

# Model Comparisons: Fits to Surveys Size Composition Data – M19F00a vs M19F01 vs M19F02 vs M19F03 vs M19F04 vs M19F05

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*07 September, 2019*

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## **Introduction**

Fits to survey size composition data available to the model(s) are presented in this section. Included are plots of mean fits to size compositions, Pearson's residuals as bubble plots, and effective sample sizes. Not all of the fits presented are necessarily included in the parameter optimization for each model; some fits to datasets for a particular model may be included for comparison purposes with other models which include those data in their optimization. The reader should consult the main assessment document to determine which fits are included in the optimization for any particular model.

# Mean survey size compositions

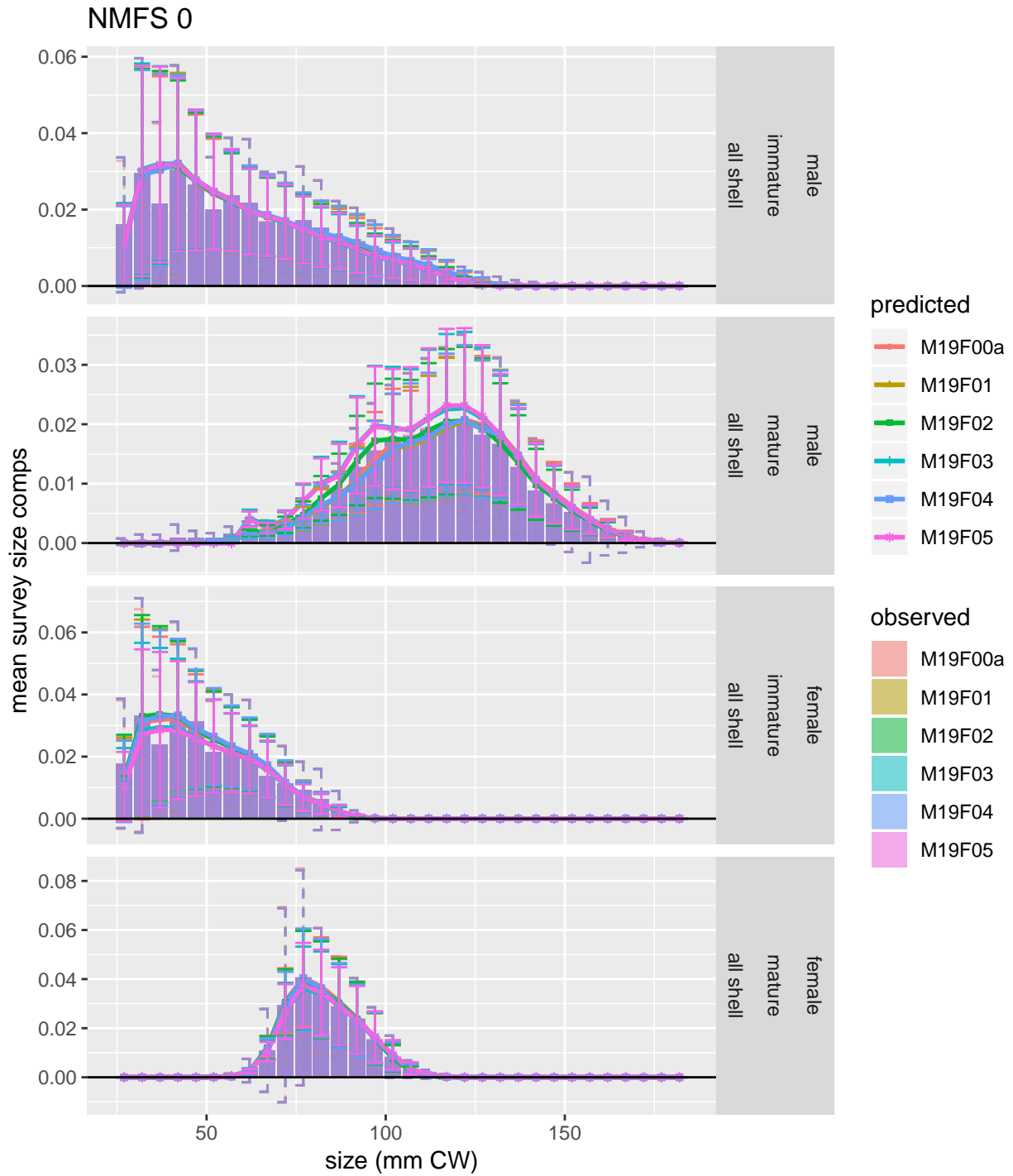


Figure 1: Comparison of observed and predicted mean survey size comps for NMFS 0.

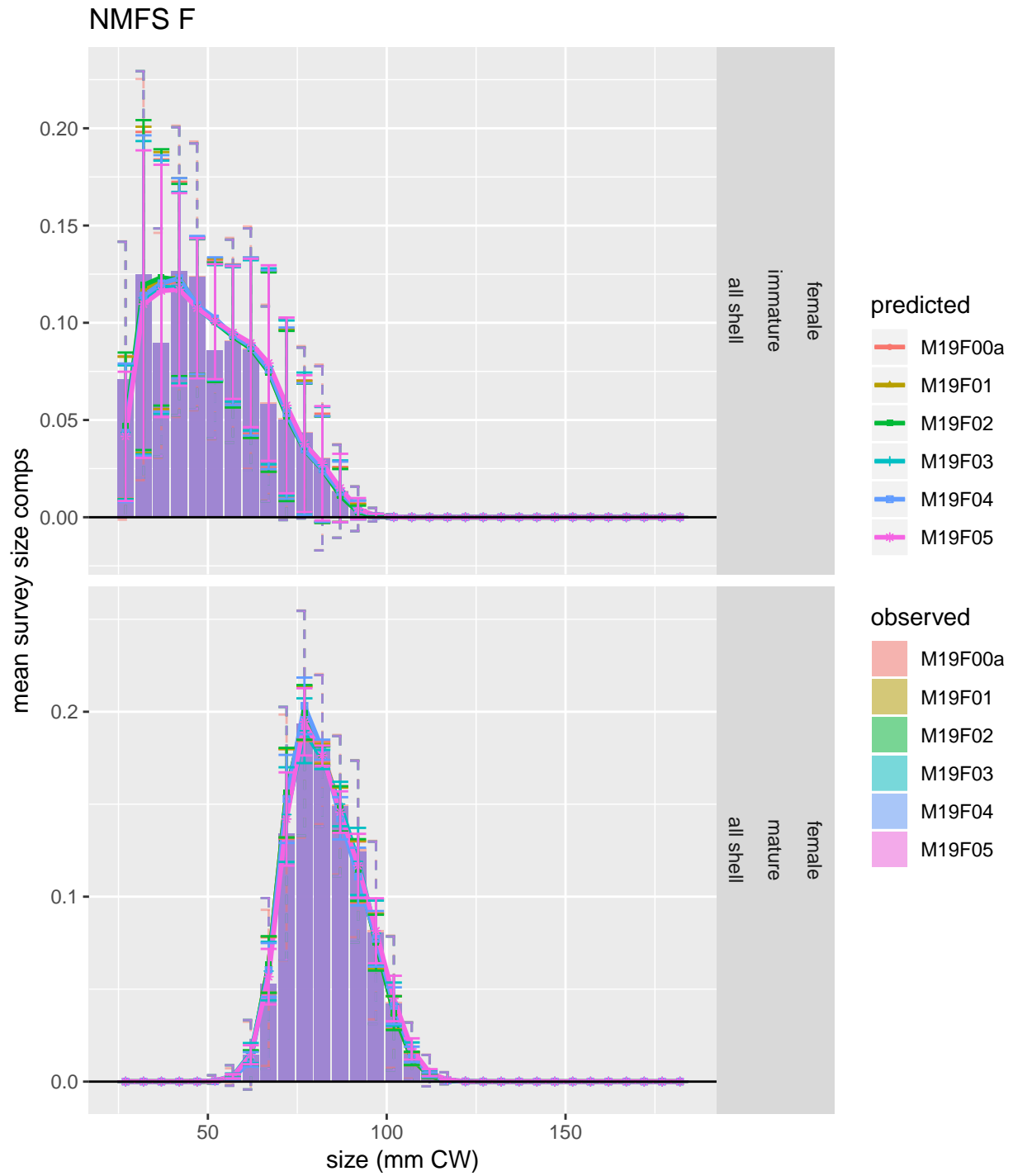


Figure 2: Comparison of observed and predicted mean survey size comps for NMFS F.

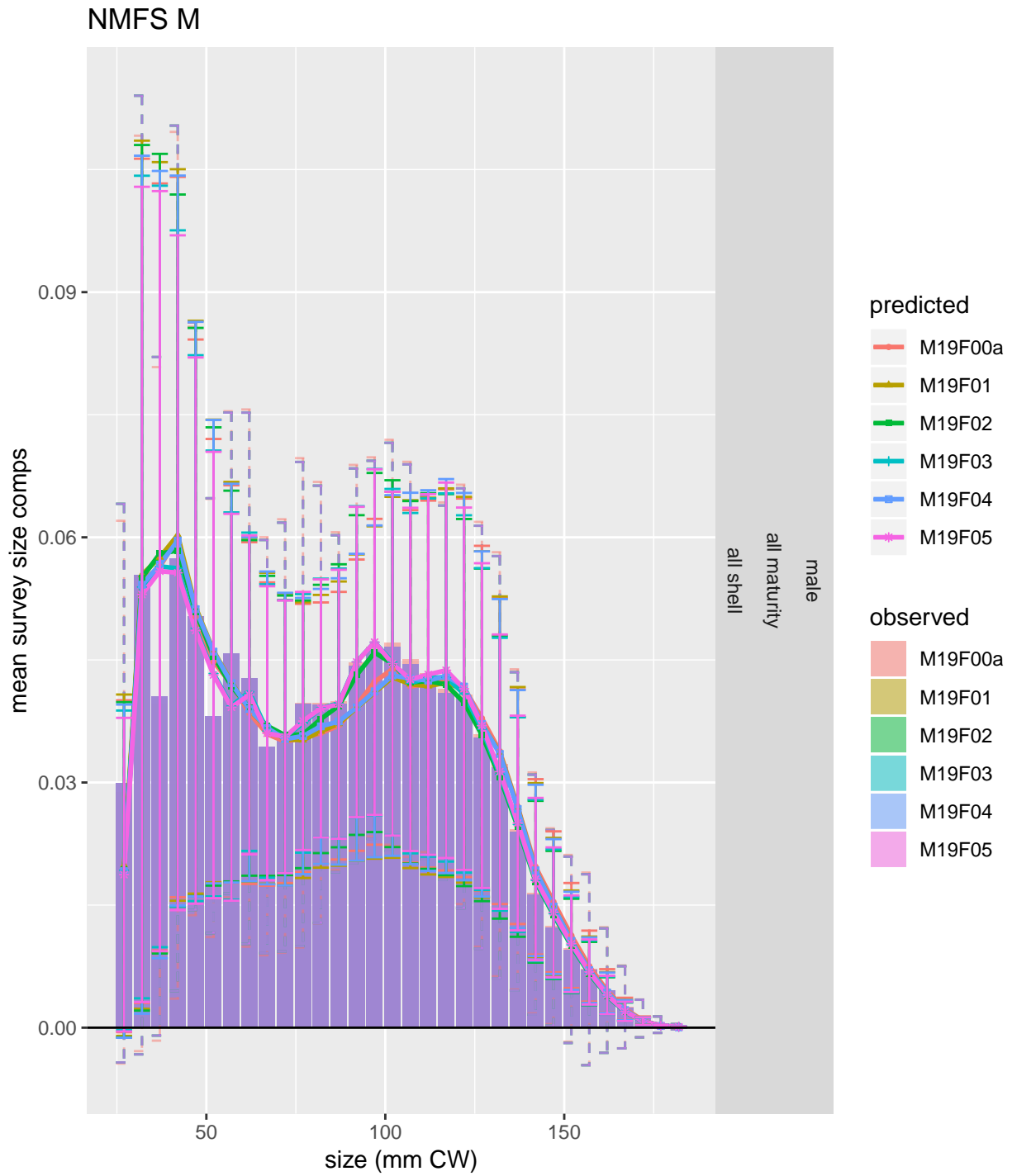


Figure 3: Comparison of observed and predicted mean survey size comps for NMFS M.

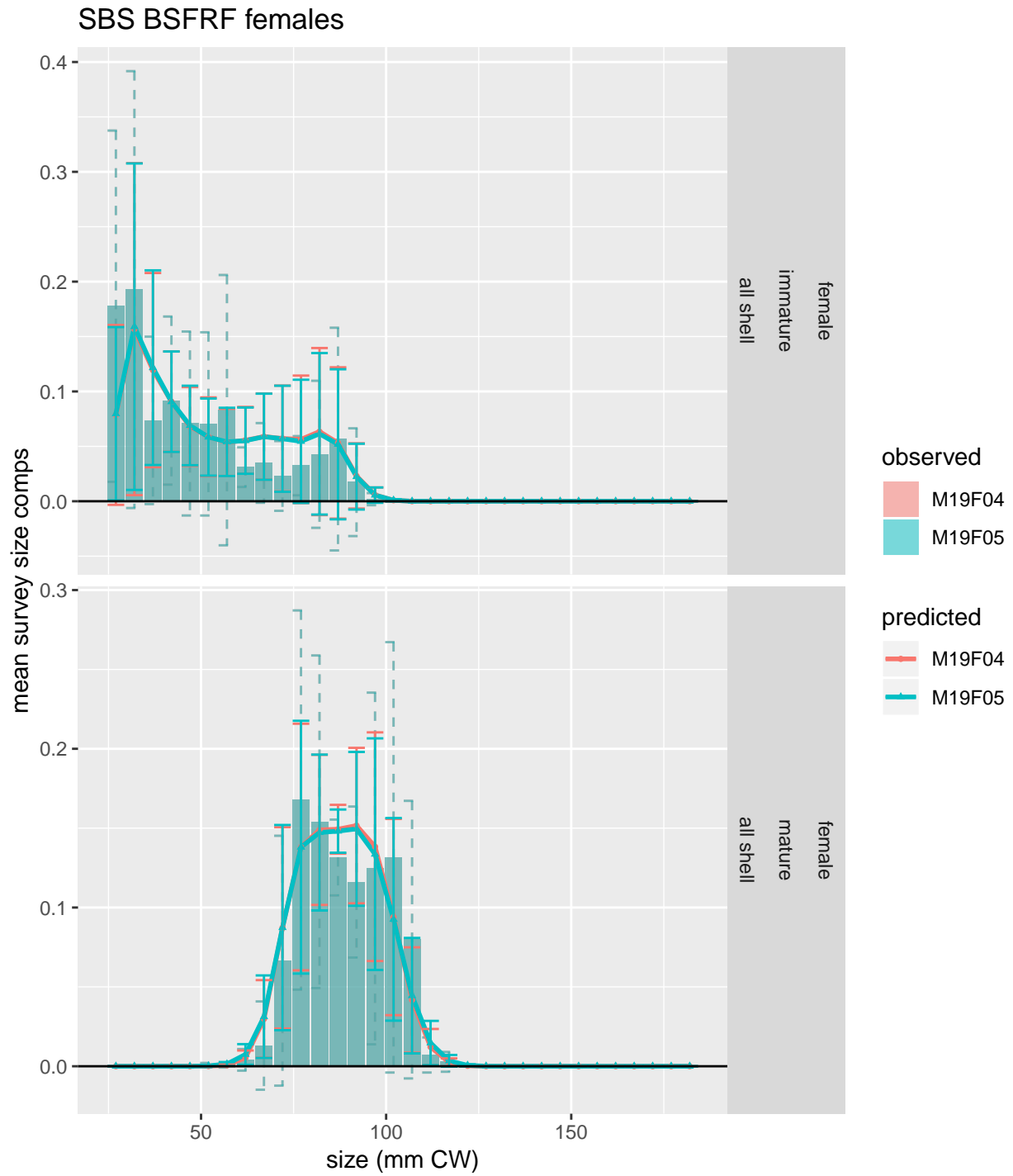


Figure 4: Comparison of observed and predicted mean survey size comps for SBS BSFRF females.

### SBS BSFRF males

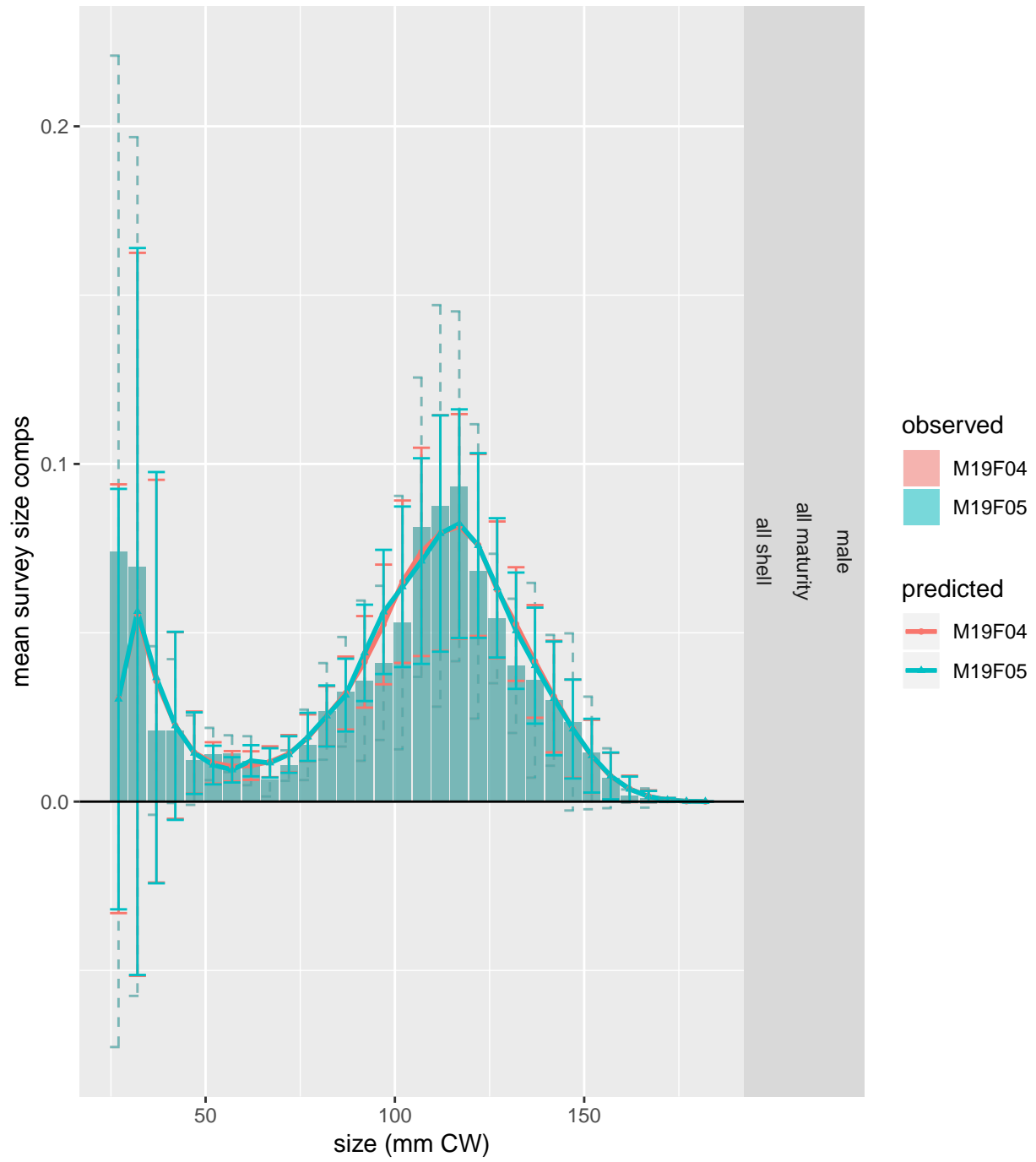


Figure 5: Comparison of observed and predicted mean survey size comps for SBS BSFRF males.

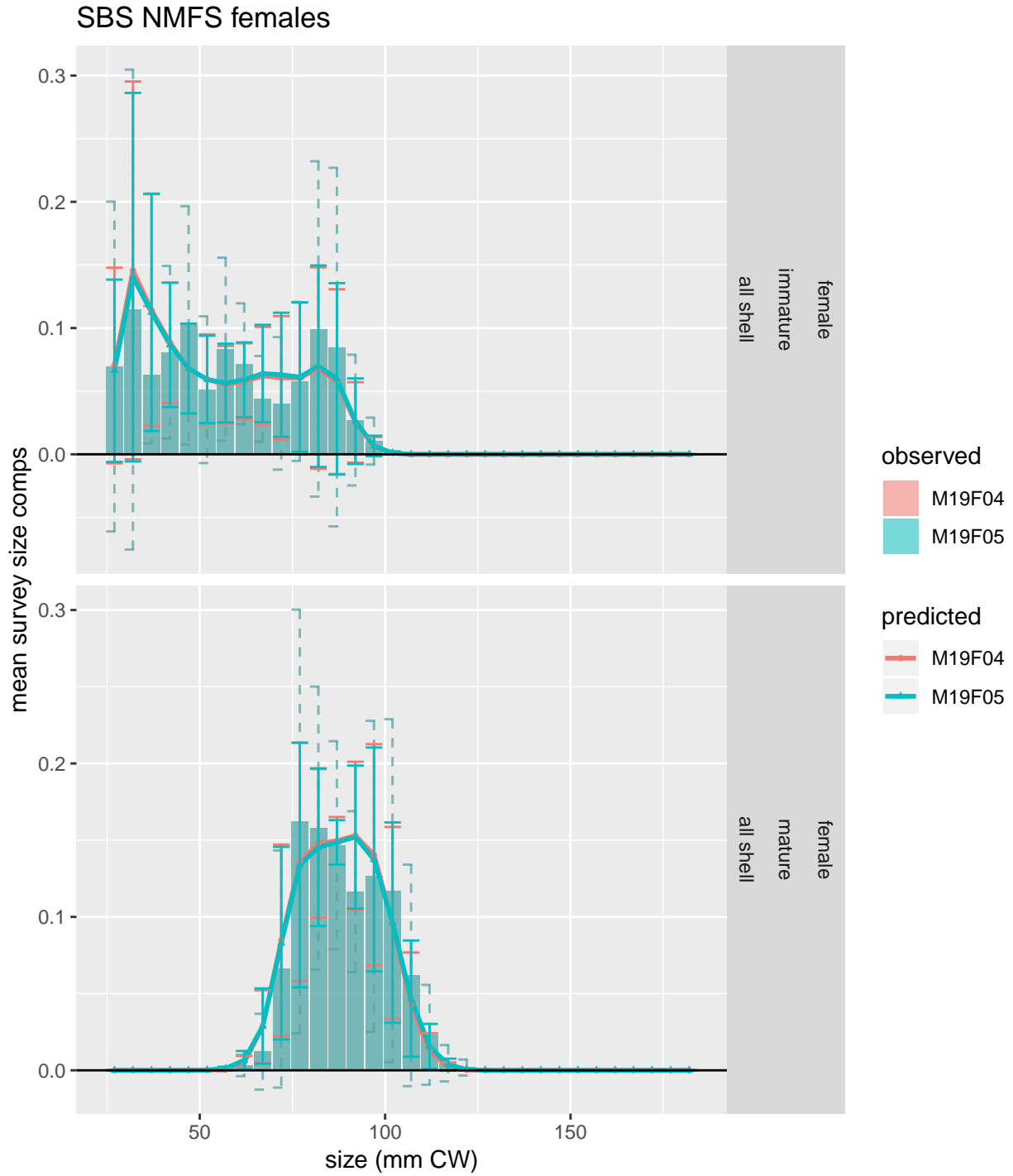


Figure 6: Comparison of observed and predicted mean survey size comps for SBS NMFS females.

