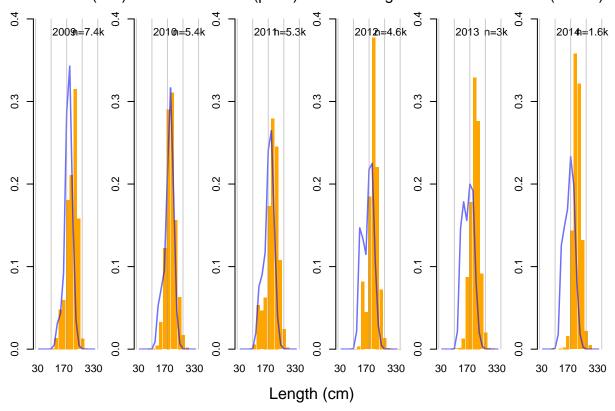
Catch composition fit for TPOld

Predicted (line) versus observed (point) catch at length for the TPOId fleet (n=79k)



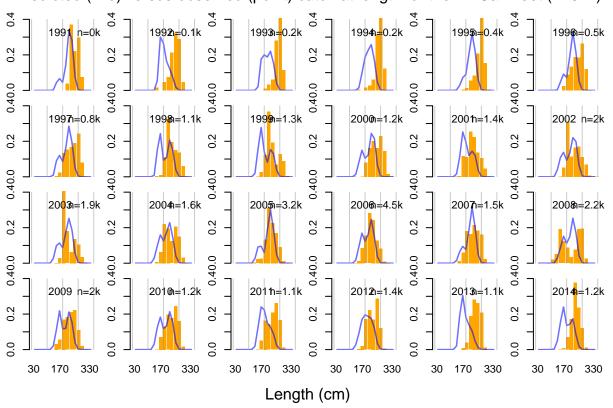
Catch composition fit for TPnew

Predicted (line) versus observed (point) catch at length for the TPnew fleet (n=27k)



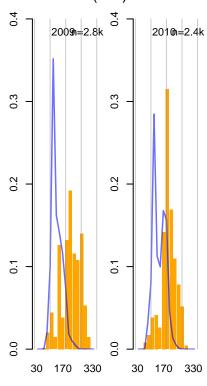
Catch composition fit for RRCan

Predicted (line) versus observed (point) catch at length for the RRCan fleet (n=32k)



Catch composition fit for RRUSA

Predicted (line) versus observed (point) catch at length for the RRUSA fleet (n=5k)



Length (cm)

Catch composition fit for ALL OTH

Predicted (line) versus observed (point) catch at length for the ALL OTH fleet (n=171k)

