

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

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## **Introduction**

Fits to fishery retained catch and total catch 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.

# Retained catch mean size compositions

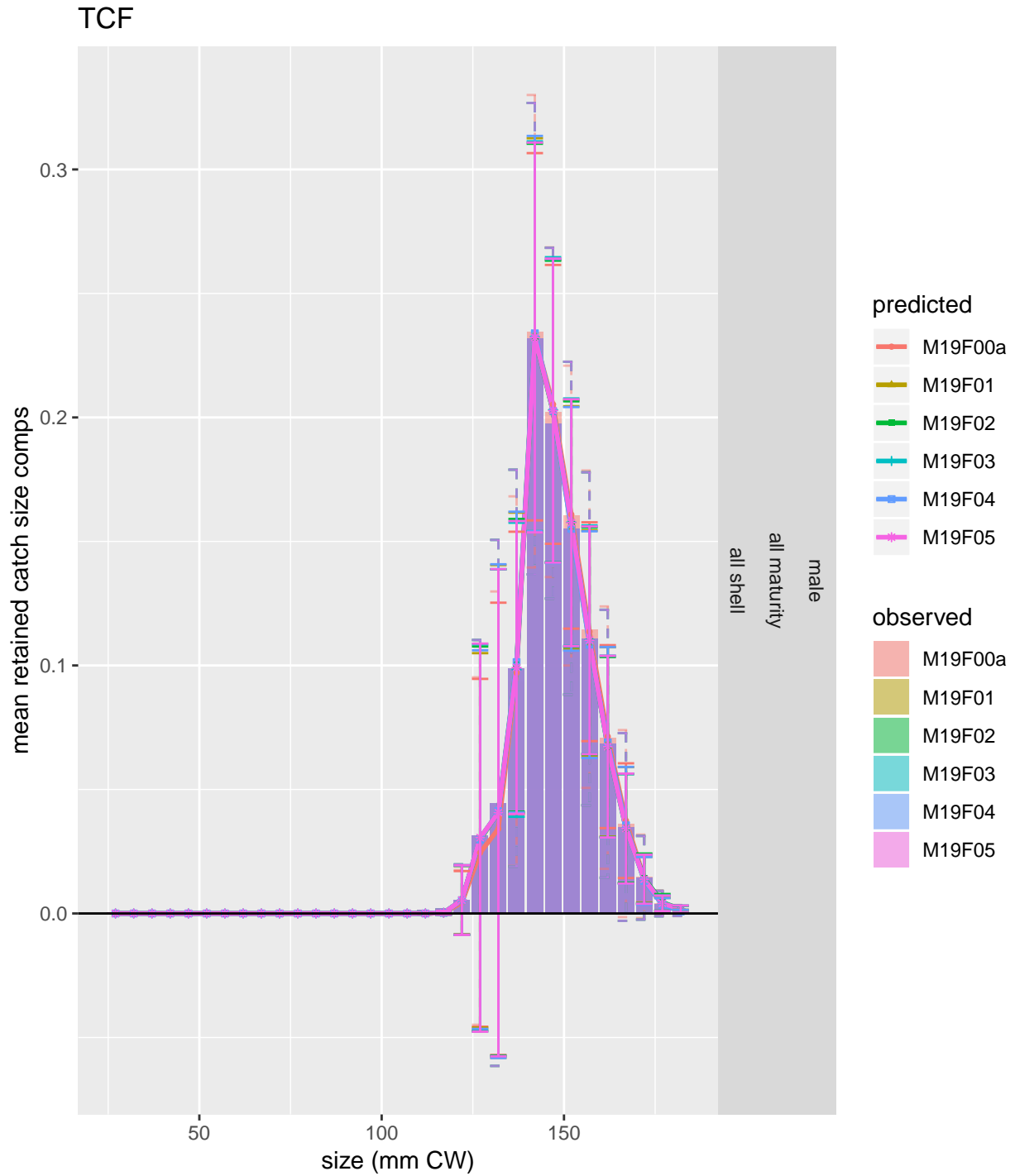


Figure 1: Comparison of observed and predicted mean retained catch size comps for TCF.