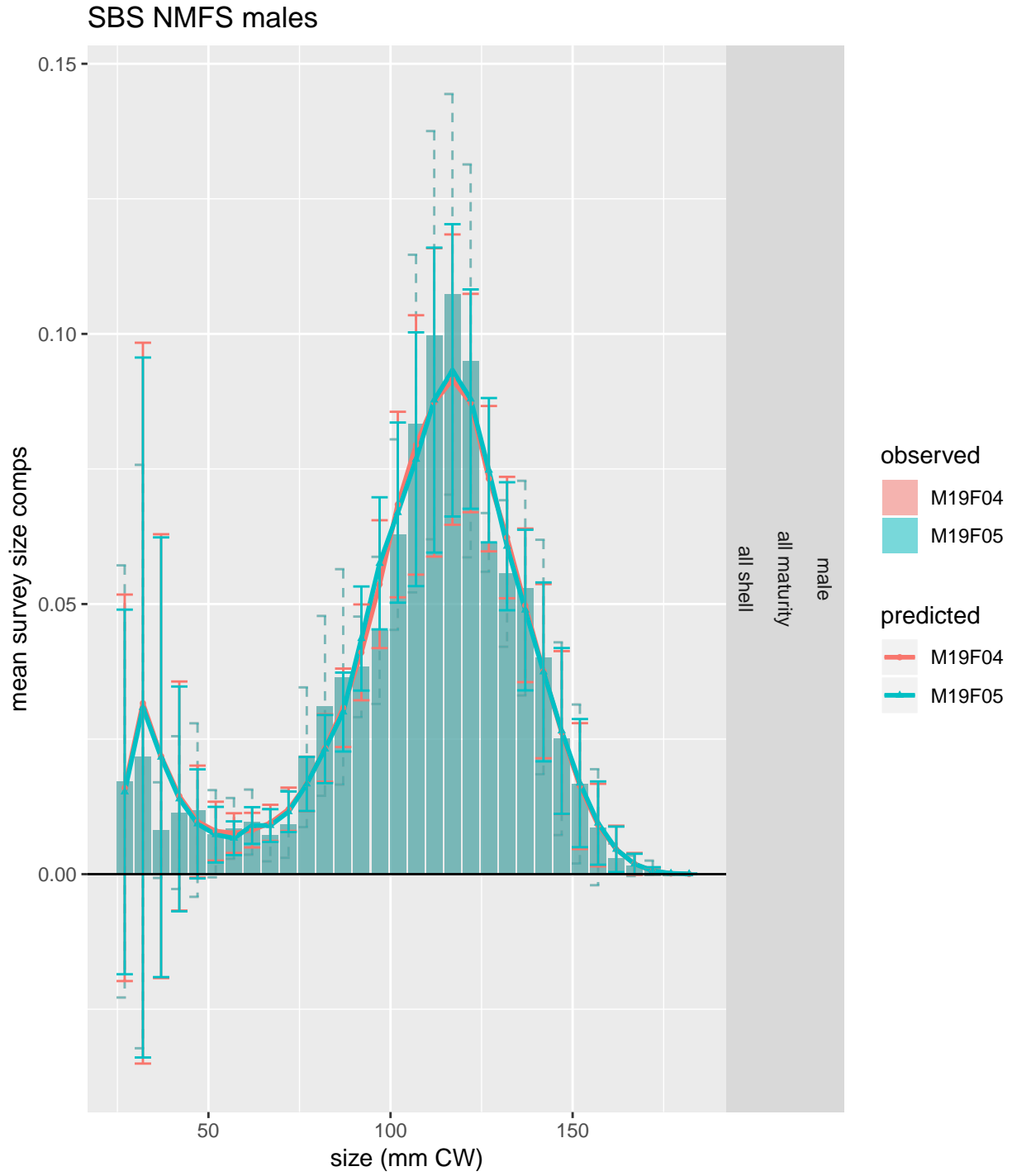


Figure 7: Comparison of observed and predicted mean survey size comps for SBS NMFS males.





# Residuals to survey size composition data

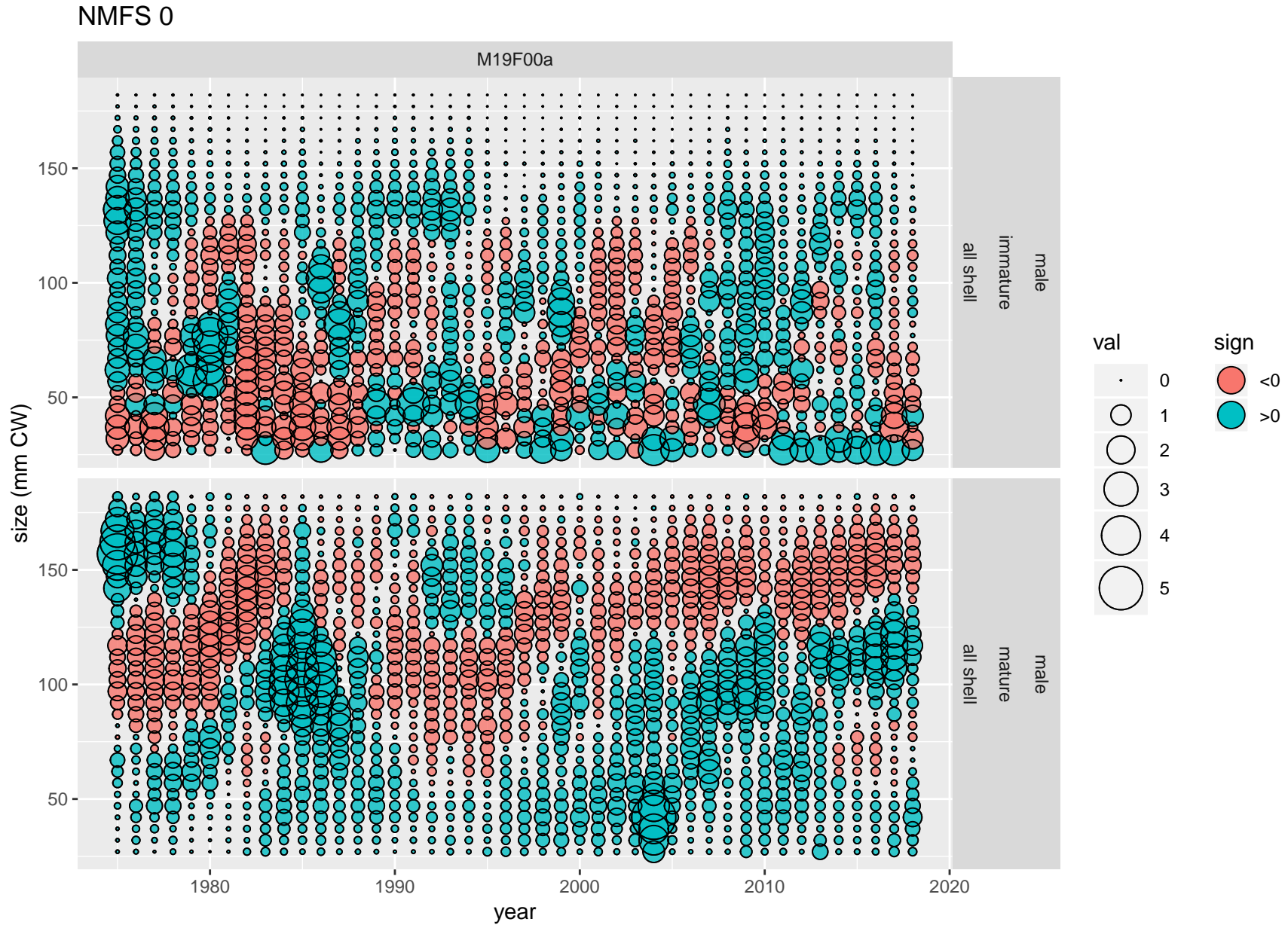


Figure 8: Pearson's residuals for male proportions-at-size from the NMFS 0 for scenario M19F00a.

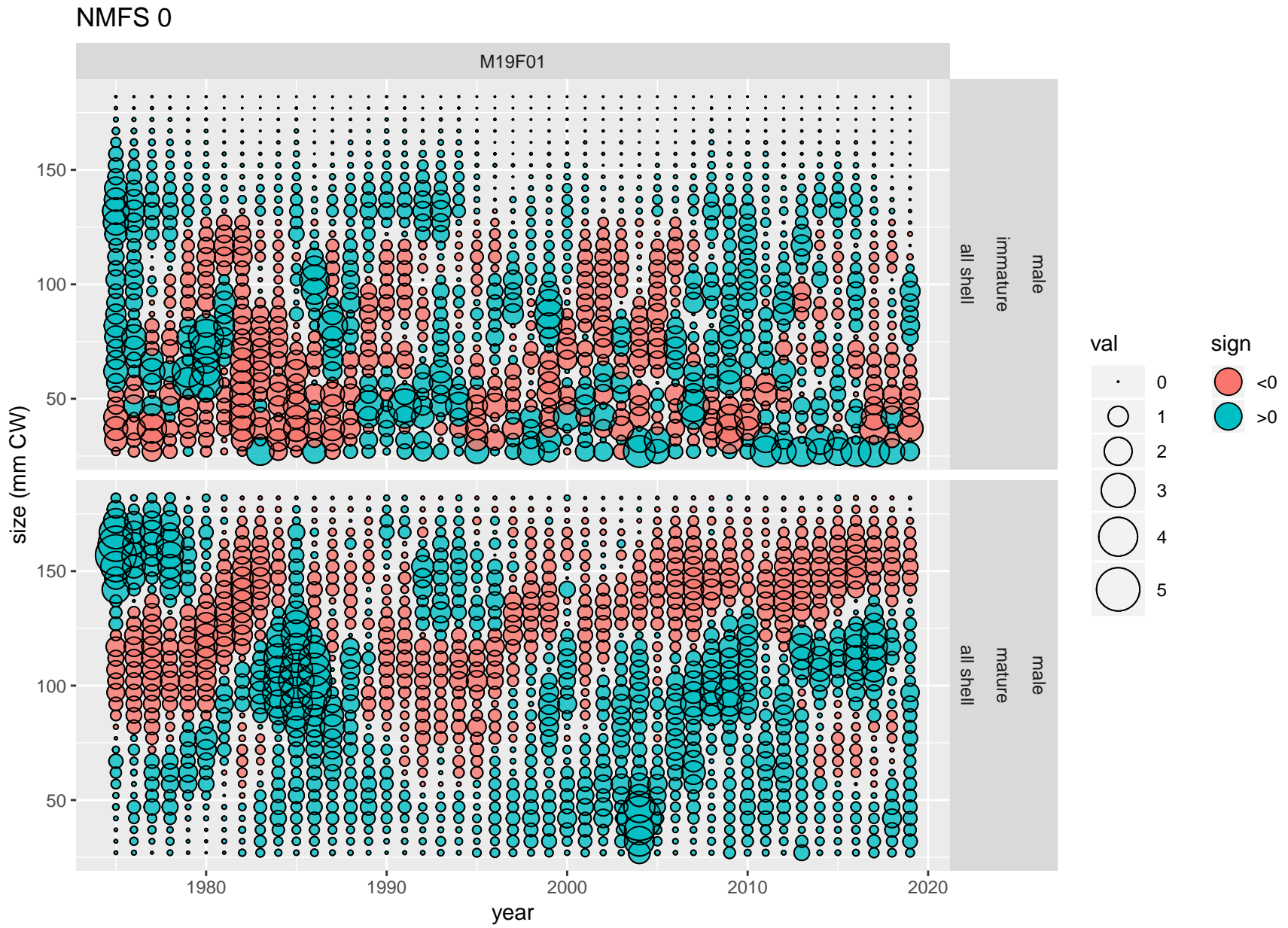


Figure 9: Pearson's residuals for male proportions-at-size from the NMFS 0 for scenario M19F01.

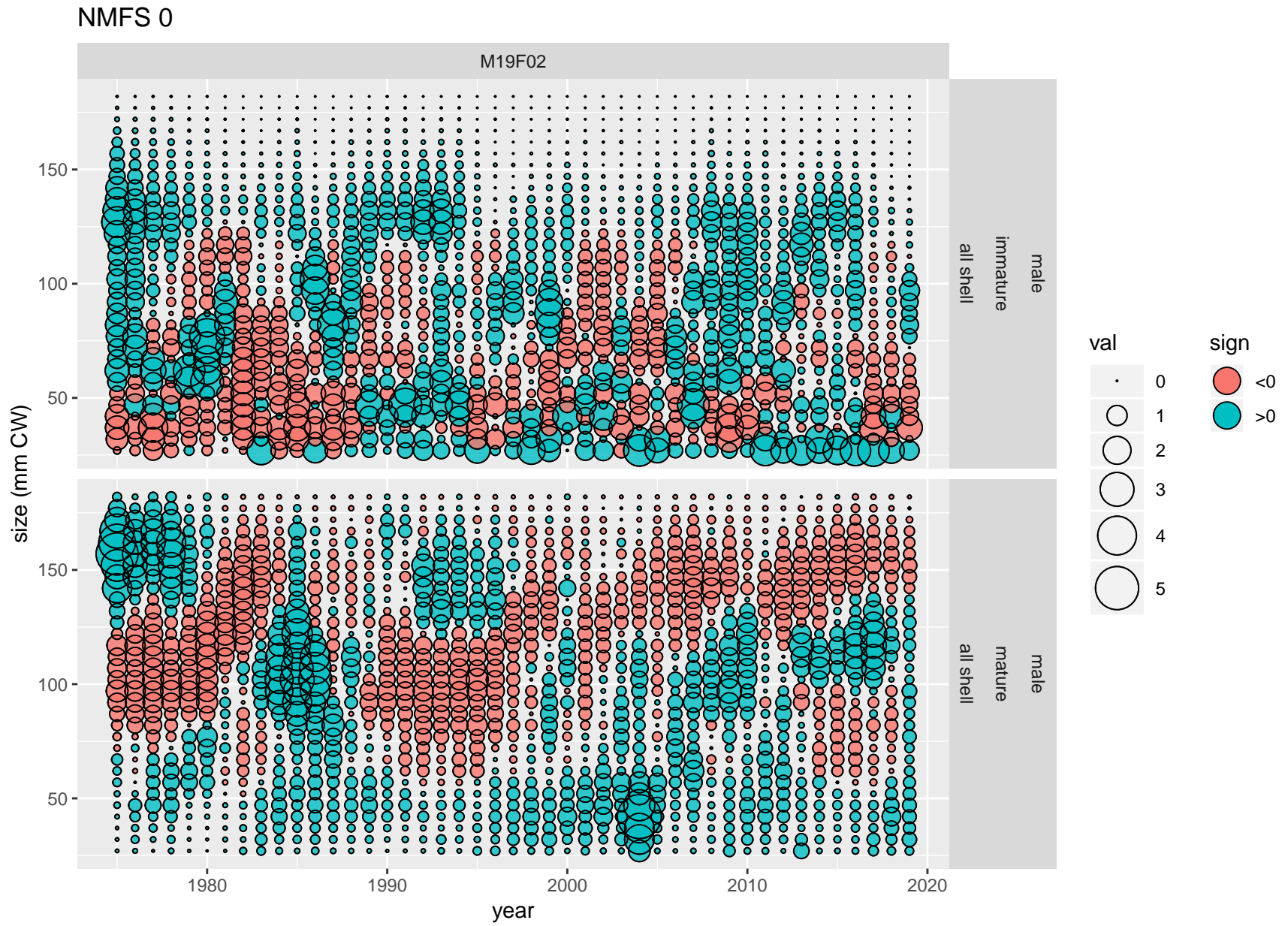


Figure 10: Pearson's residuals for male proportions-at-size from the NMFS 0 for scenario M19F02.

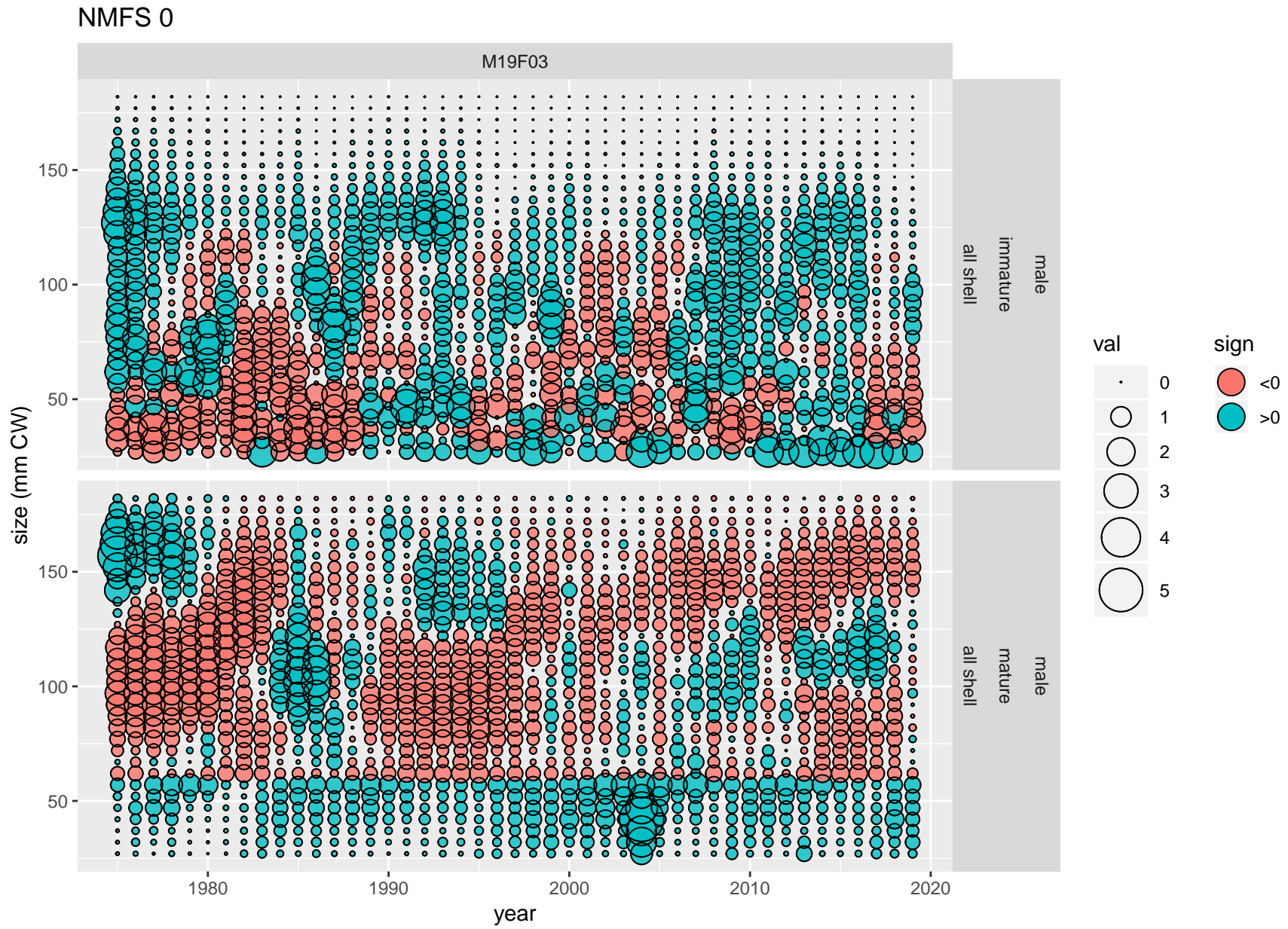


Figure 11: Pearson's residuals for male proportions-at-size from the NMFS 0 for scenario M19F03.

