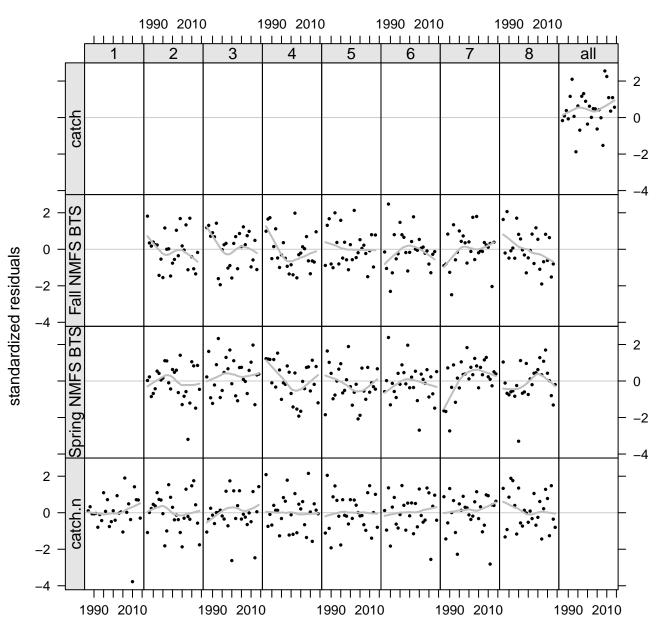
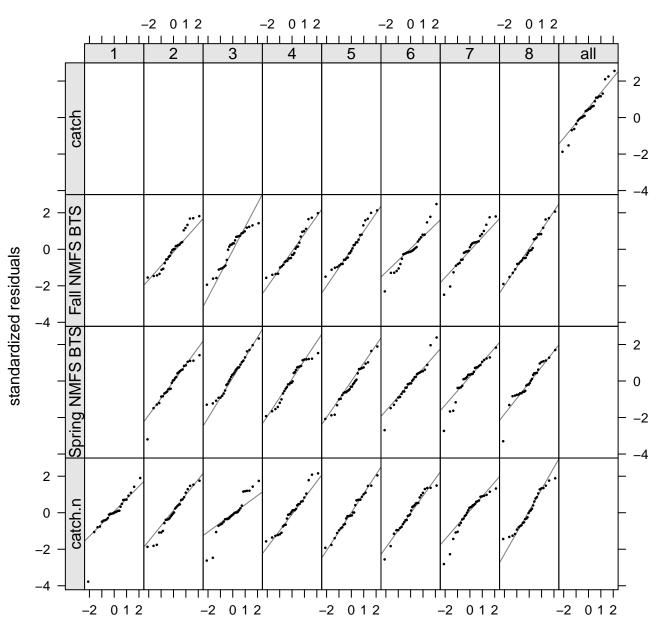
### log residuals of catch and abundance indices by age



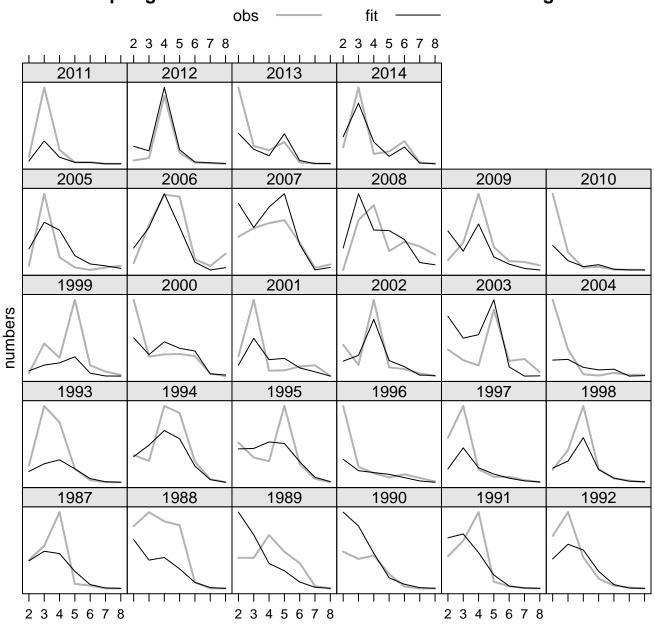
### quantile-quantile plot of log residuals of catch and abundance indices



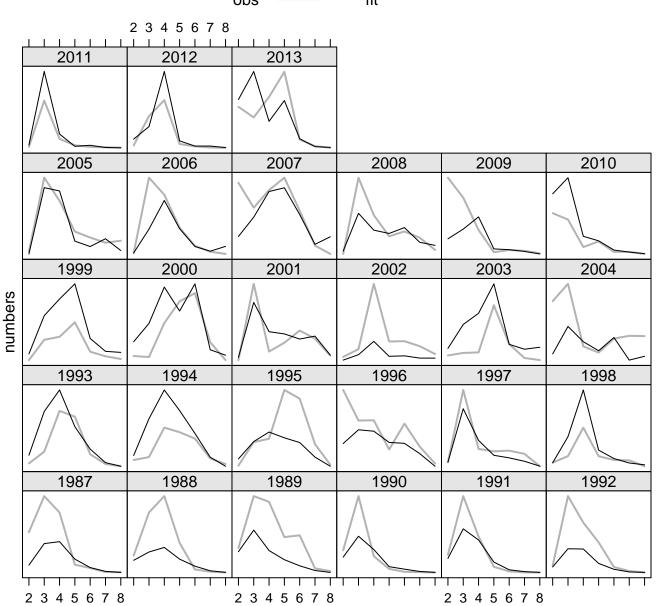
#### fitted and observed catch-at-age obs fit numbers

age

#### Spring NMFS BTS: fitted and observed index-at-age

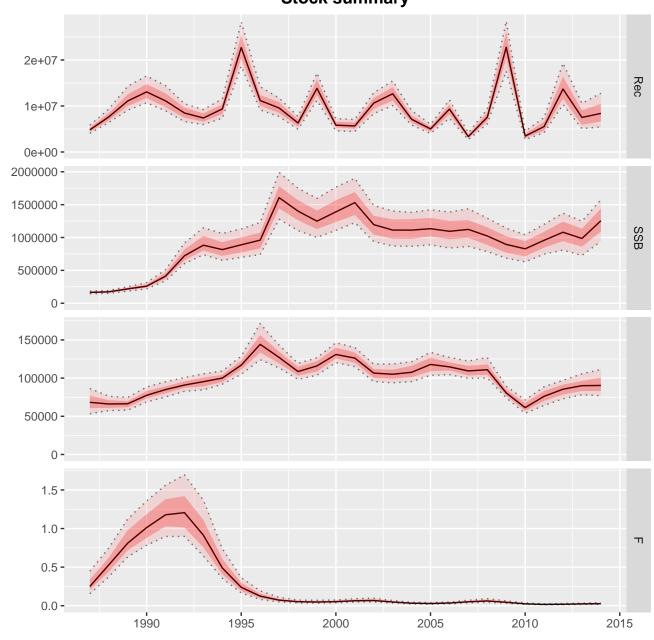


# Fall NMFS BTS: fitted and observed index-at-age obs fit ——



Retrospective 2e+07 -1e+07 -0e+00 -2000000 -1500000 -SSB 1000000 -500000 -0 -200000 -150000 -100000 -50000 -0 -1.5 -Harvest 1.0 -0.5 -0.0 -2000 2010 1990

**Stock summary** 



## Abundance indices predictions