# Total catch mean size compositions

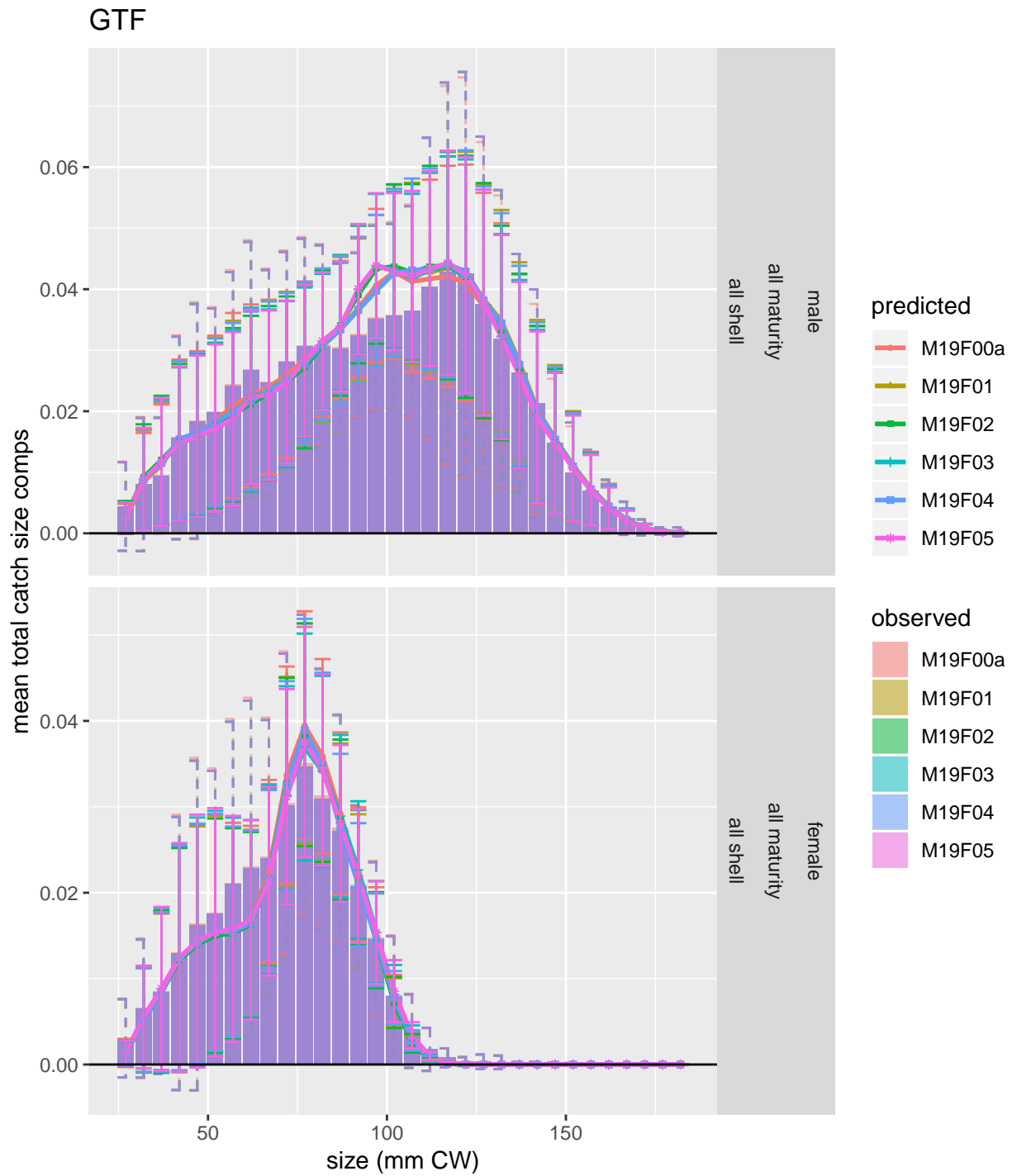


Figure 2: Comparison of observed and predicted mean total catch size comps for GTF.