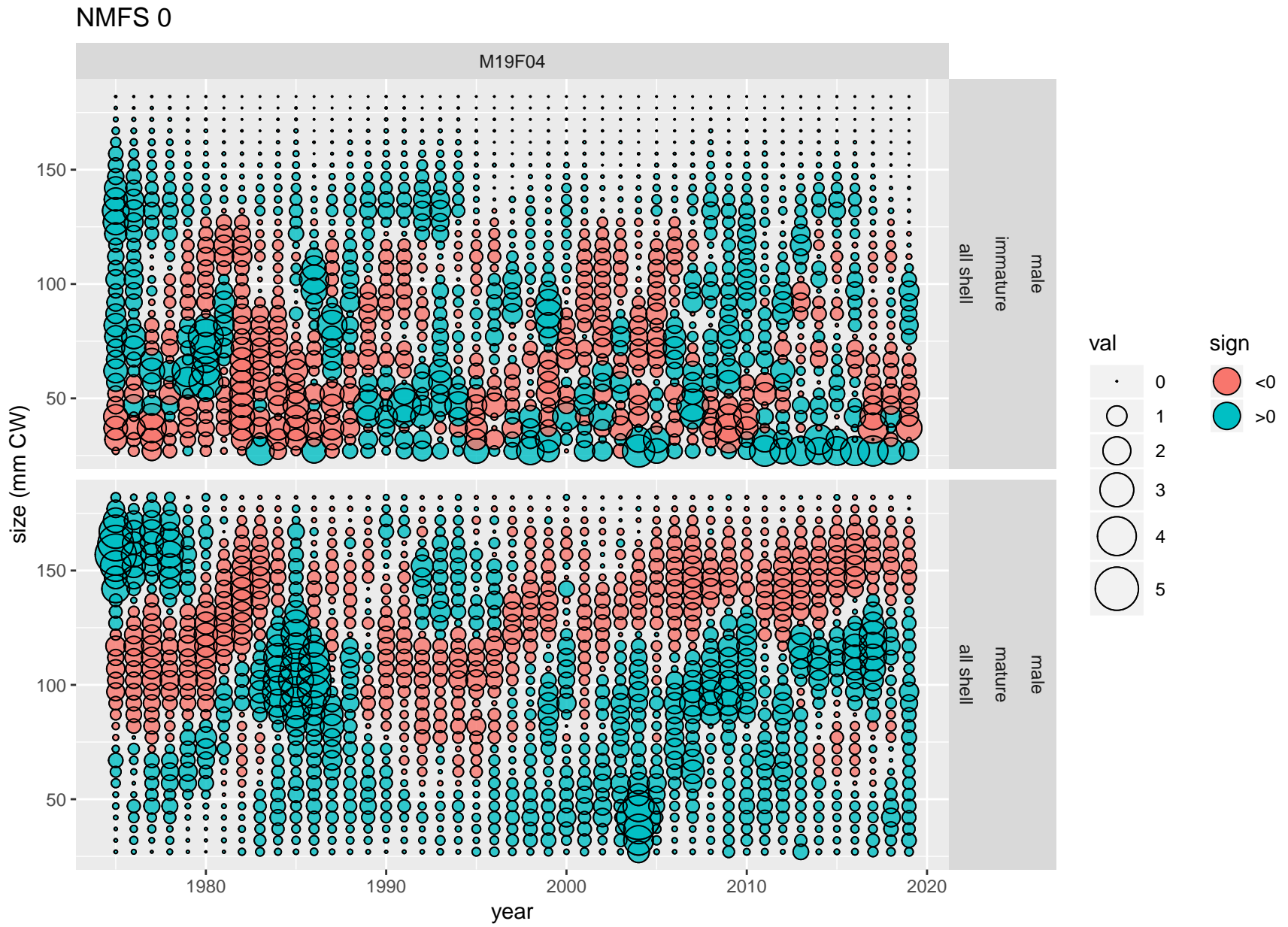


Figure 12: Pearson's residuals for male proportions-at-size from the NMFS 0 for scenario M19F04.

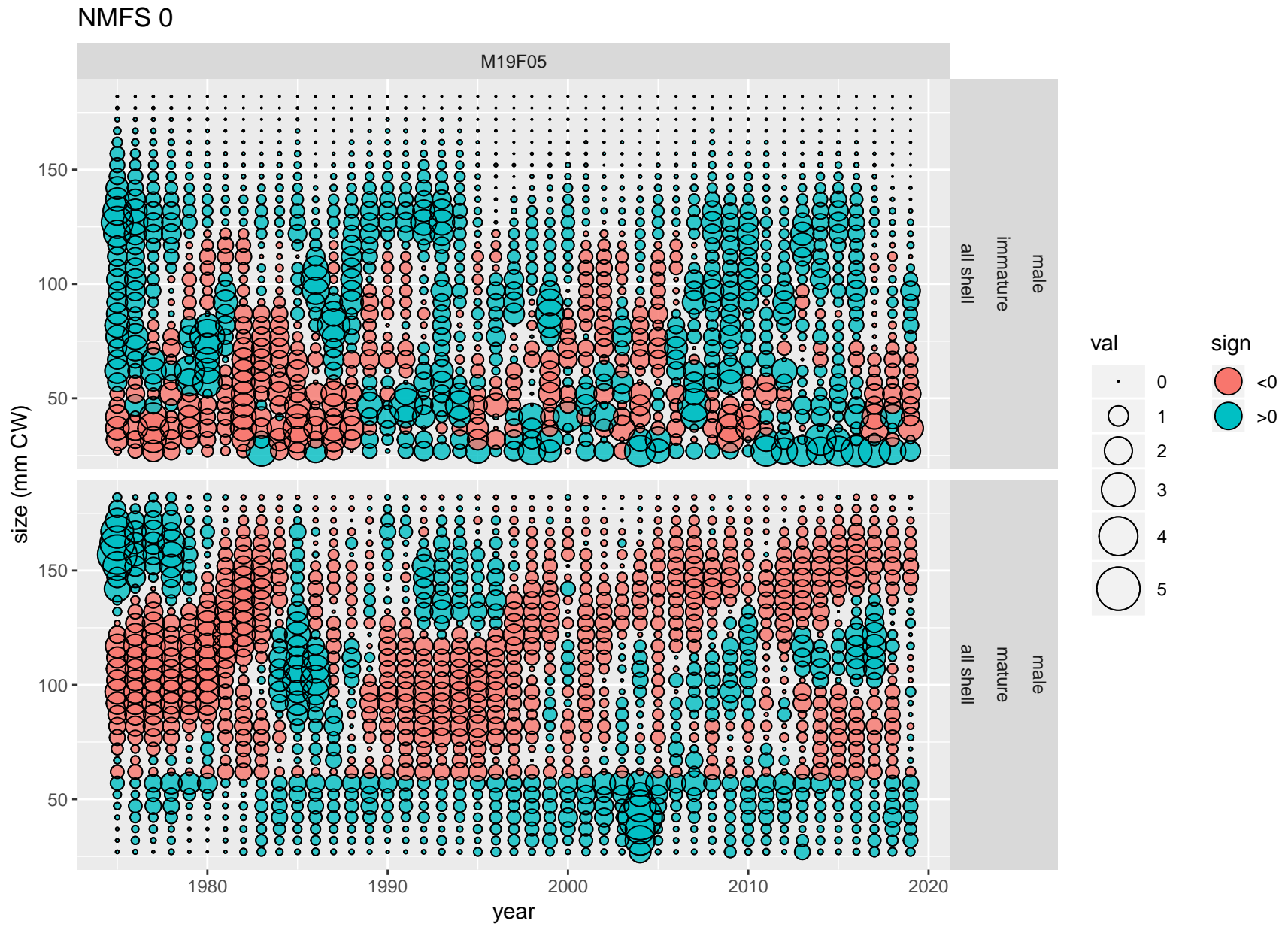


Figure 13: Pearson's residuals for male proportions-at-size from the NMFS 0 for scenario M19F05.

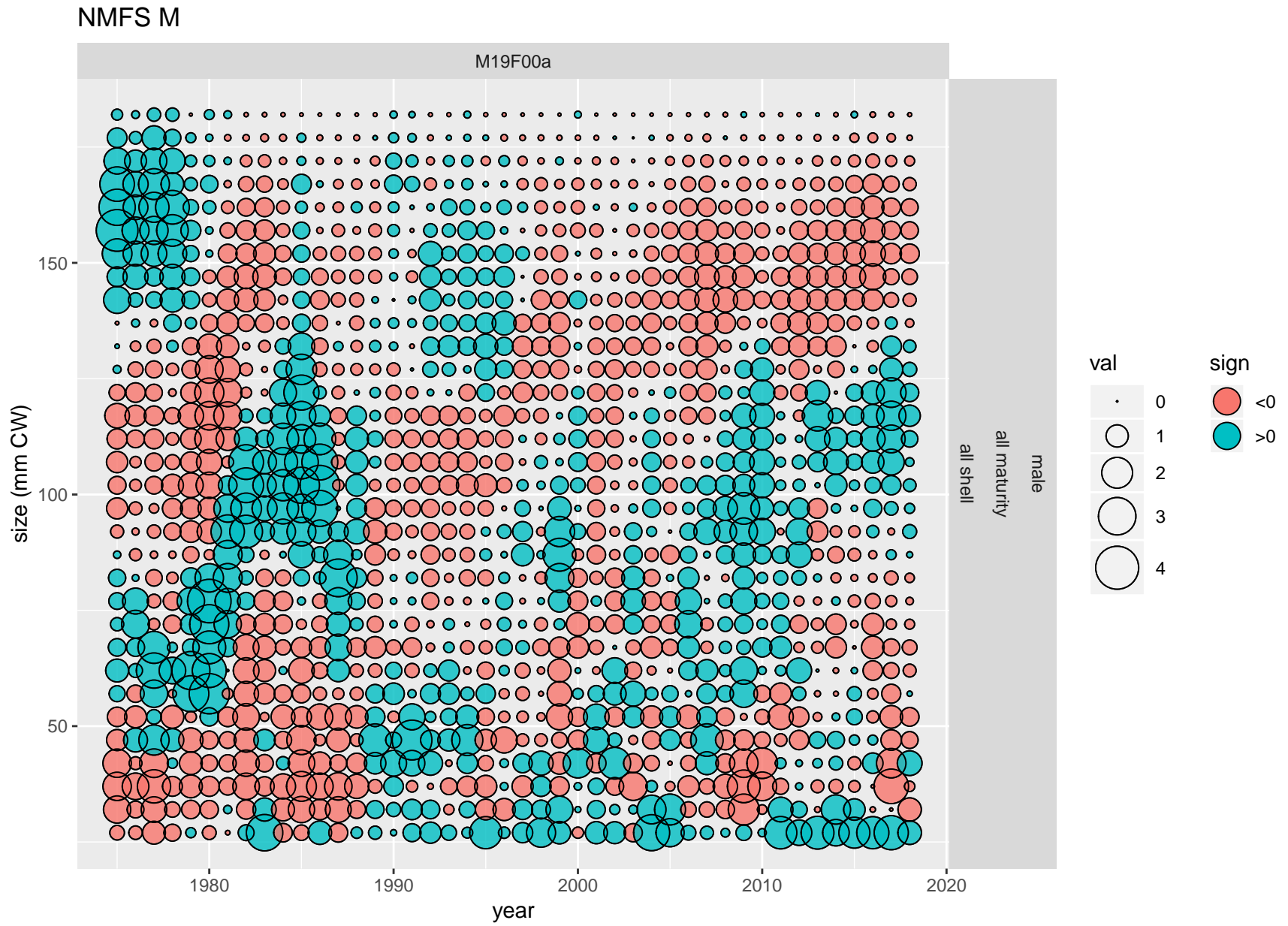


Figure 14: Pearson's residuals for male proportions-at-size from the NMFS M for scenario M19F00a.



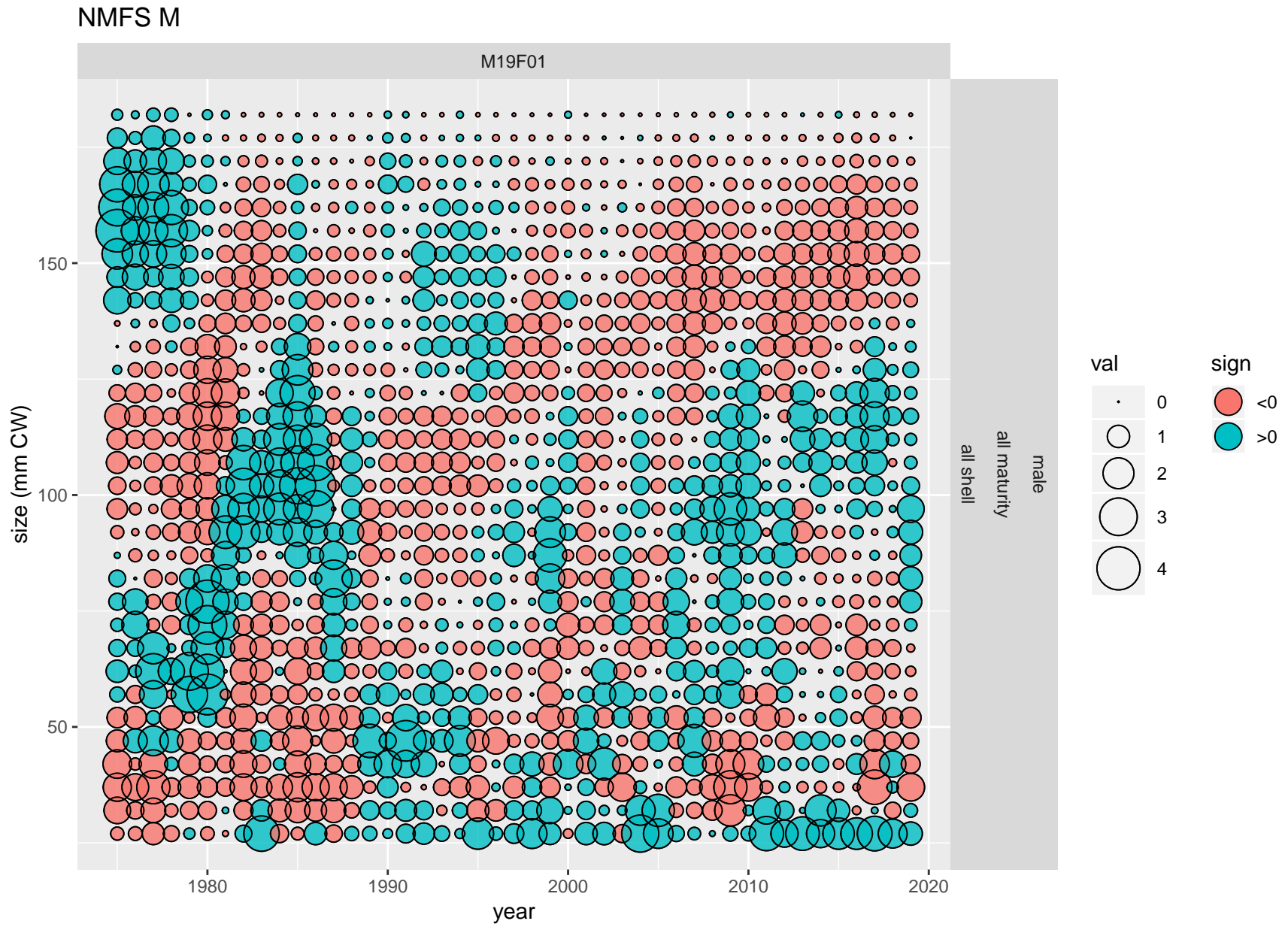


Figure 15: Pearson's residuals for male proportions-at-size from the NMFS M for scenario M19F01.

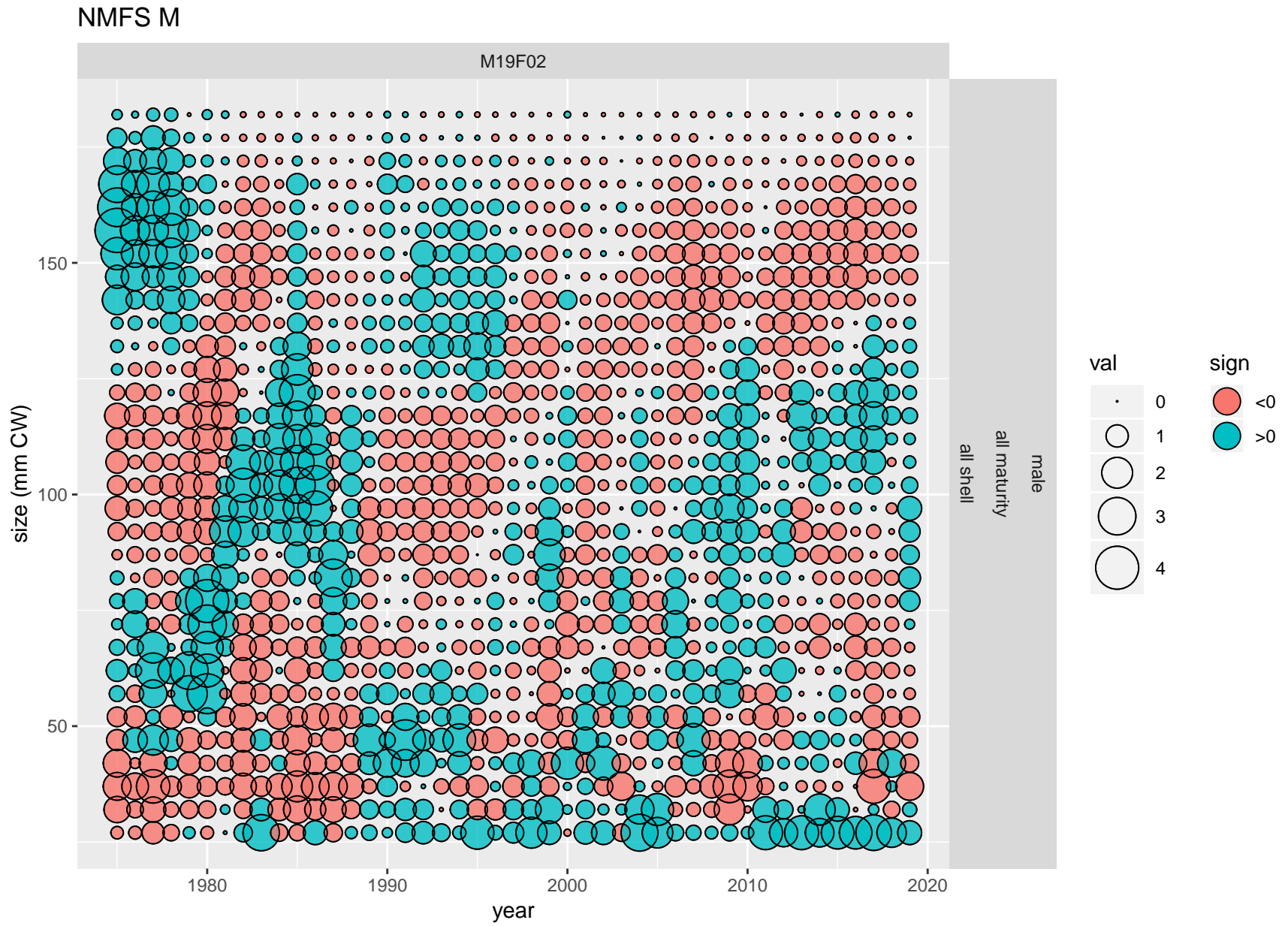


Figure 16: Pearson's residuals for male proportions-at-size from the NMFS M for scenario M19F02.

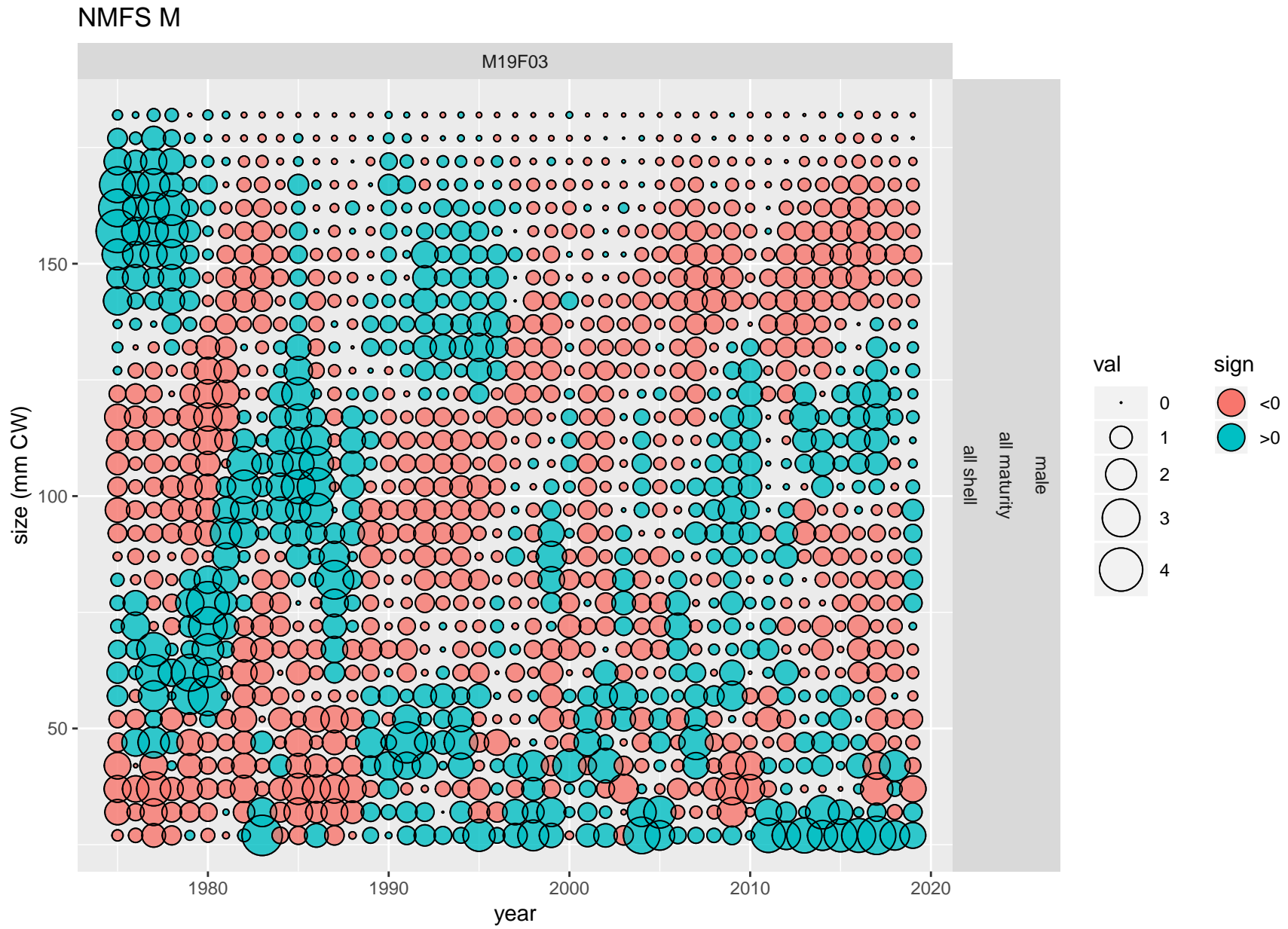


Figure 17: Pearson's residuals for male proportions-at-size from the NMFS M for scenario M19F03.