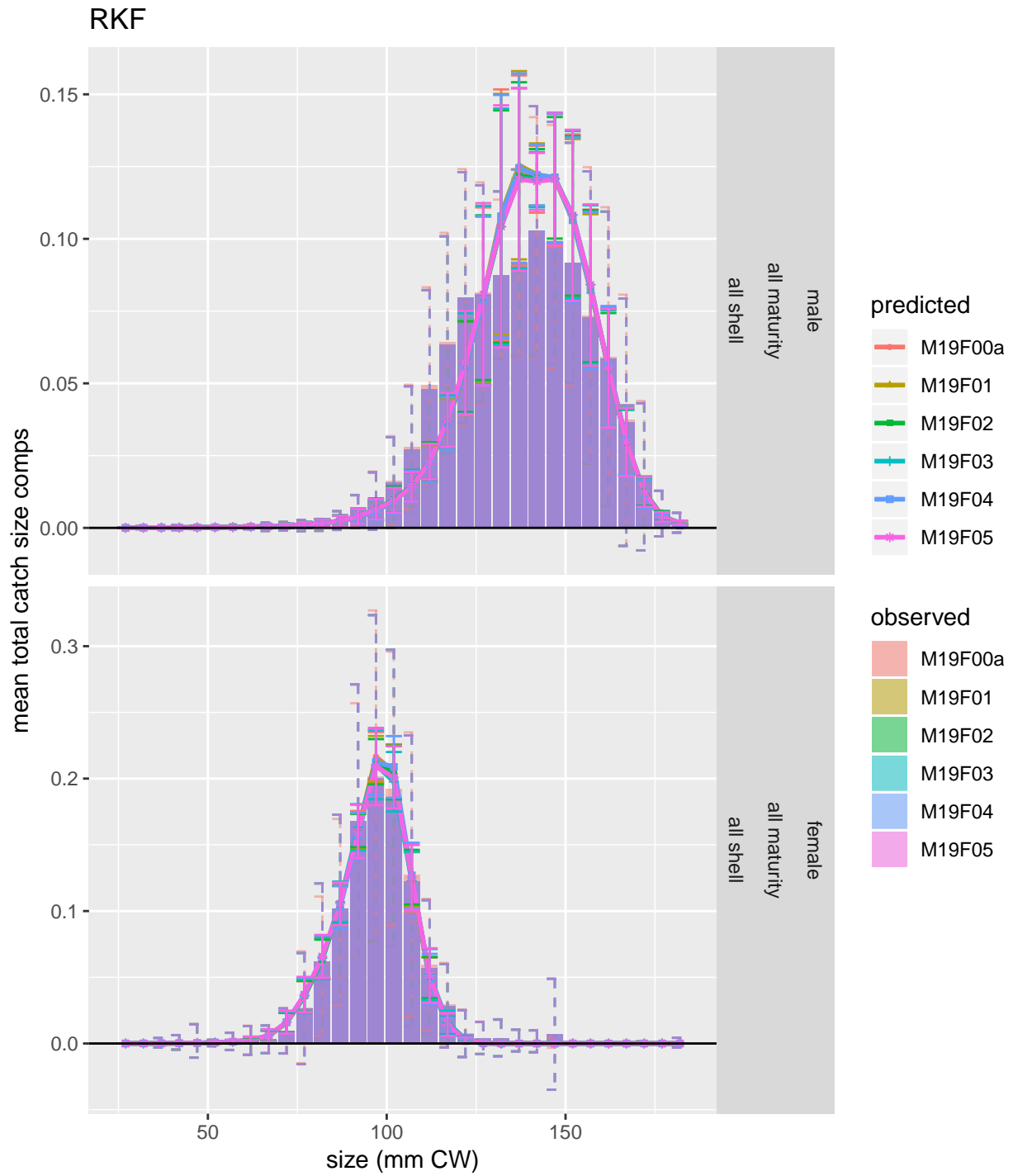


Figure 3: Comparison of observed and predicted mean total catch size comps for RKF.

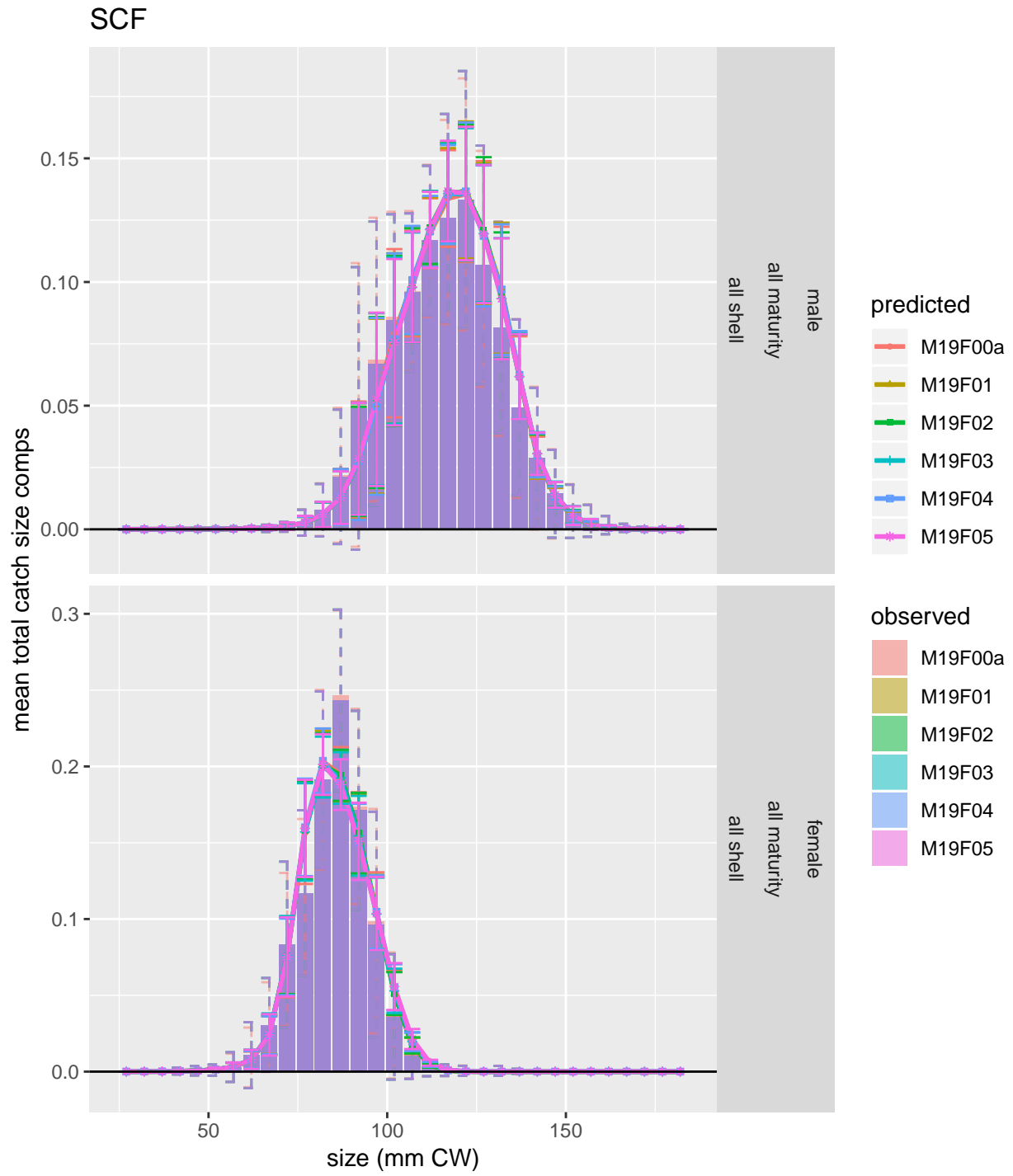


Figure 4: Comparison of observed and predicted mean total catch size comps for SCF.