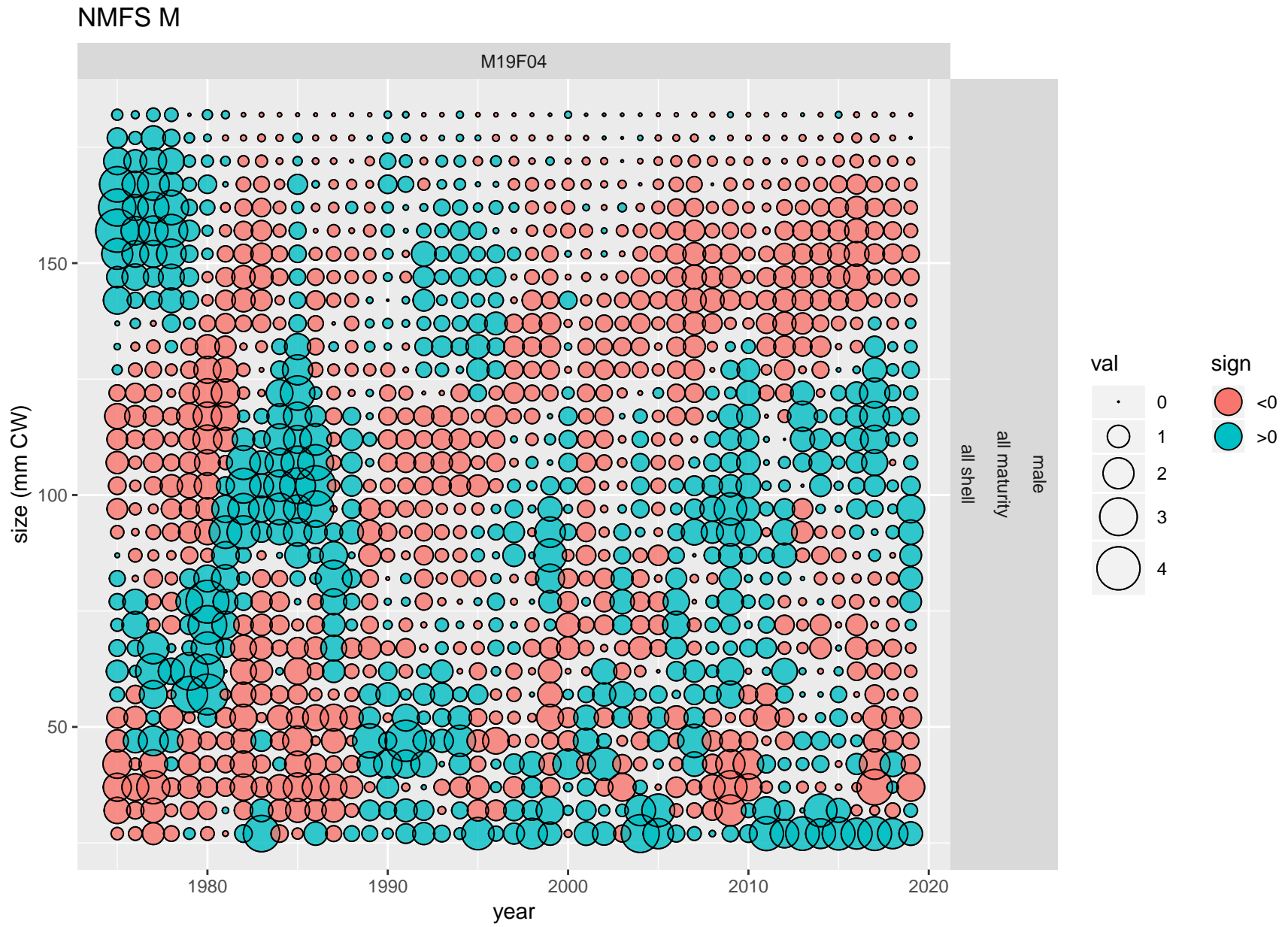


Figure 18: Pearson's residuals for male proportions-at-size from the NMFS M for scenario M19F04.

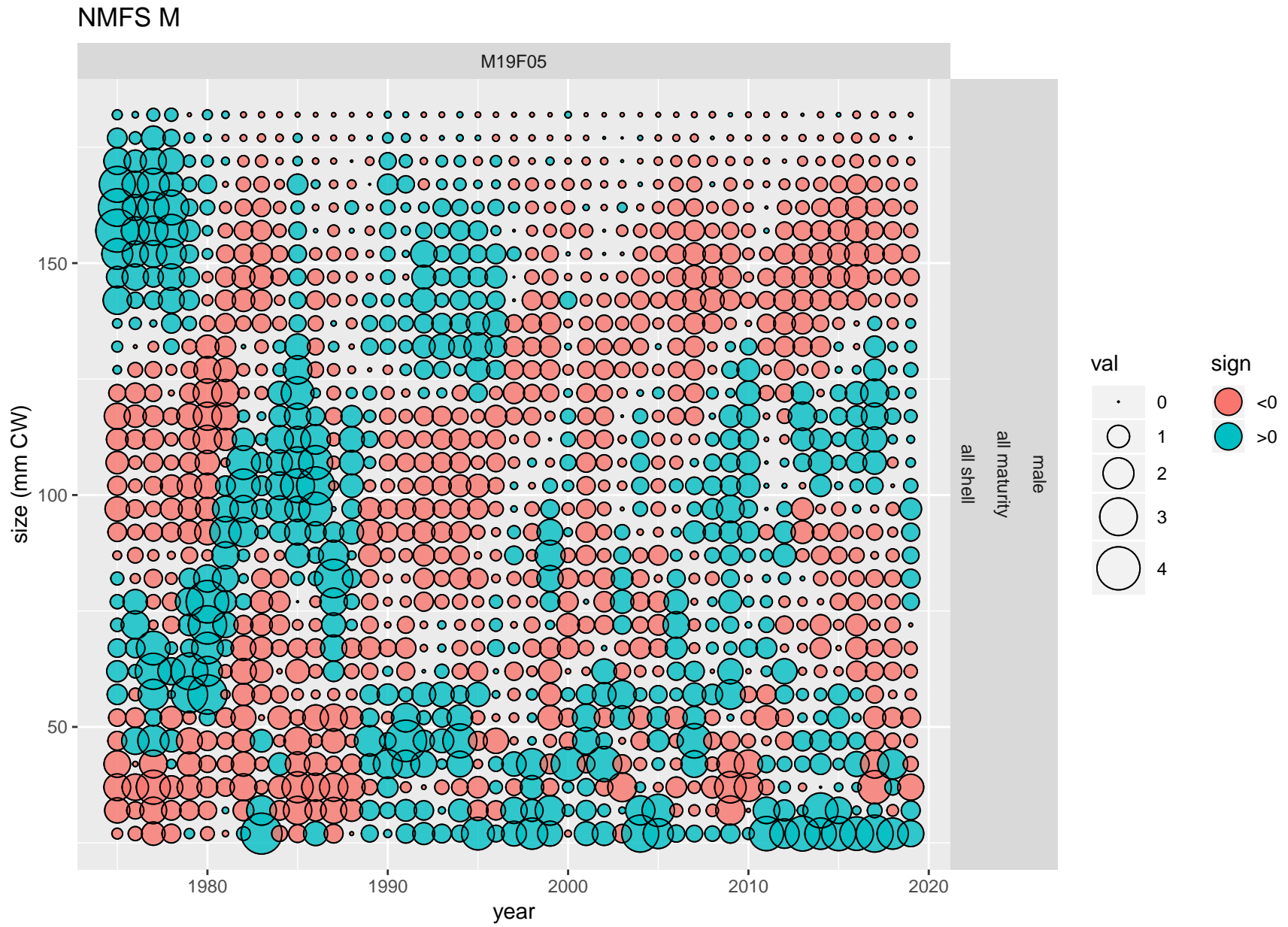


Figure 19: Pearson's residuals for male proportions-at-size from the NMFS M for scenario M19F05.

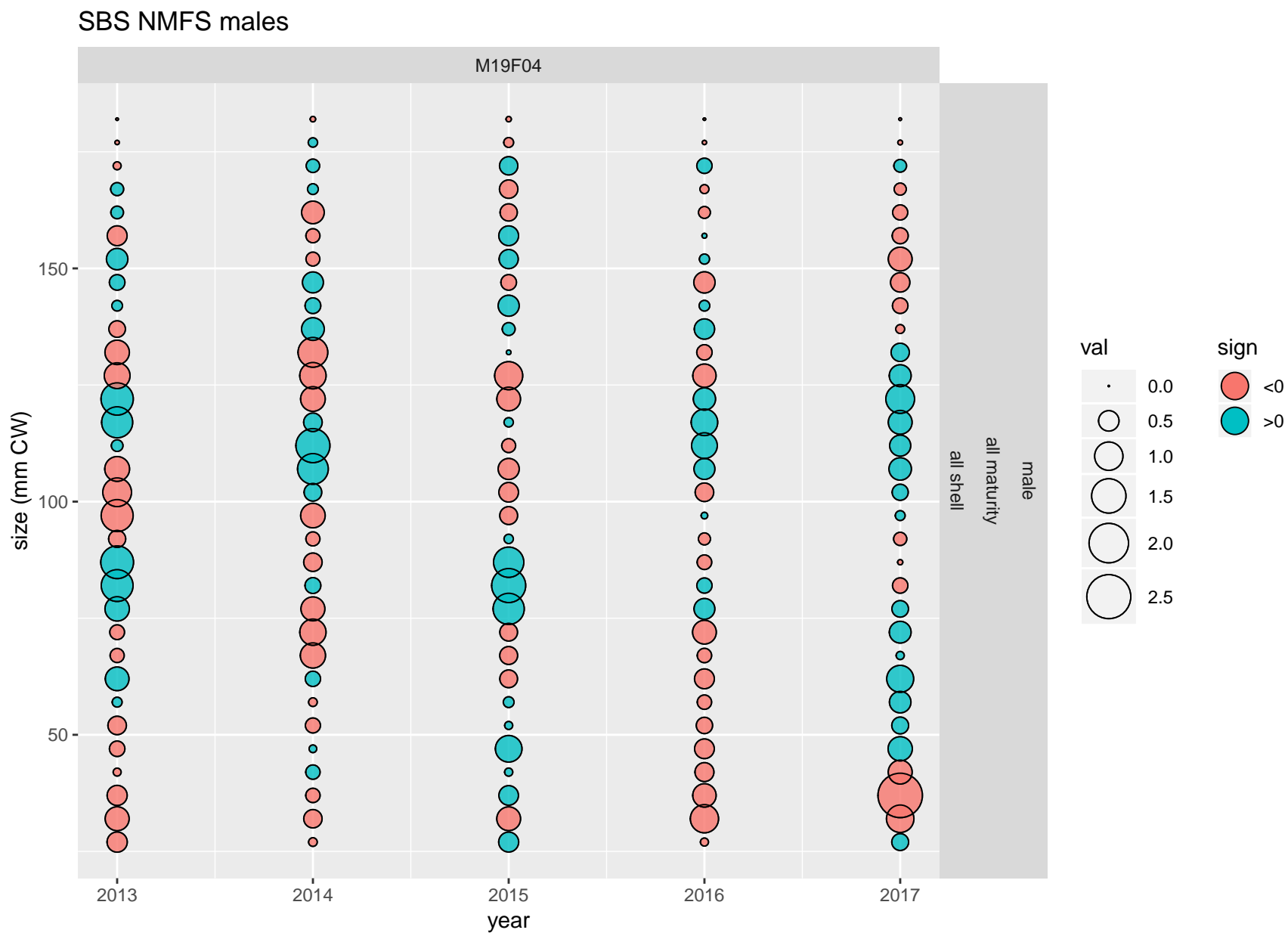


Figure 20: Pearson's residuals for male proportions-at-size from the SBS NMFS males for scenario M19F04.

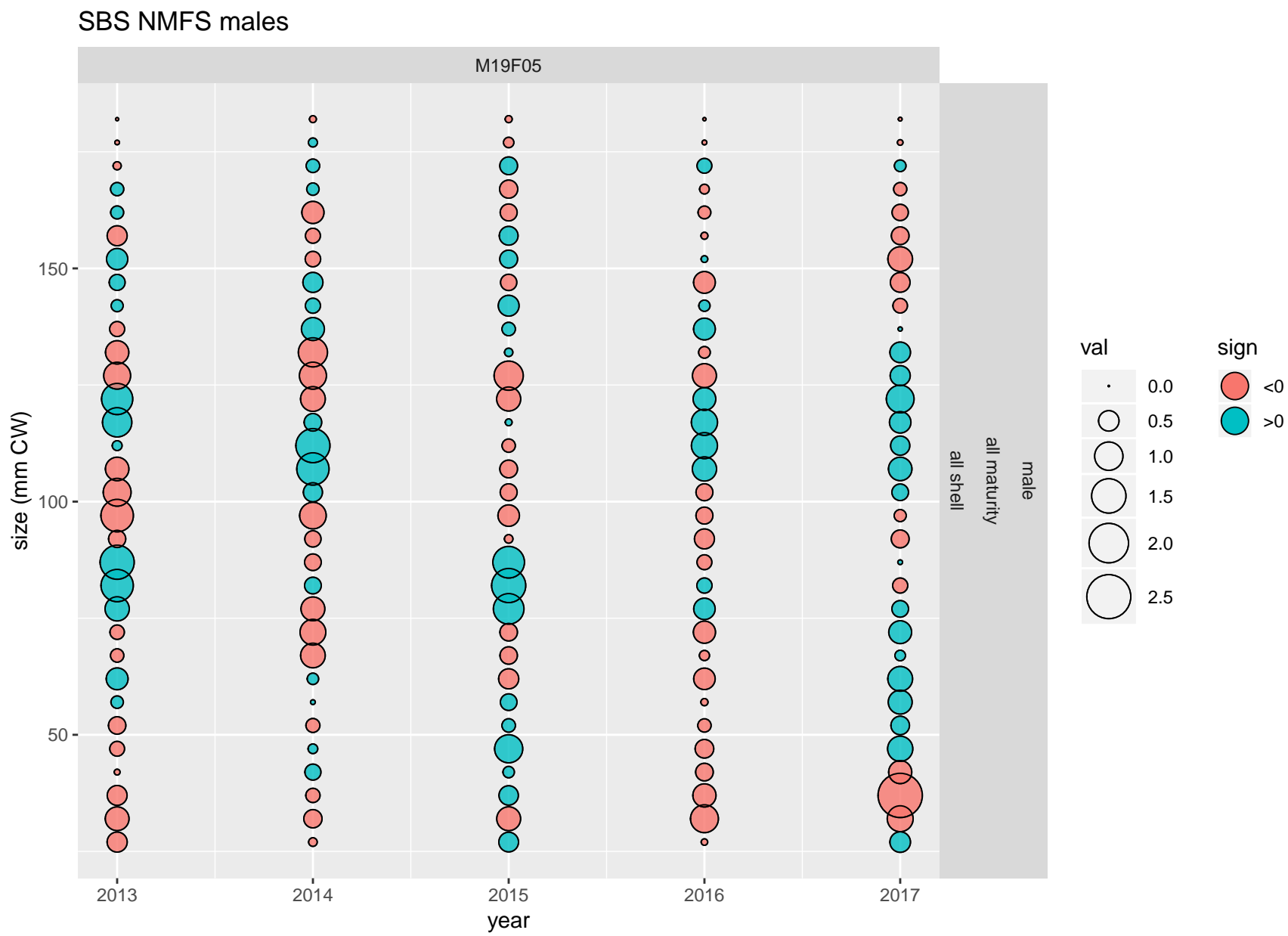


Figure 21: Pearson's residuals for male proportions-at-size from the SBS NMFS males for scenario M19F05.

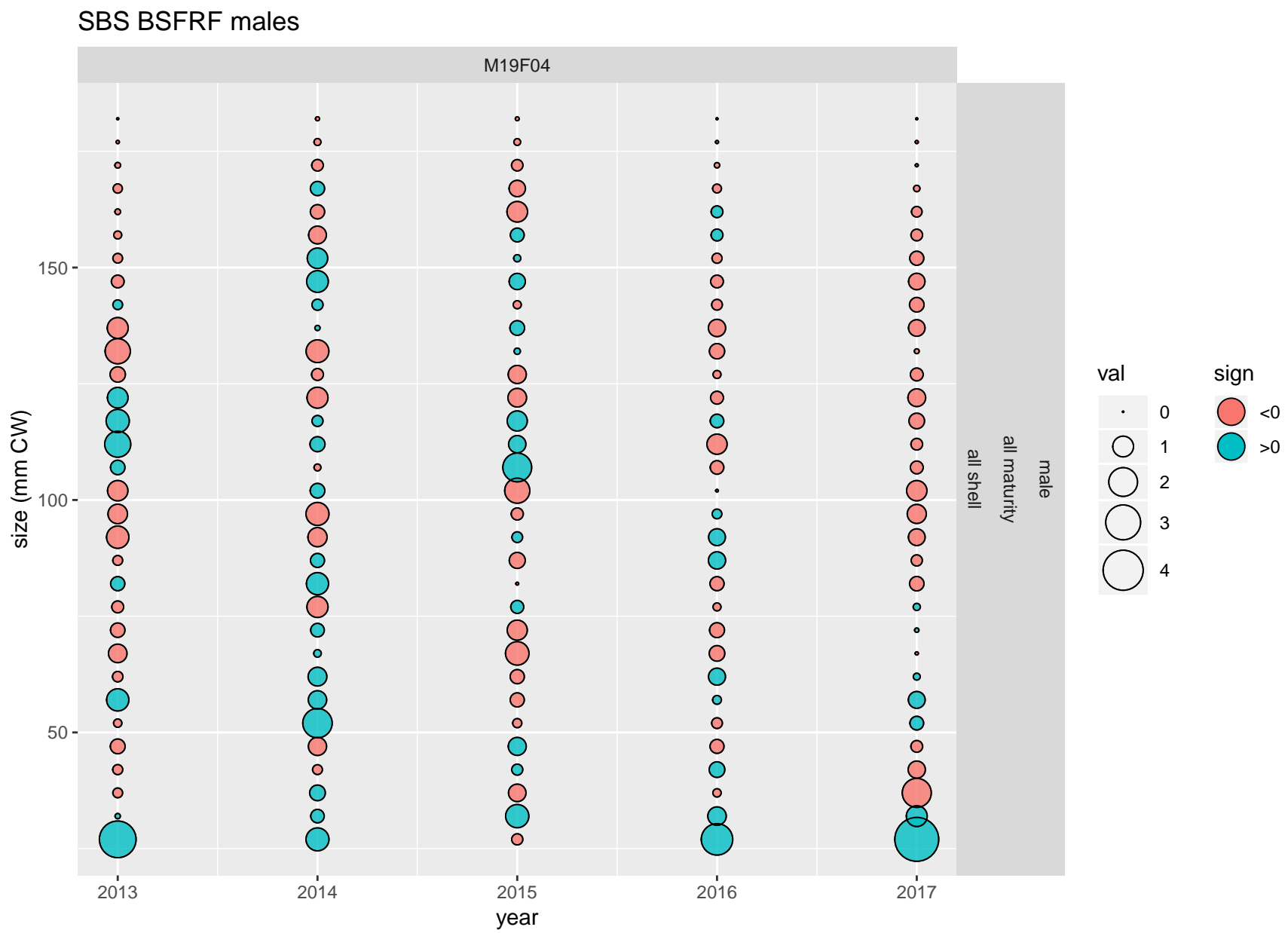


Figure 22: Pearson's residuals for male proportions-at-size from the SBS BSFRF males for scenario M19F04.



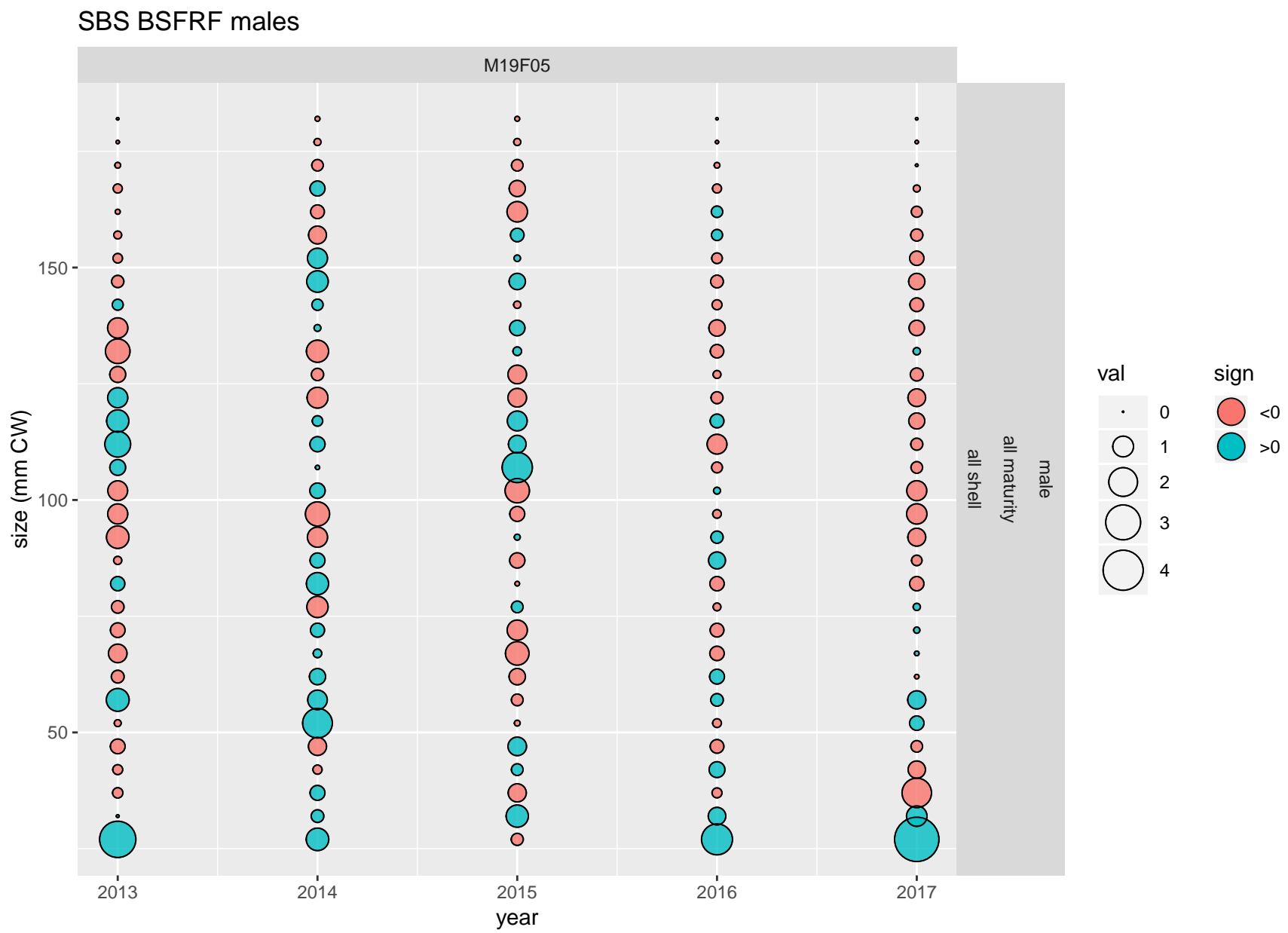


Figure 23: Pearson's residuals for male proportions-at-size from the SBS BSFRF males for scenario M19F05.