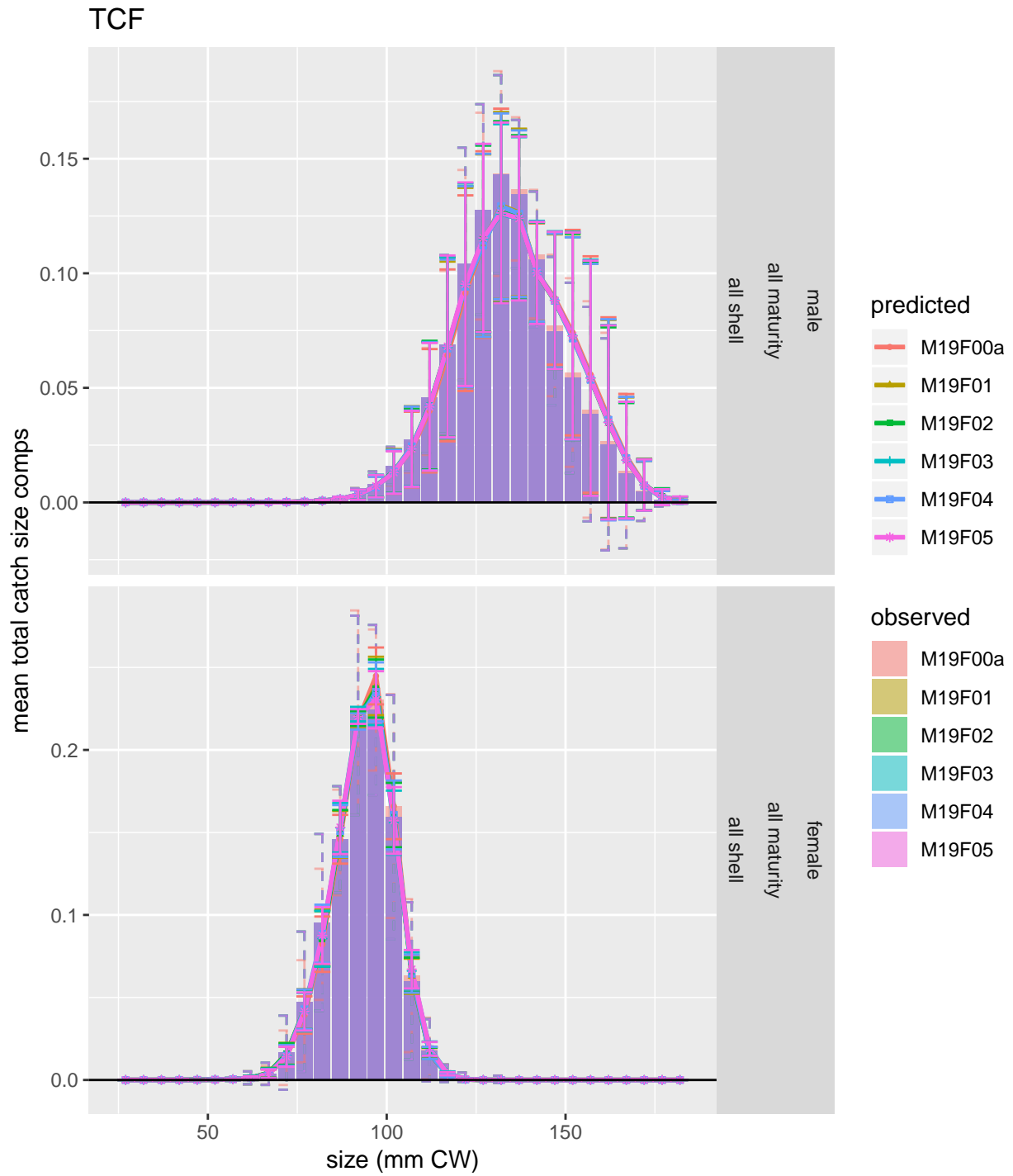


Figure 5: Comparison of observed and predicted mean total catch size comps for TCF.