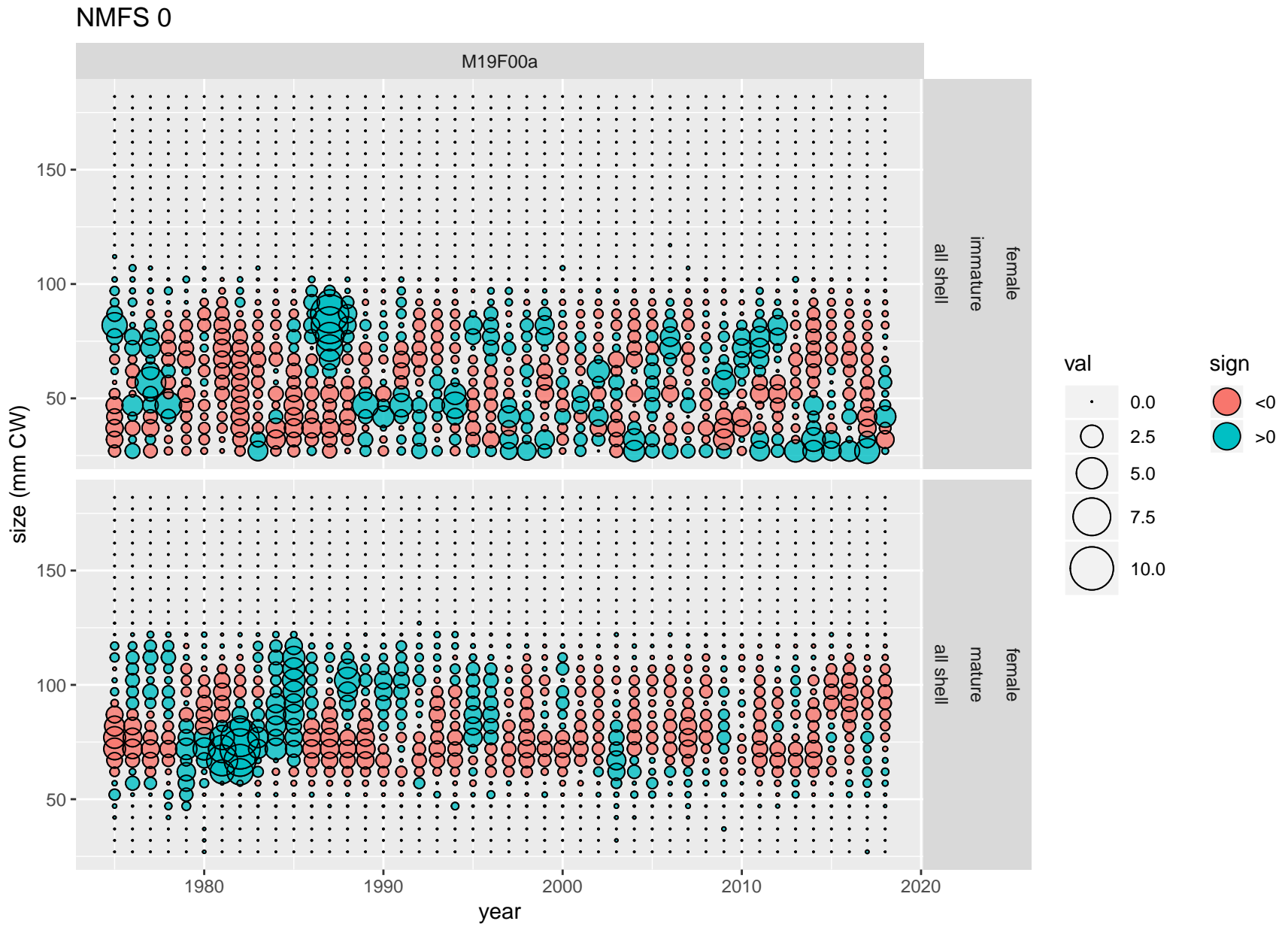


Figure 24: Pearson's residuals for female proportions-at-size from the NMFS 0 for scenario M19F00a.

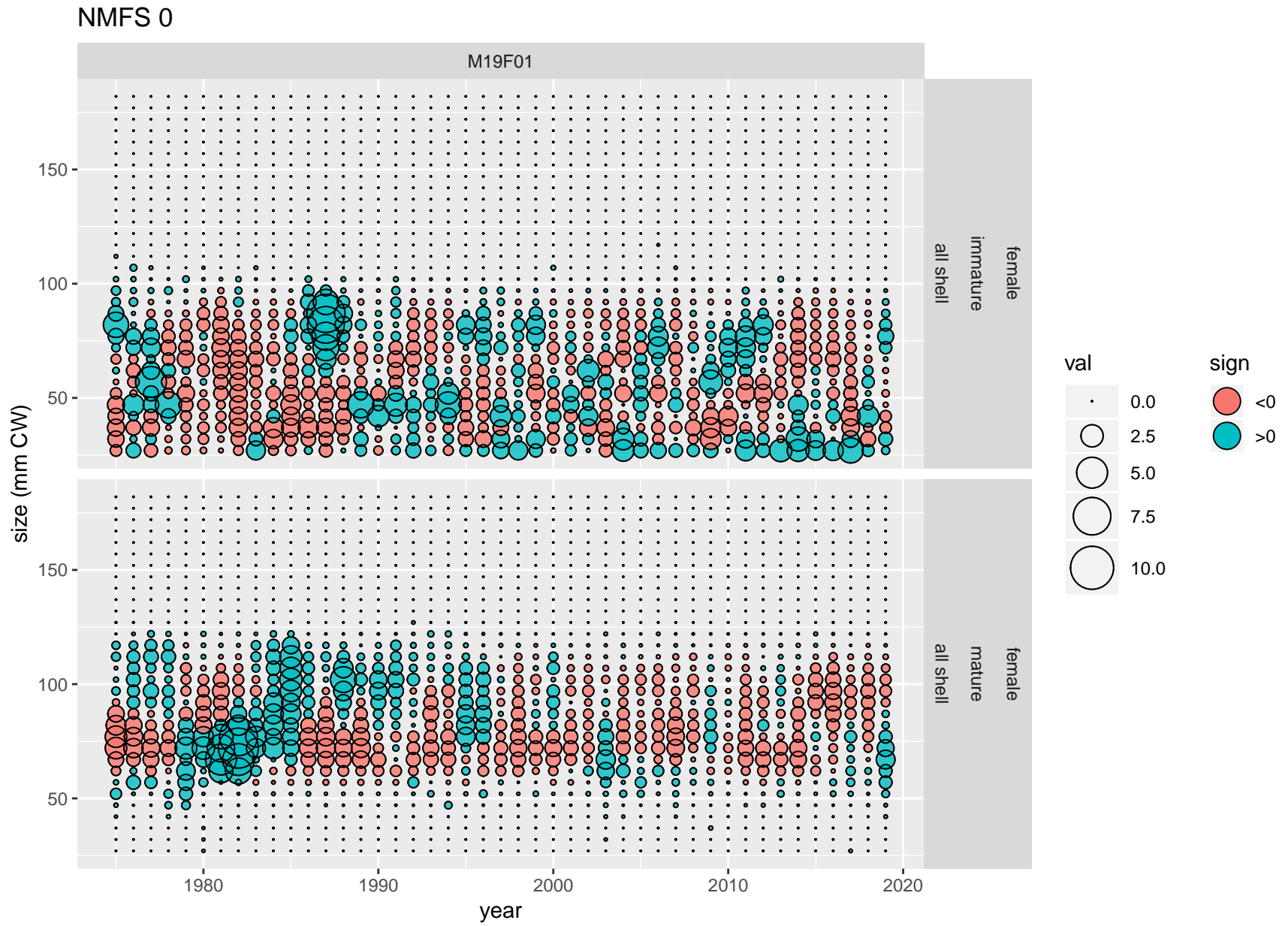


Figure 25: Pearson's residuals for female proportions-at-size from the NMFS 0 for scenario M19F01.

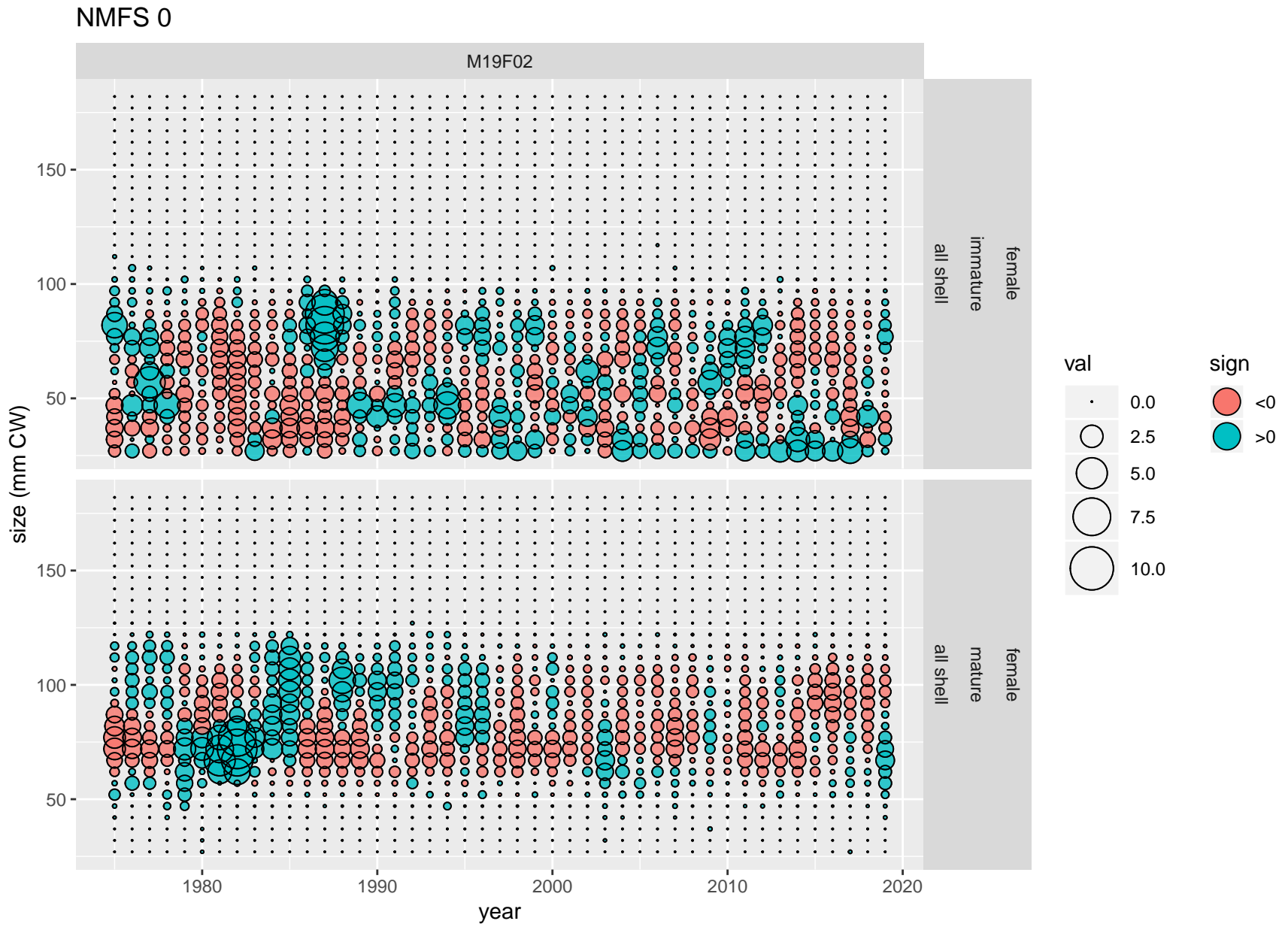


Figure 26: Pearson's residuals for female proportions-at-size from the NMFS 0 for scenario M19F02.

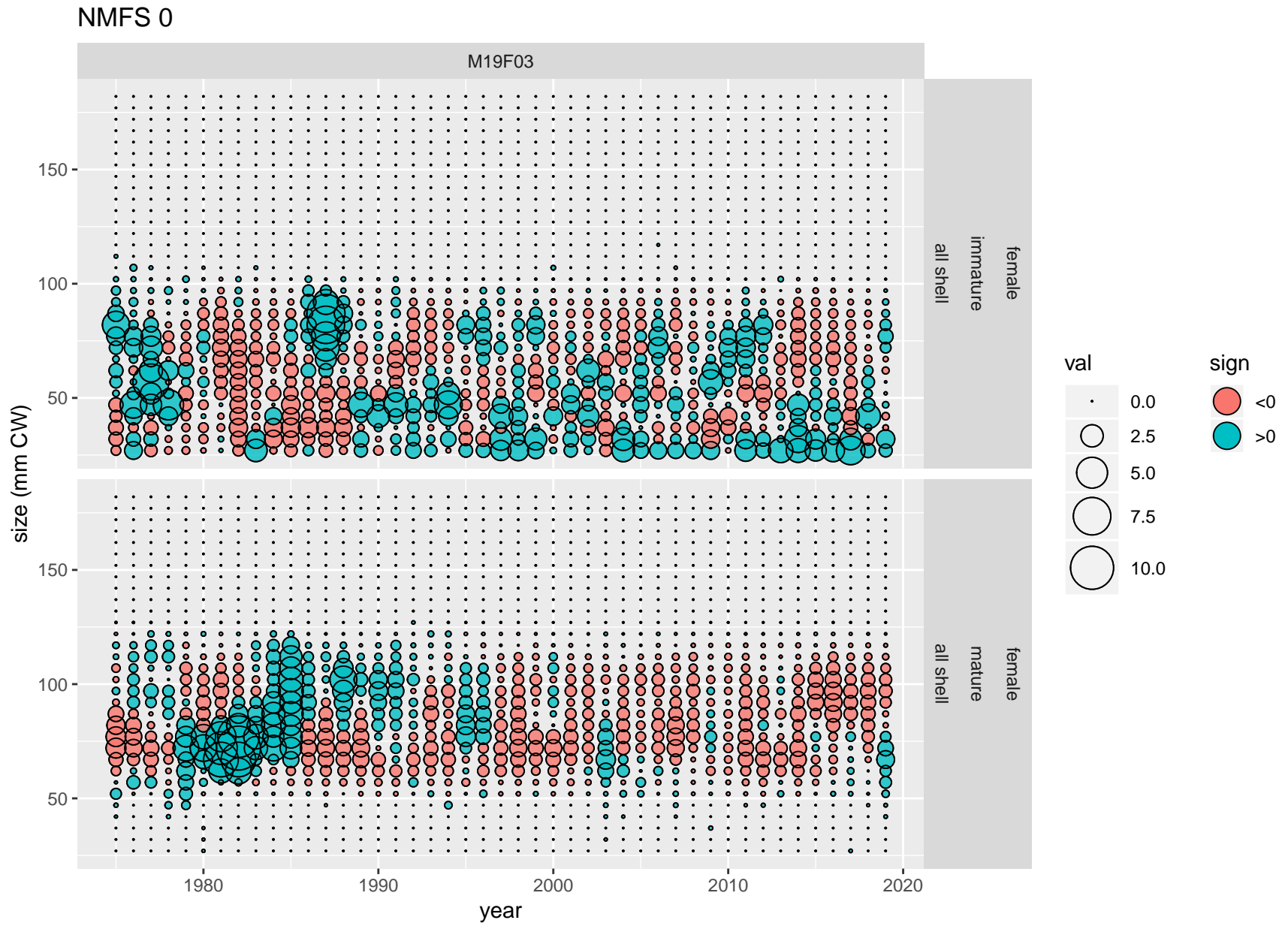


Figure 27: Pearson's residuals for female proportions-at-size from the NMFS 0 for scenario M19F03.

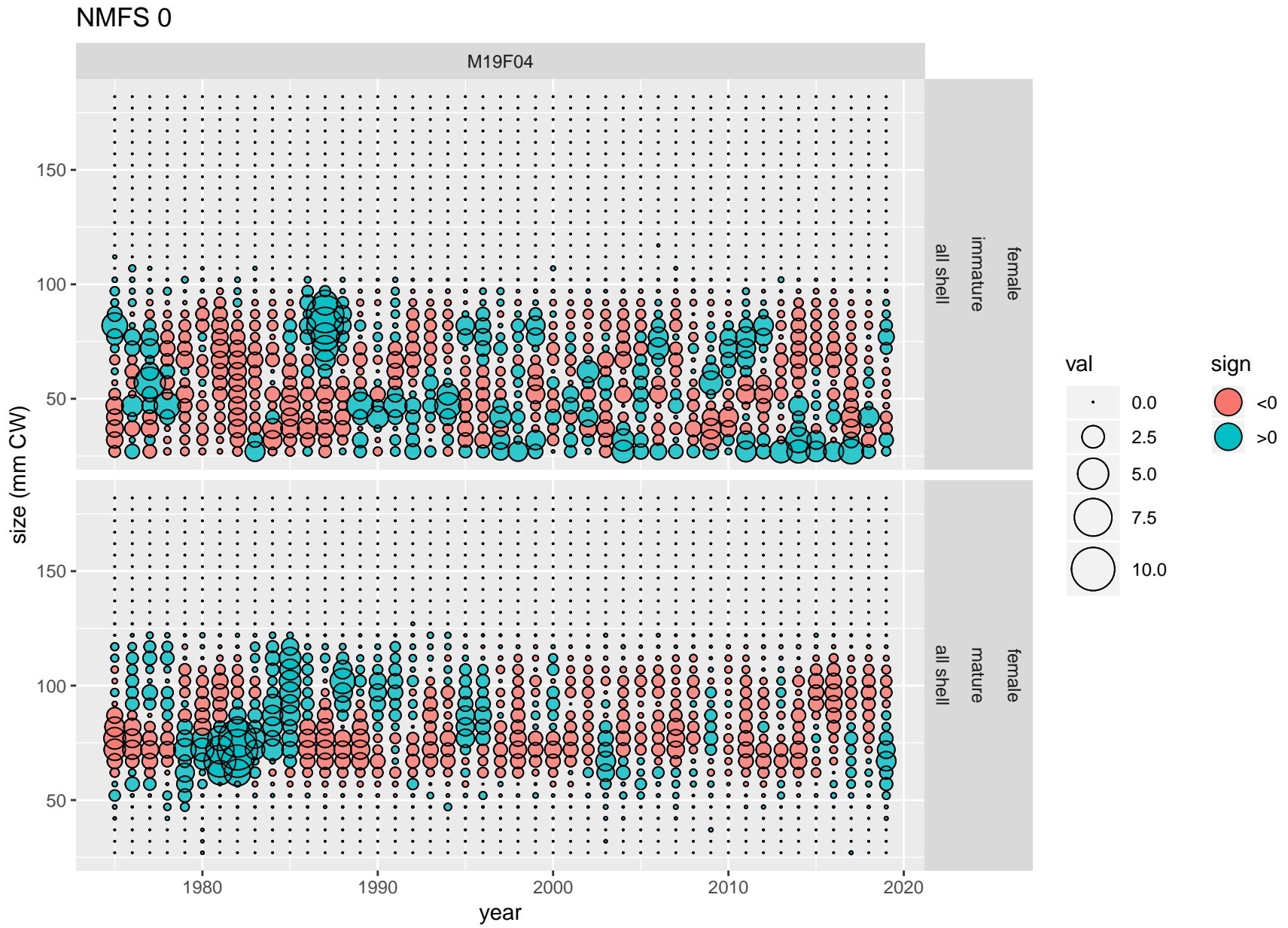


Figure 28: Pearson's residuals for female proportions-at-size from the NMFS 0 for scenario M19F04.

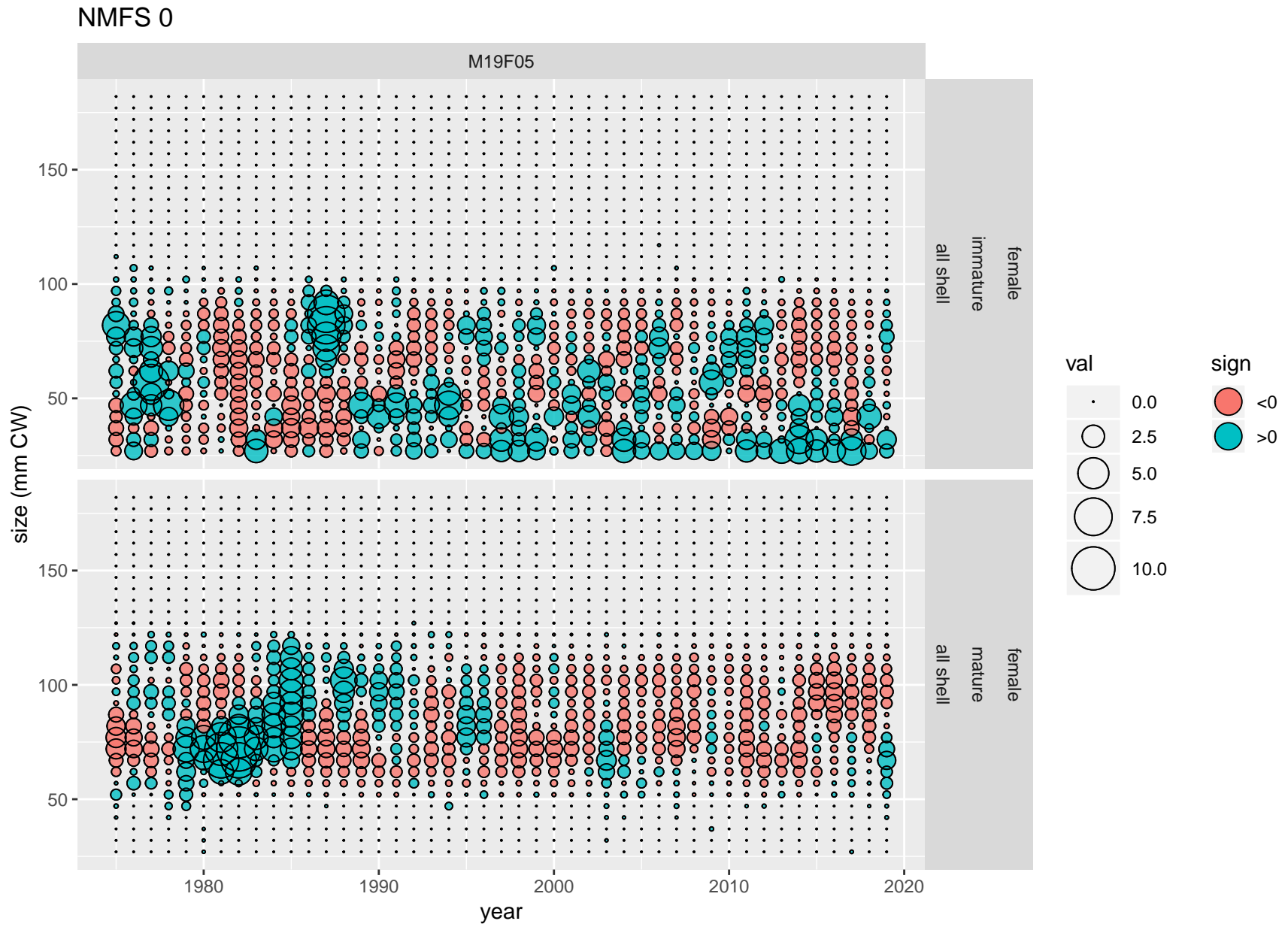


Figure 29: Pearson's residuals for female proportions-at-size from the NMFS 0 for scenario M19F05.

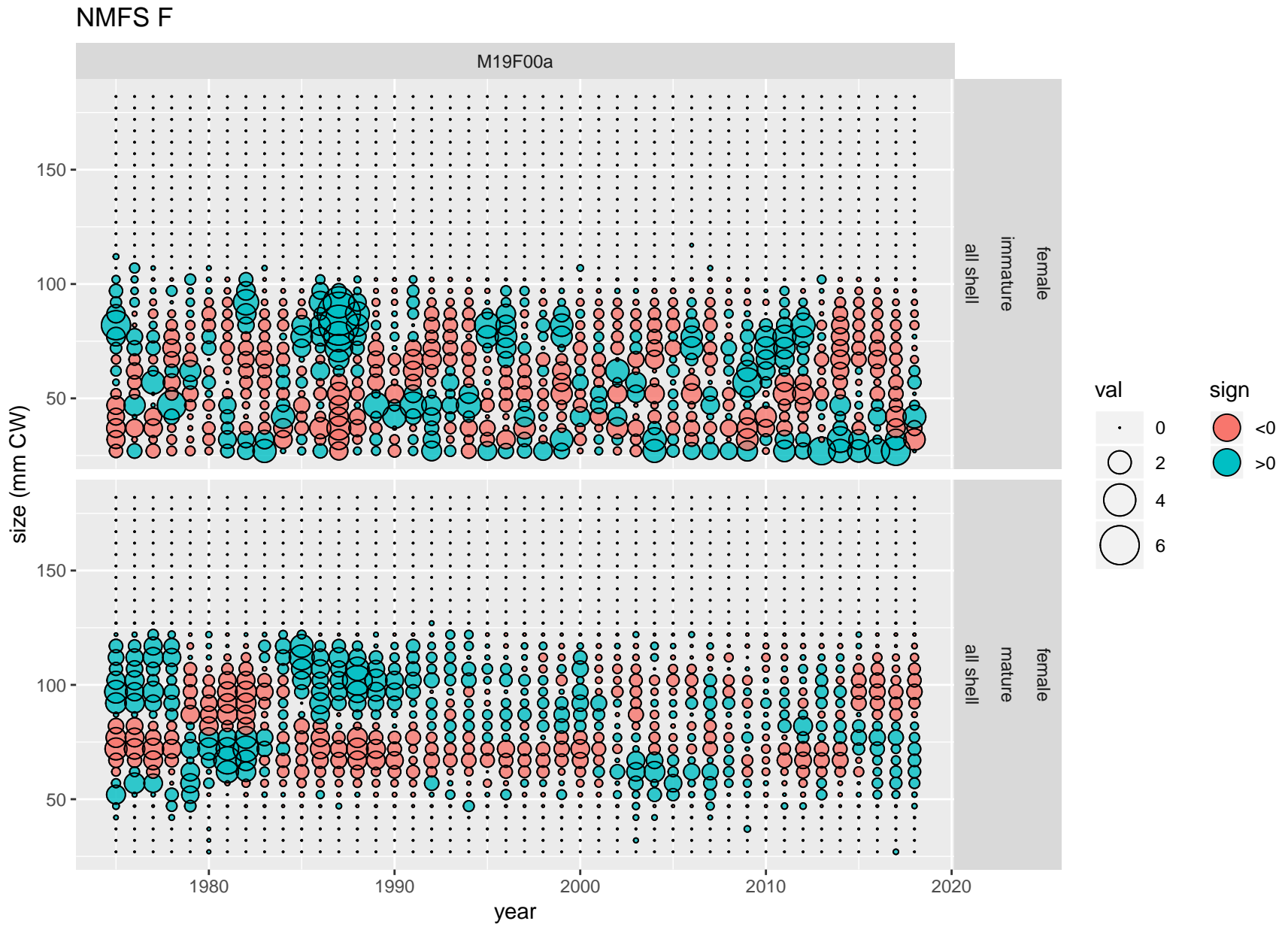


Figure 30: Pearson's residuals for female proportions-at-size from the NMFS F for scenario M19F00a.



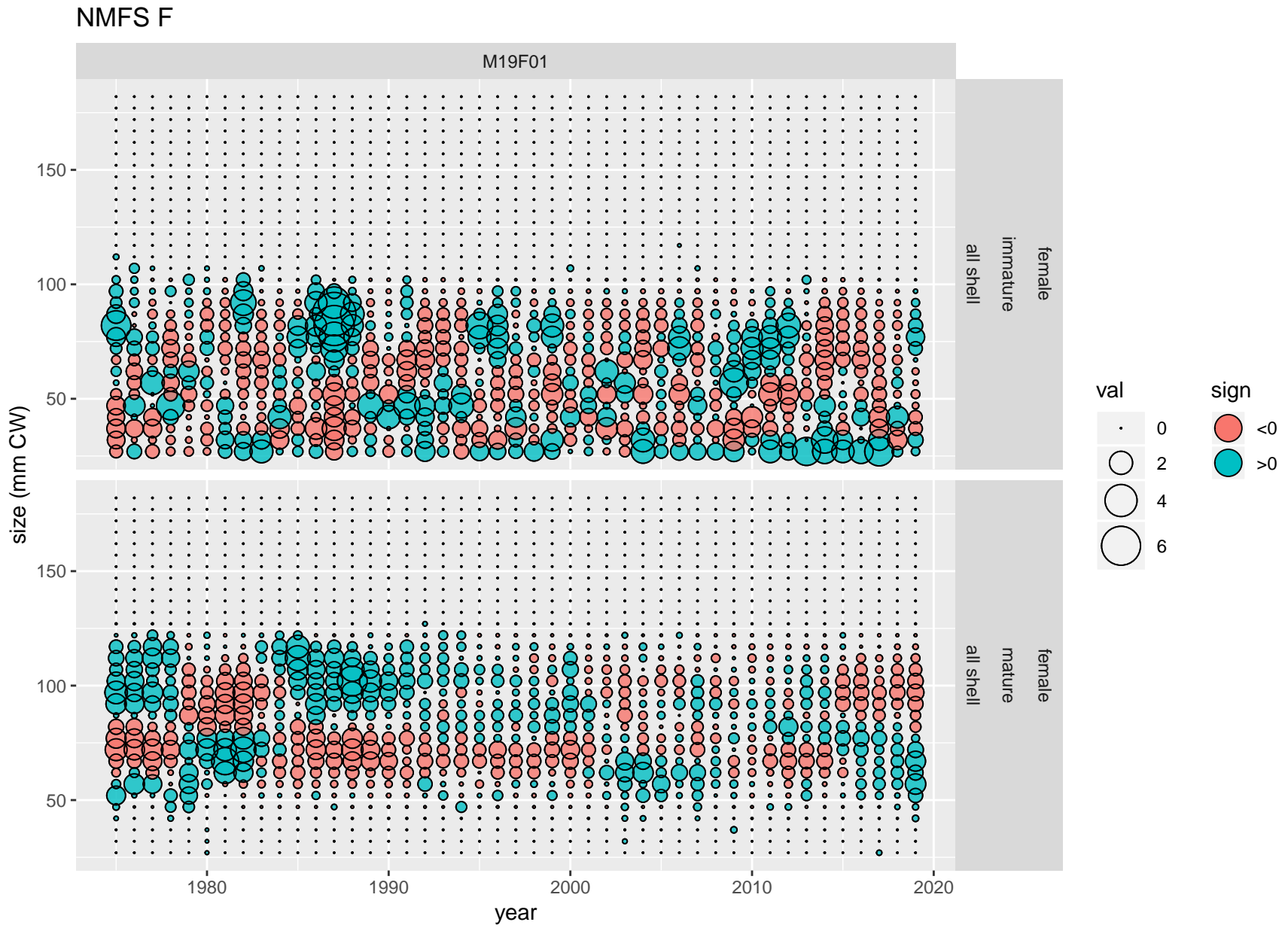


Figure 31: Pearson's residuals for female proportions-at-size from the NMFS F for scenario M19F01.

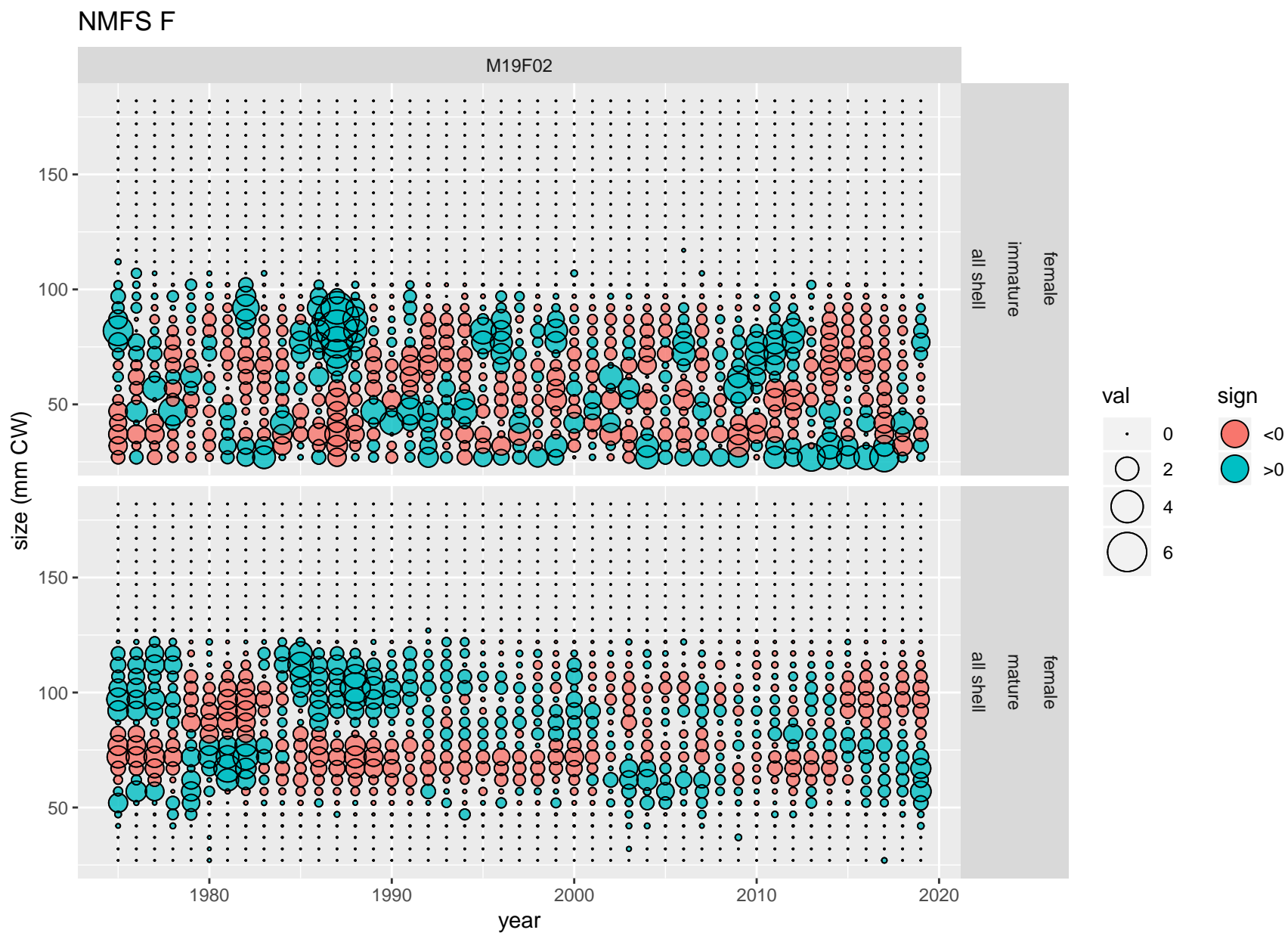


Figure 32: Pearson's residuals for female proportions-at-size from the NMFS F for scenario M19F02.

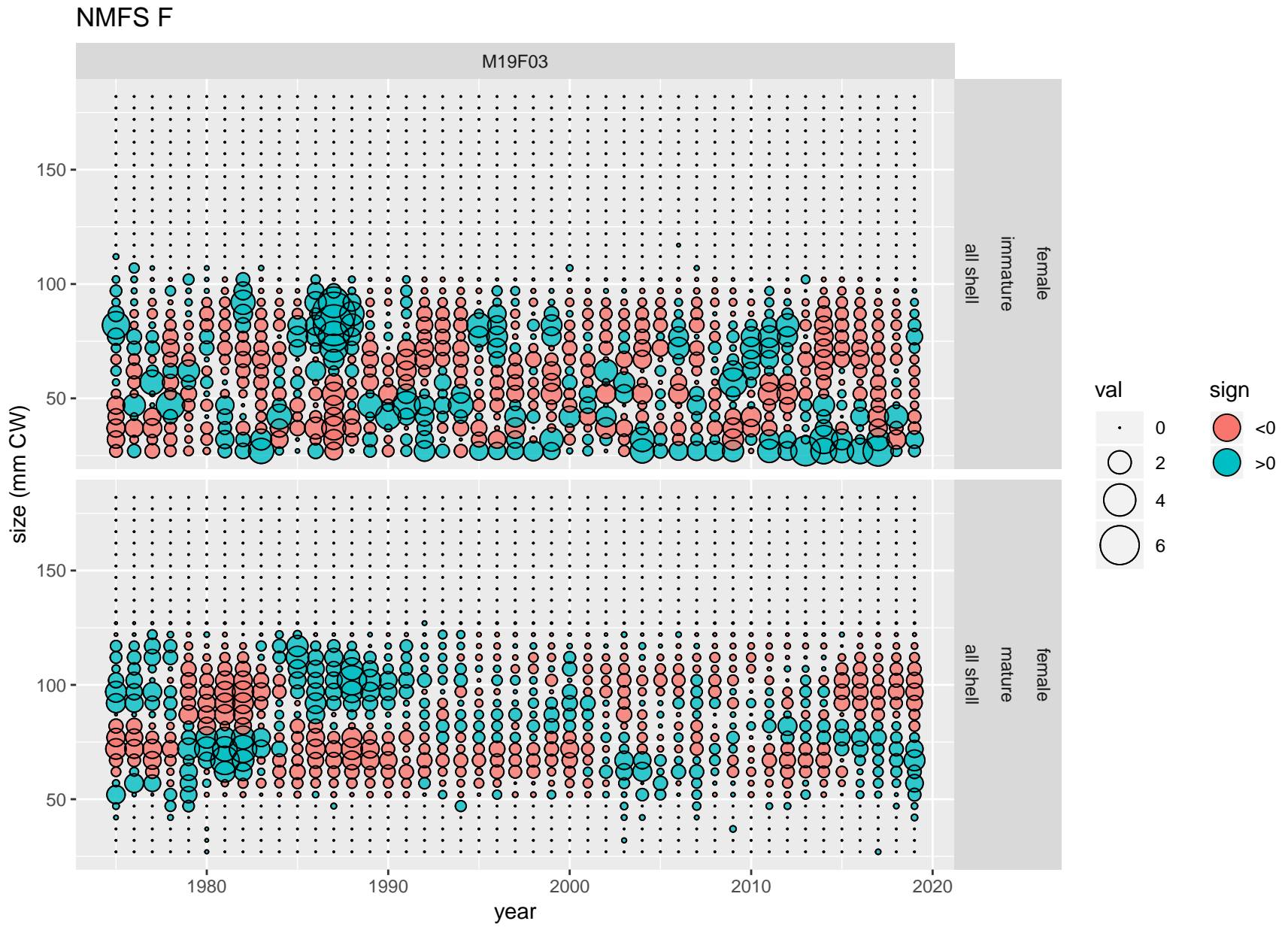


Figure 33: Pearson's residuals for female proportions-at-size from the NMFS F for scenario M19F03.

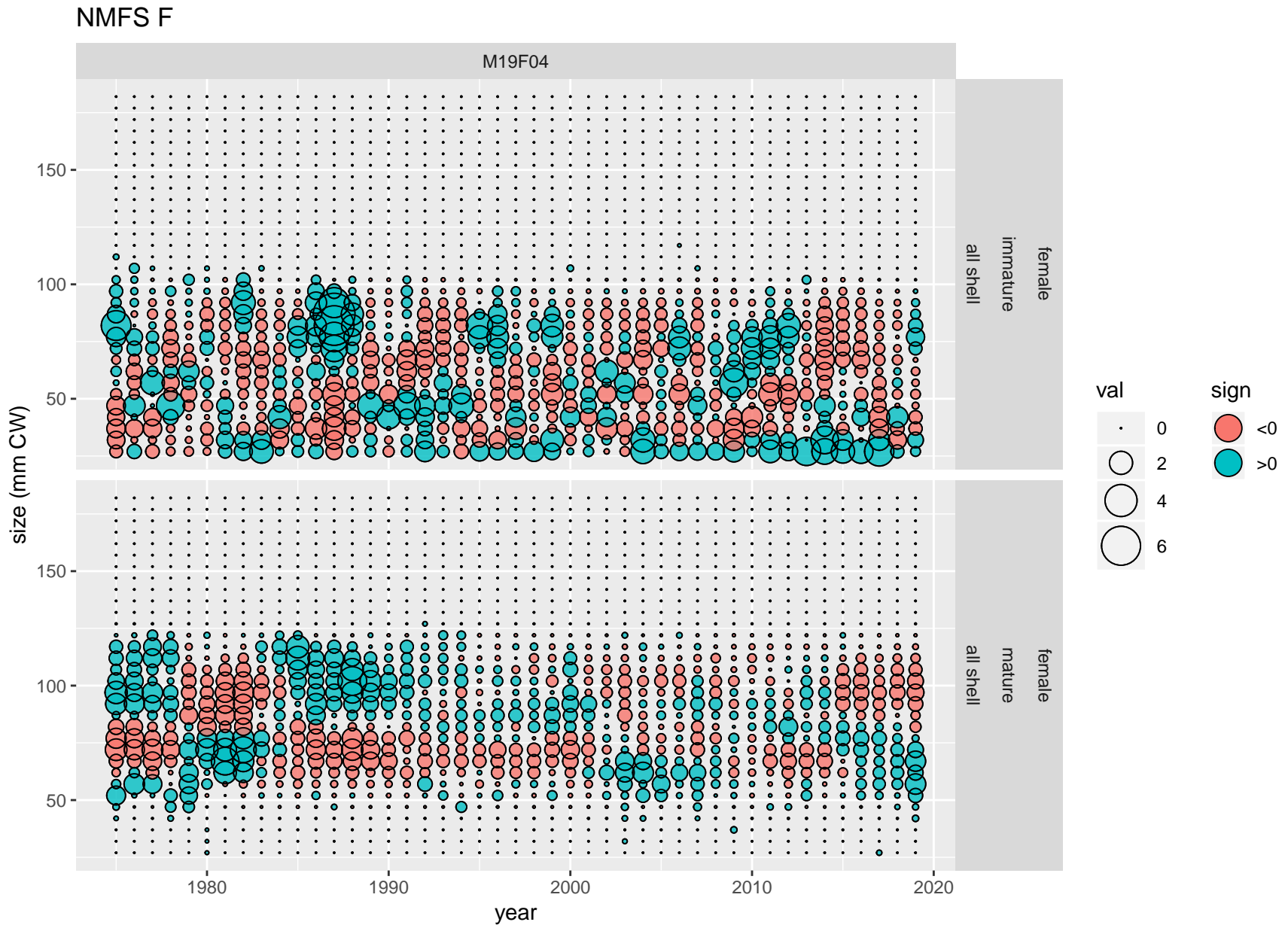


Figure 34: Pearson's residuals for female proportions-at-size from the NMFS F for scenario M19F04.

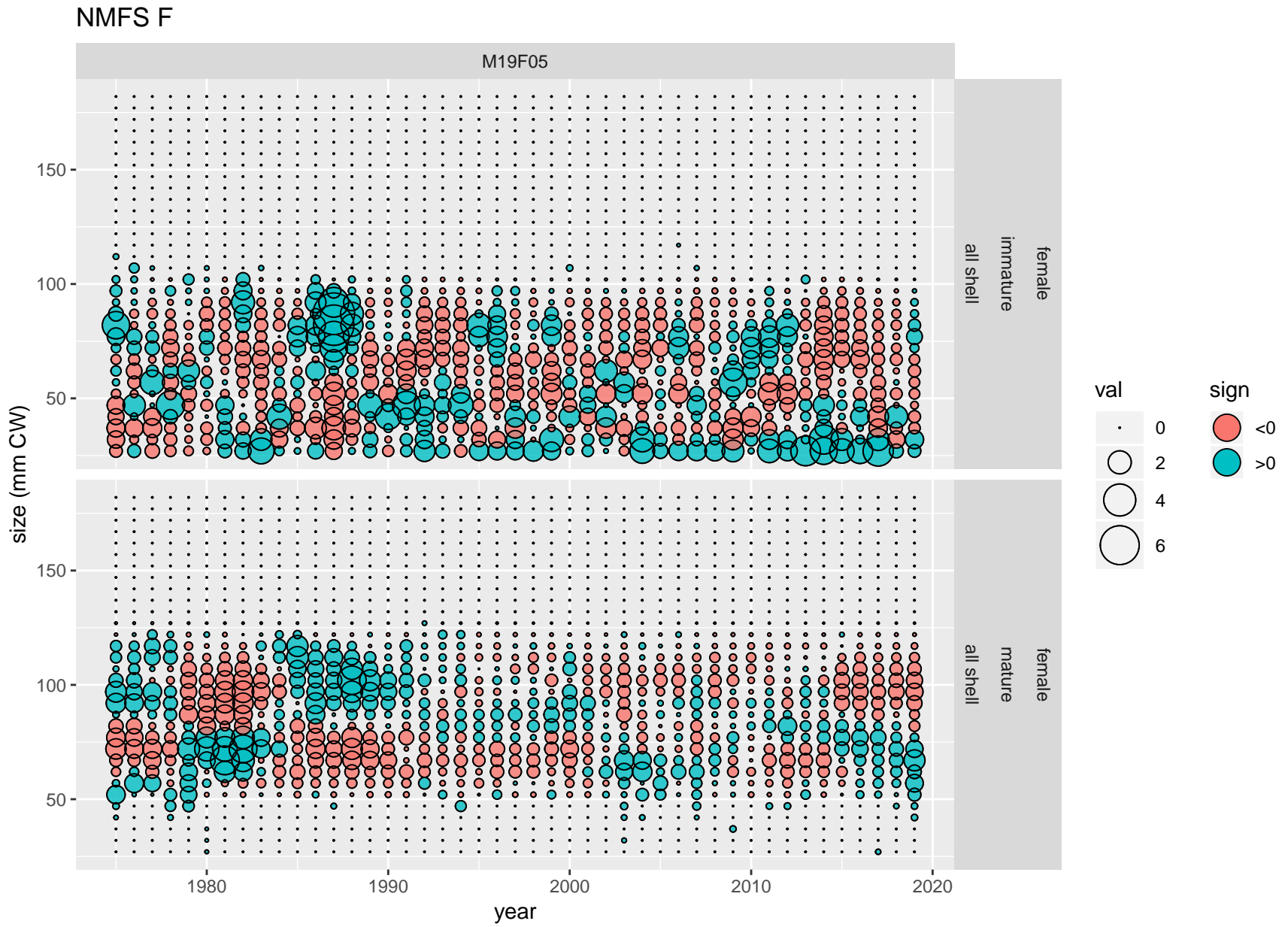


Figure 35: Pearson's residuals for female proportions-at-size from the NMFS F for scenario M19F05.

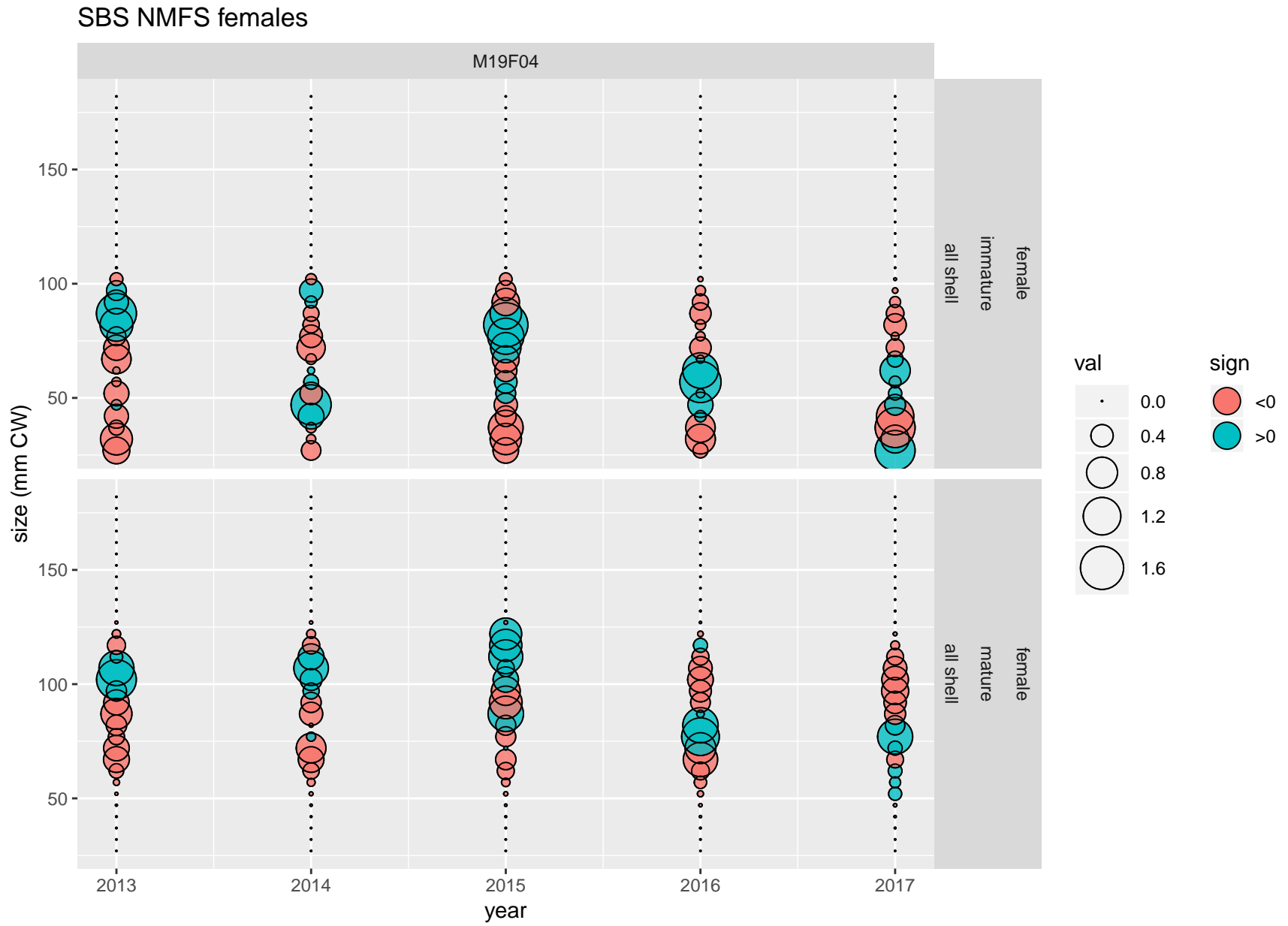


Figure 36: Pearson's residuals for female proportions-at-size from the SBS NMFS females for scenario M19F04.

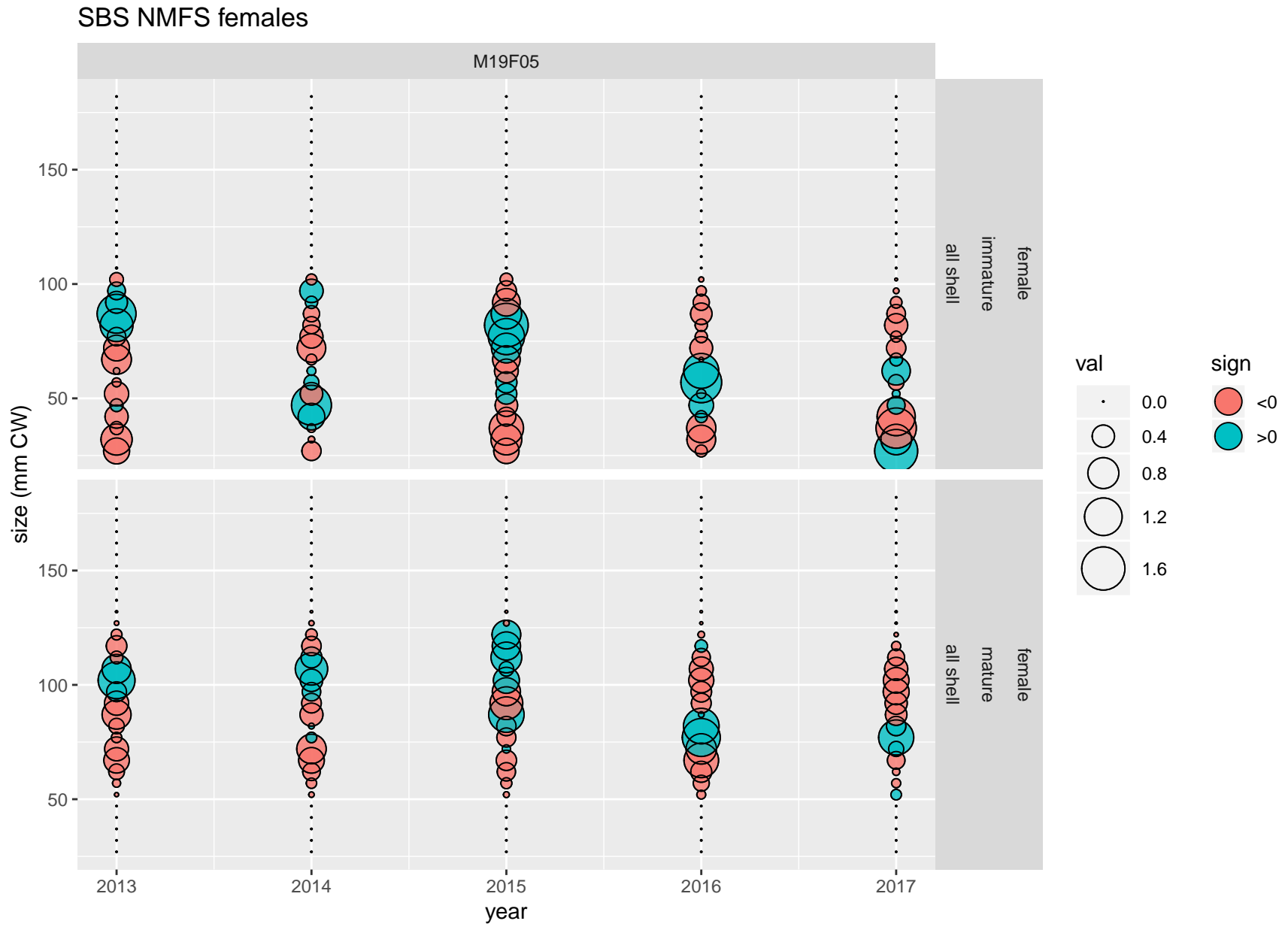


Figure 37: Pearson's residuals for female proportions-at-size from the SBS NMFS females for scenario M19F05.

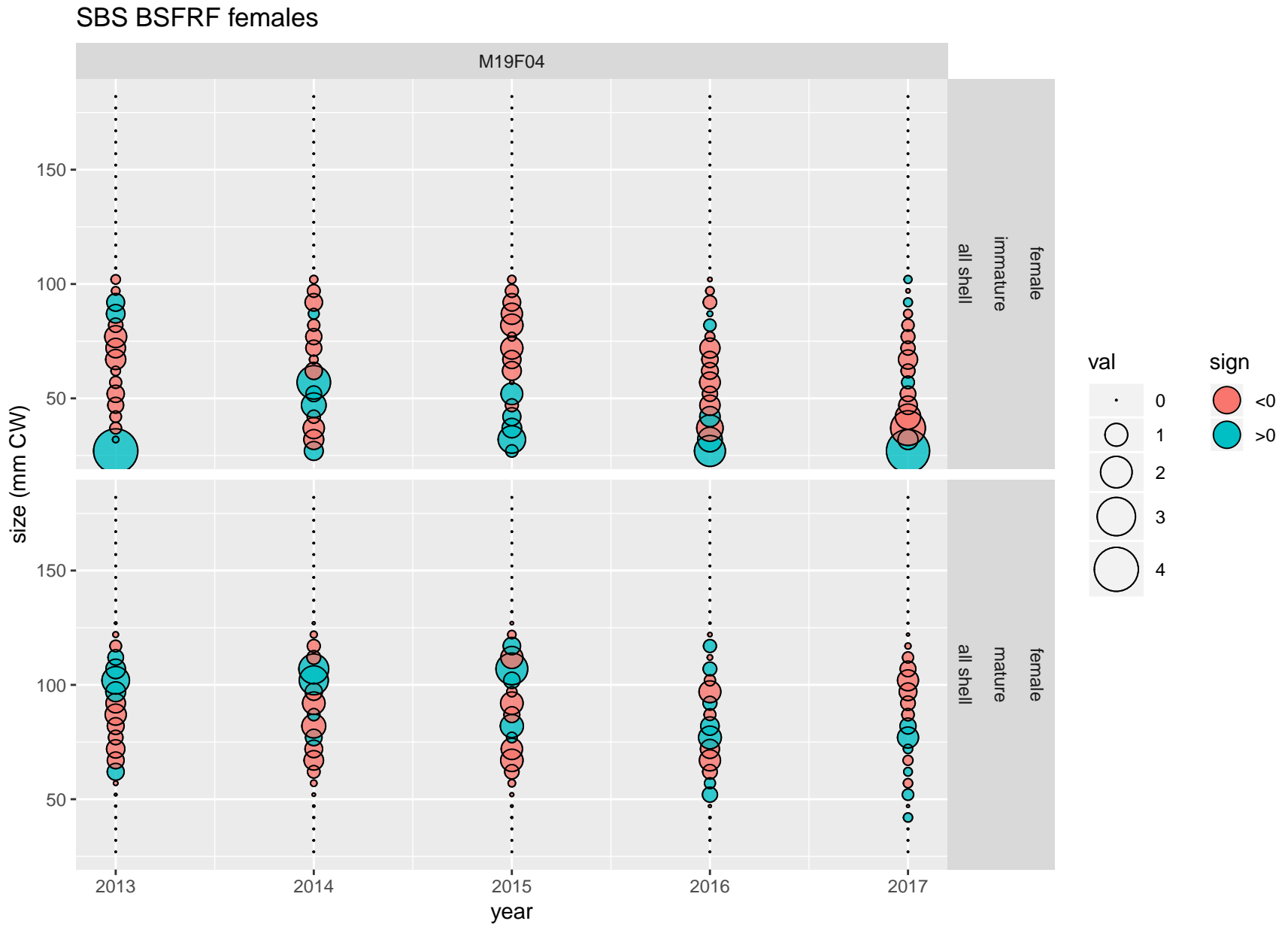


Figure 38: Pearson's residuals for female proportions-at-size from the SBS BSFRF females for scenario M19F04.



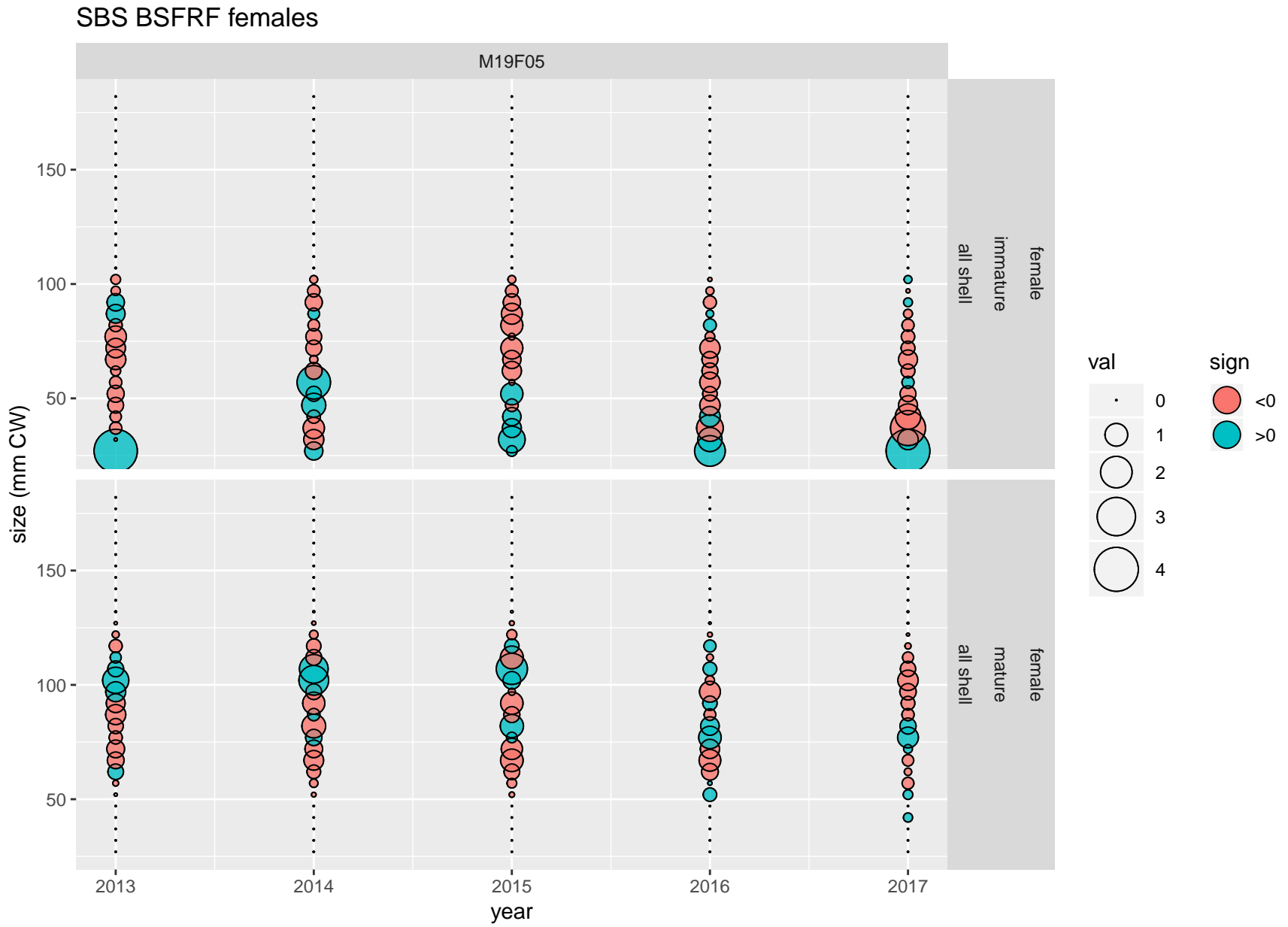


Figure 39: Pearson's residuals for female proportions-at-size from the SBS BSFRF females for scenario M19F05.

# Effective sample sizes for survey size compositions

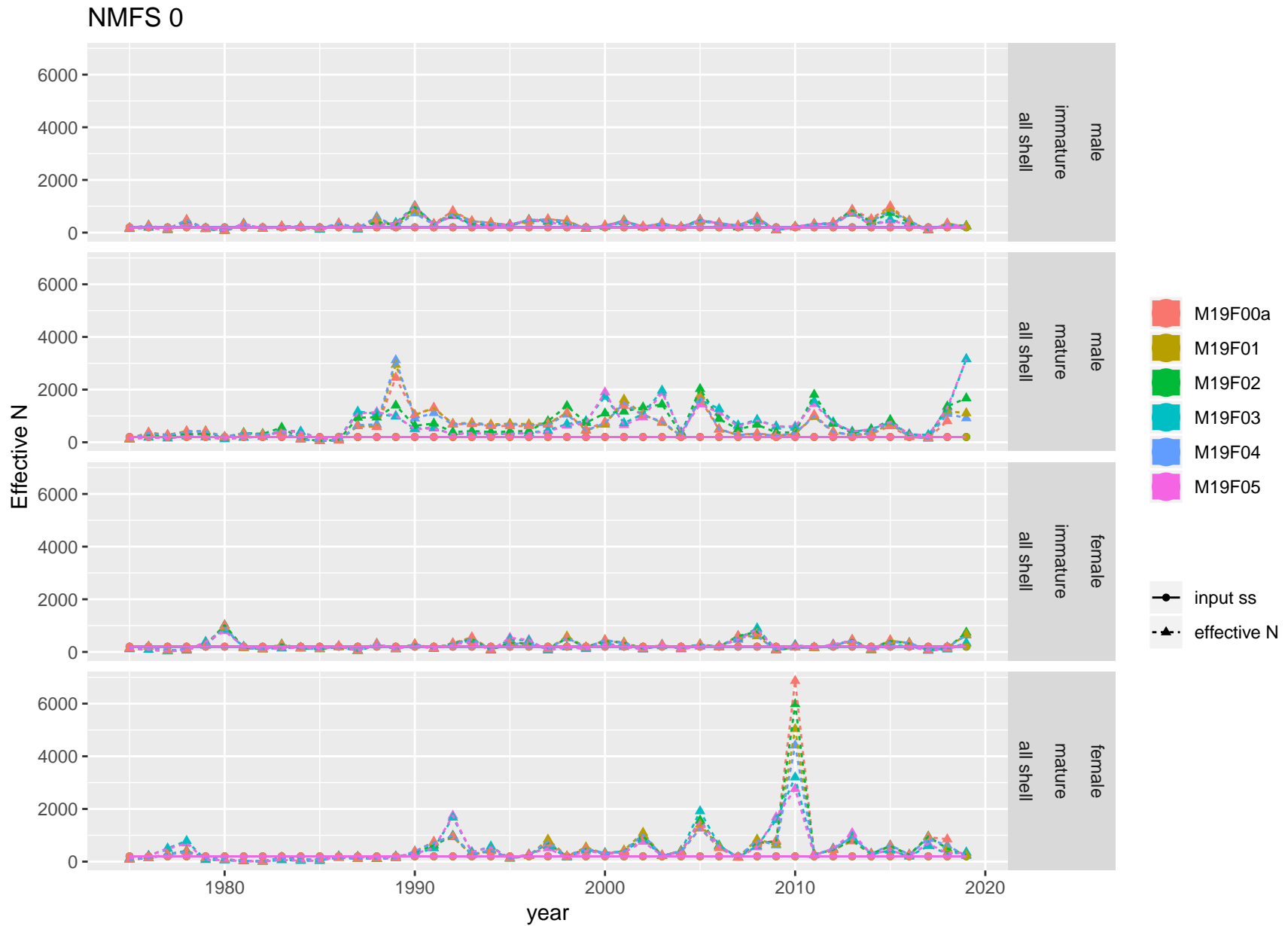


Figure 40: Input and effective sample sizes from retained catch size compositions from the NMFS 0.

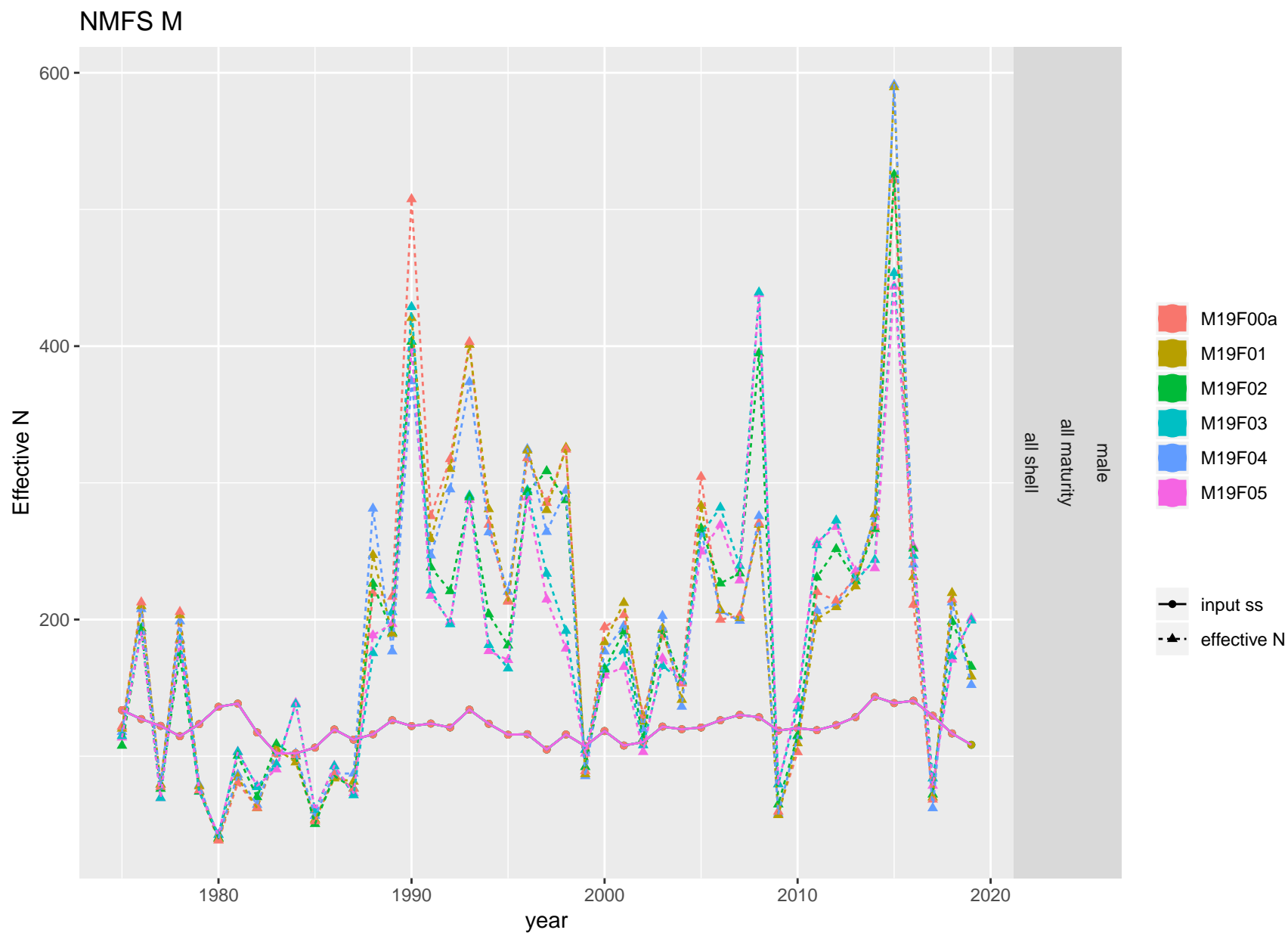


Figure 41: Input and effective sample sizes from retained catch size compositions from the NMFS M.

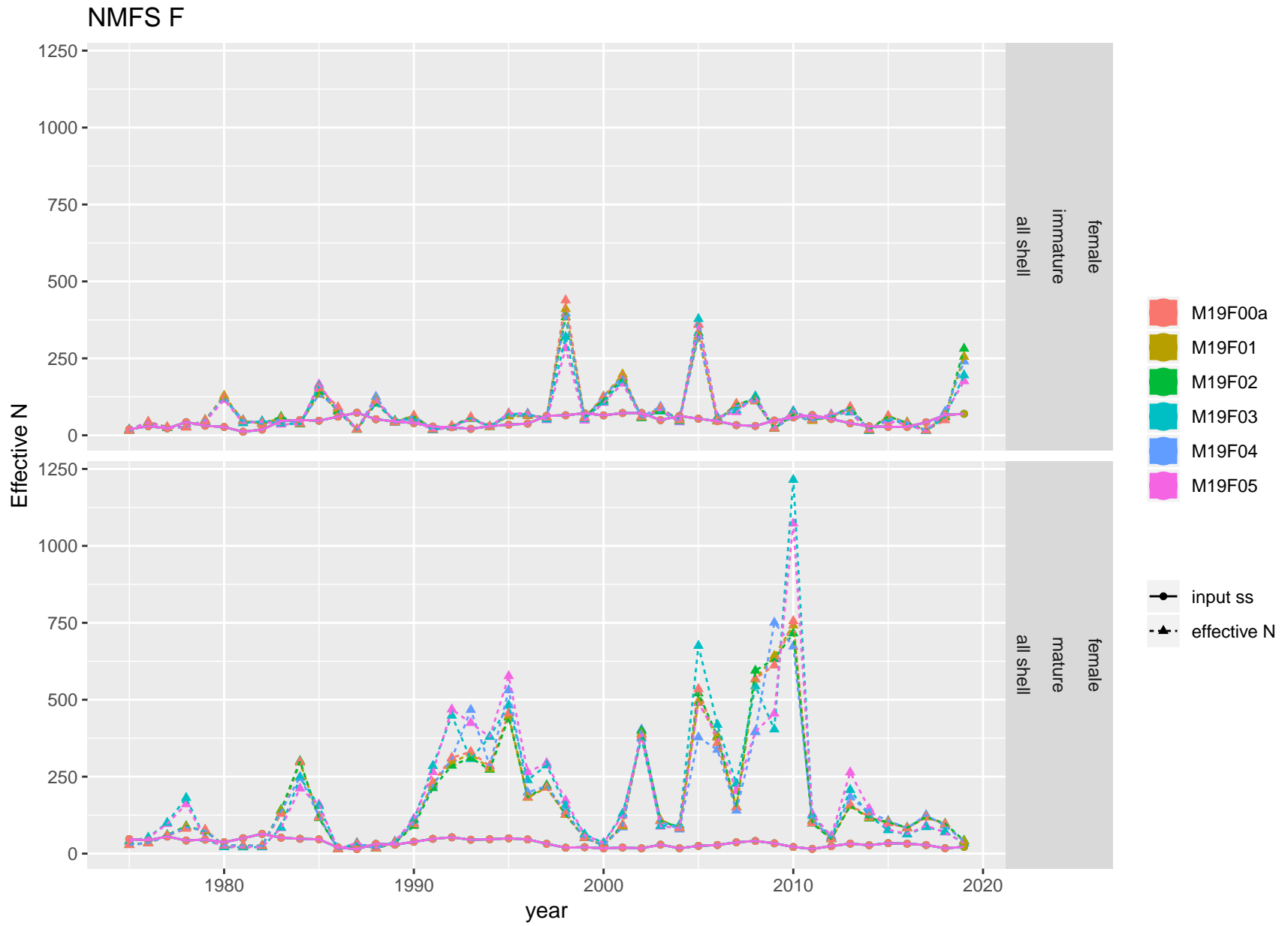


Figure 42: Input and effective sample sizes from retained catch size compositions from the NMFS F.

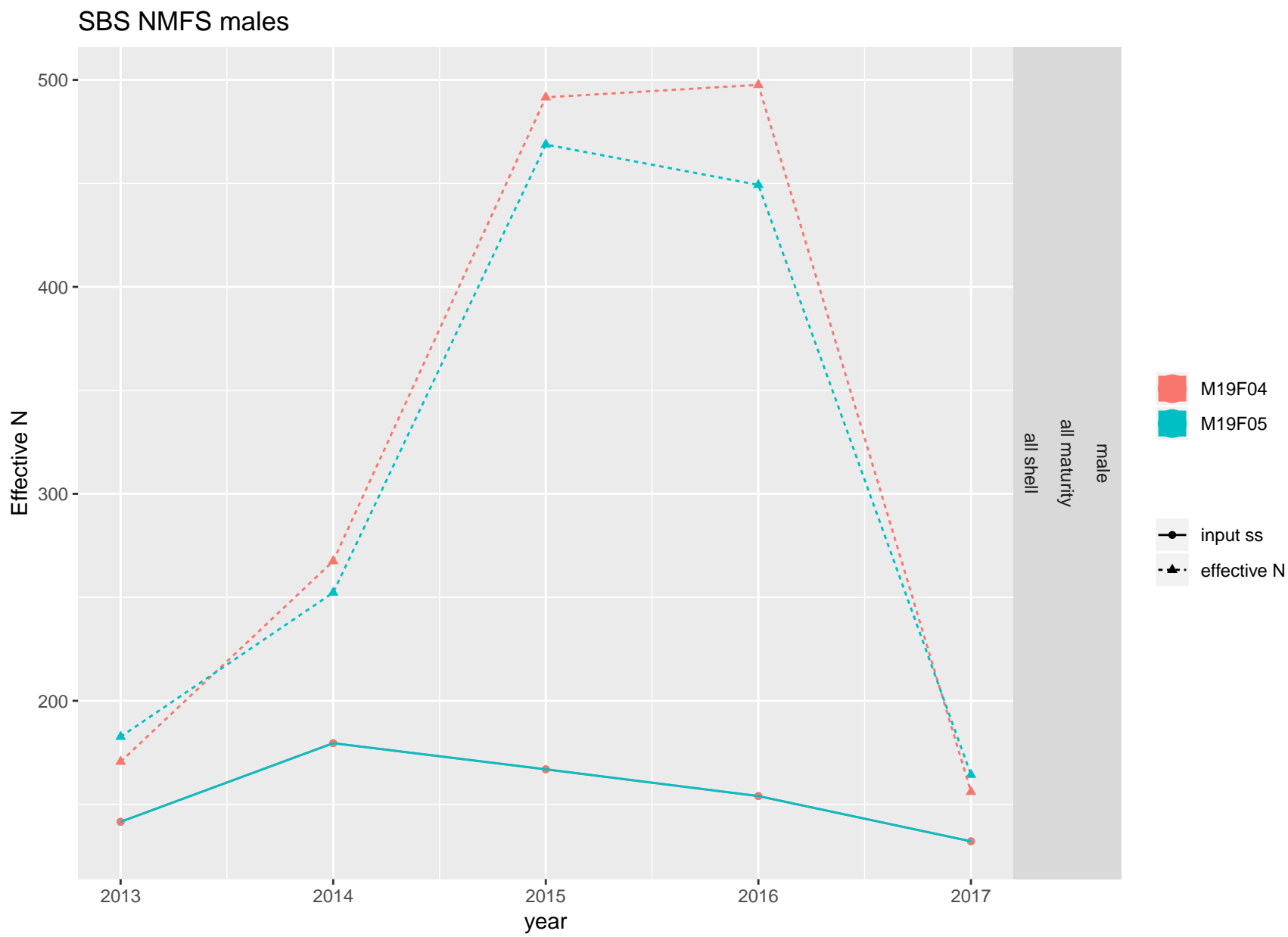


Figure 43: Input and effective sample sizes from retained catch size compositions from the SBS NMFS males.

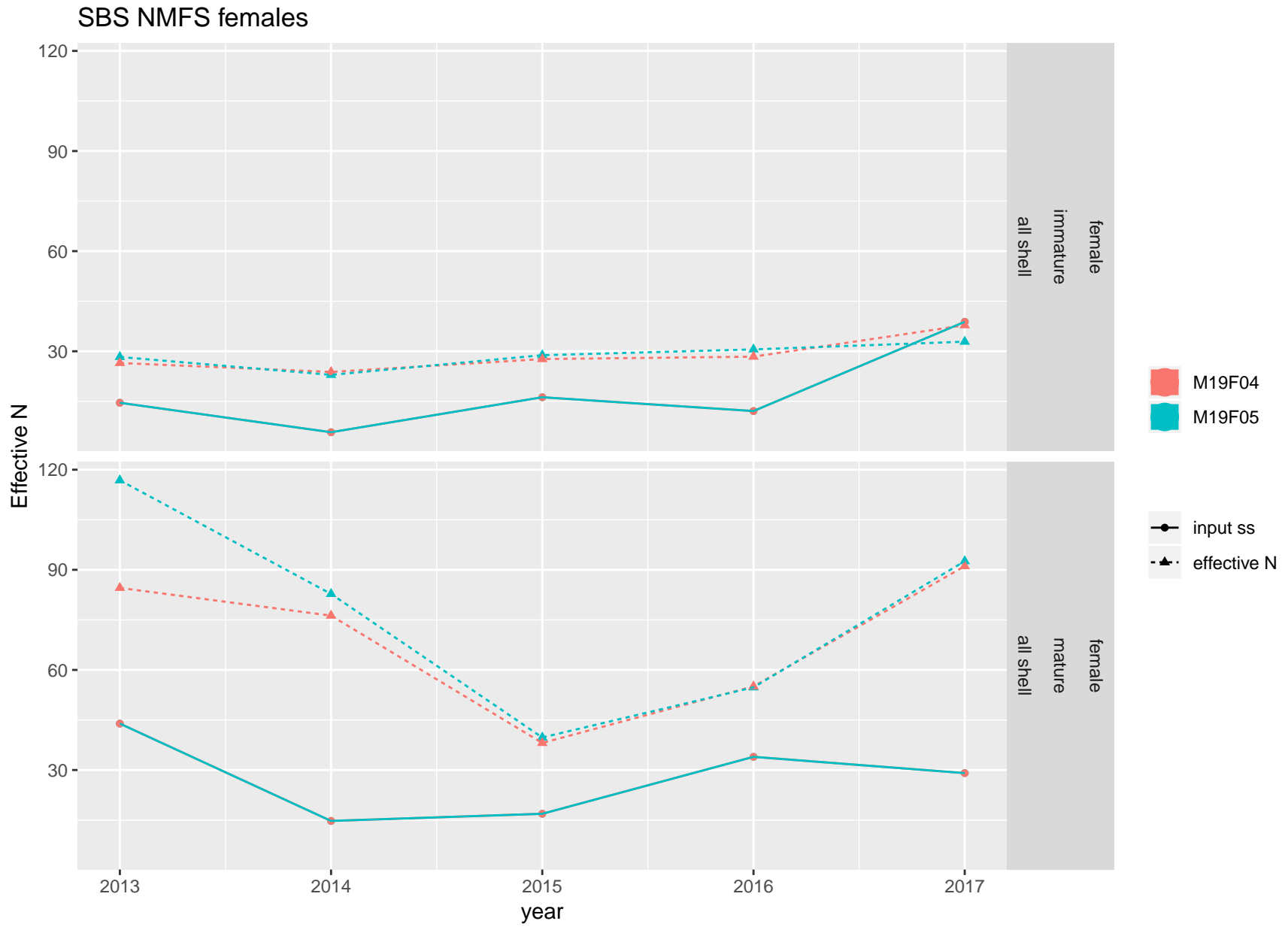


Figure 44: Input and effective sample sizes from retained catch size compositions from the SBS NMFS females.

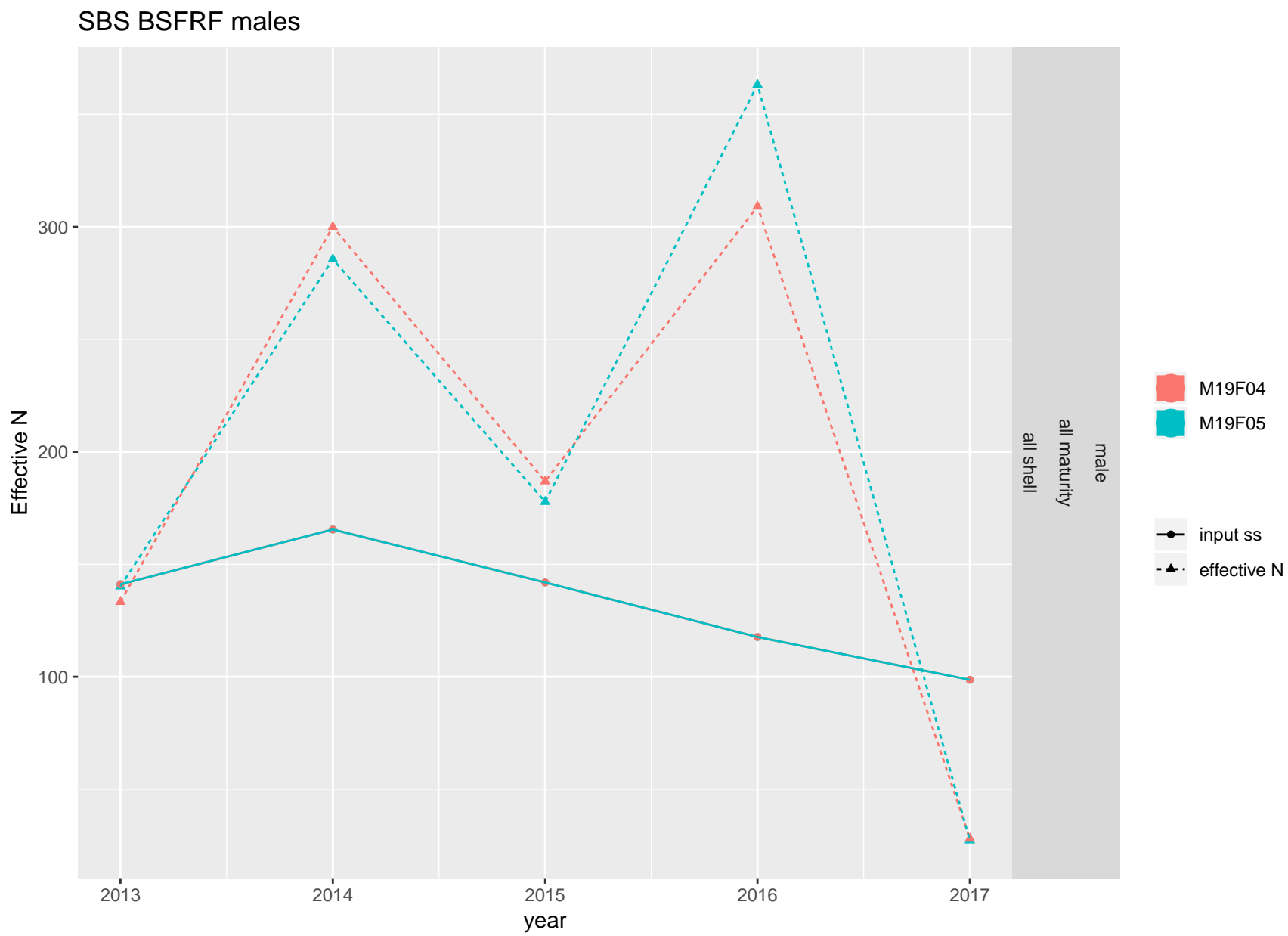


Figure 45: Input and effective sample sizes from retained catch size compositions from the SBS BSFRF males.

### SBS BSFRF females

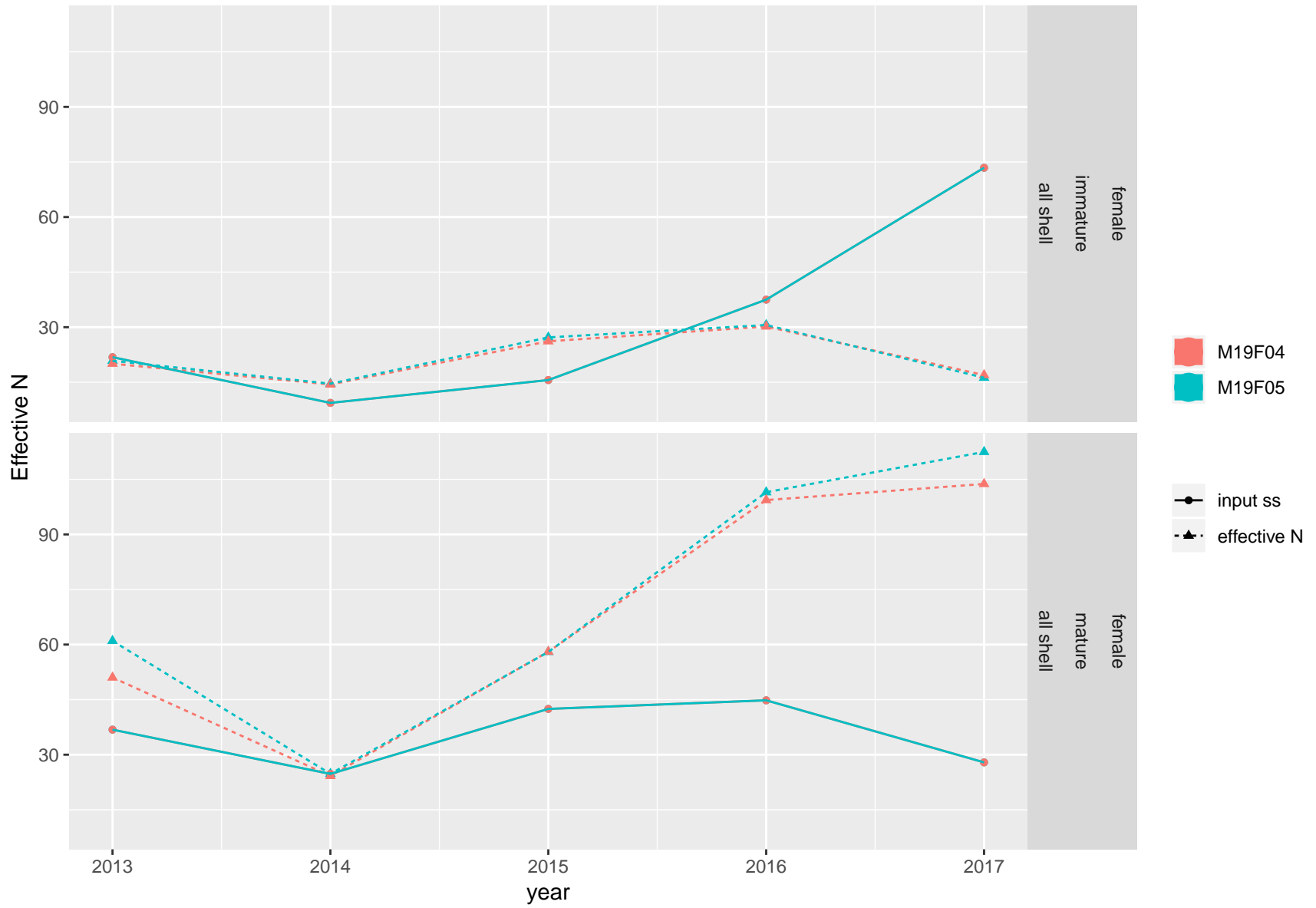


Figure 46: Input and effective sample sizes from retained catch size compositions from the SBS BSFRF females.