# Fishery retained catch size composition residuals

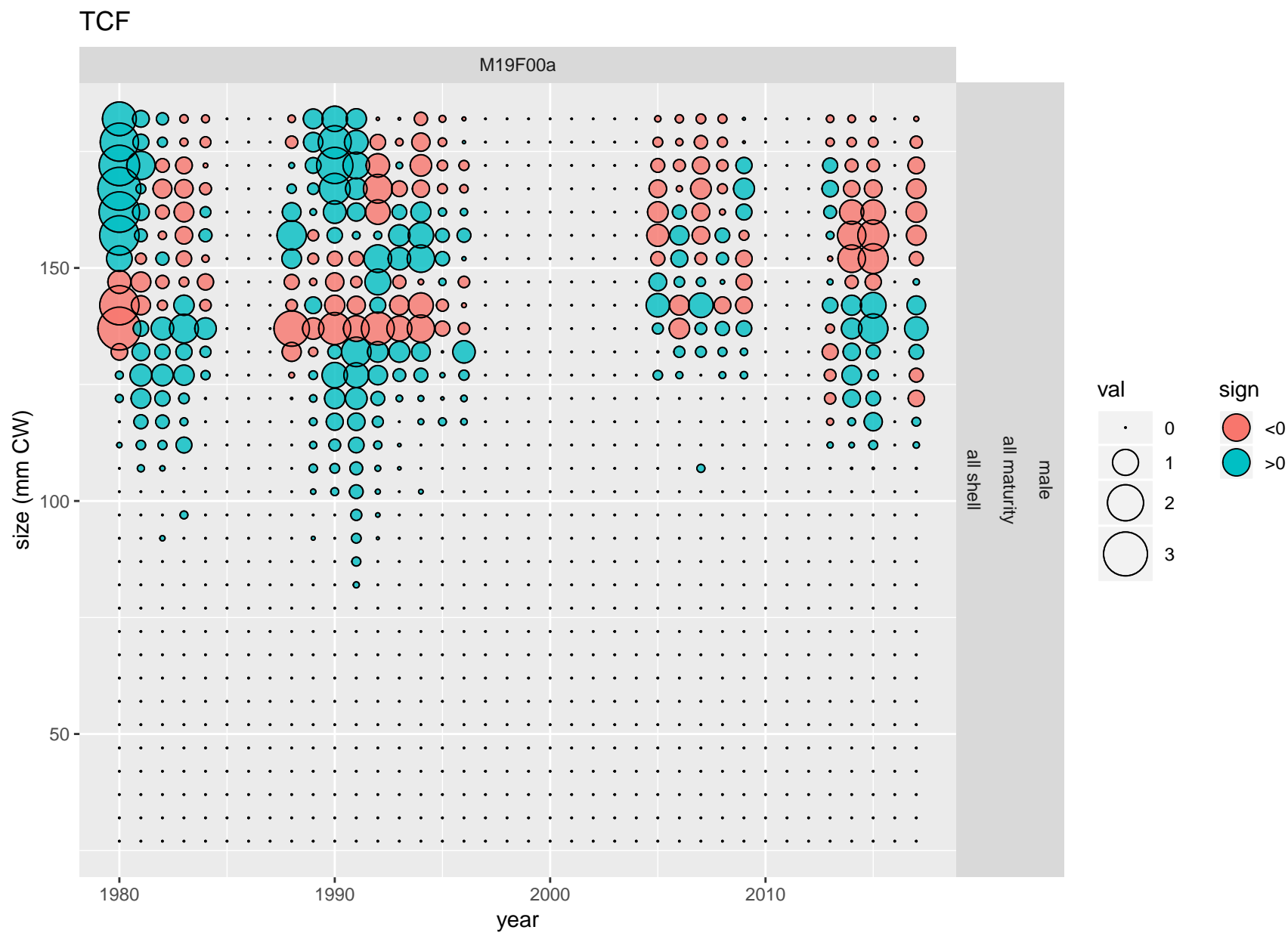


Figure 6: Pearson's residuals for male proportions-at-size from the TCF for scenario M19F00a.



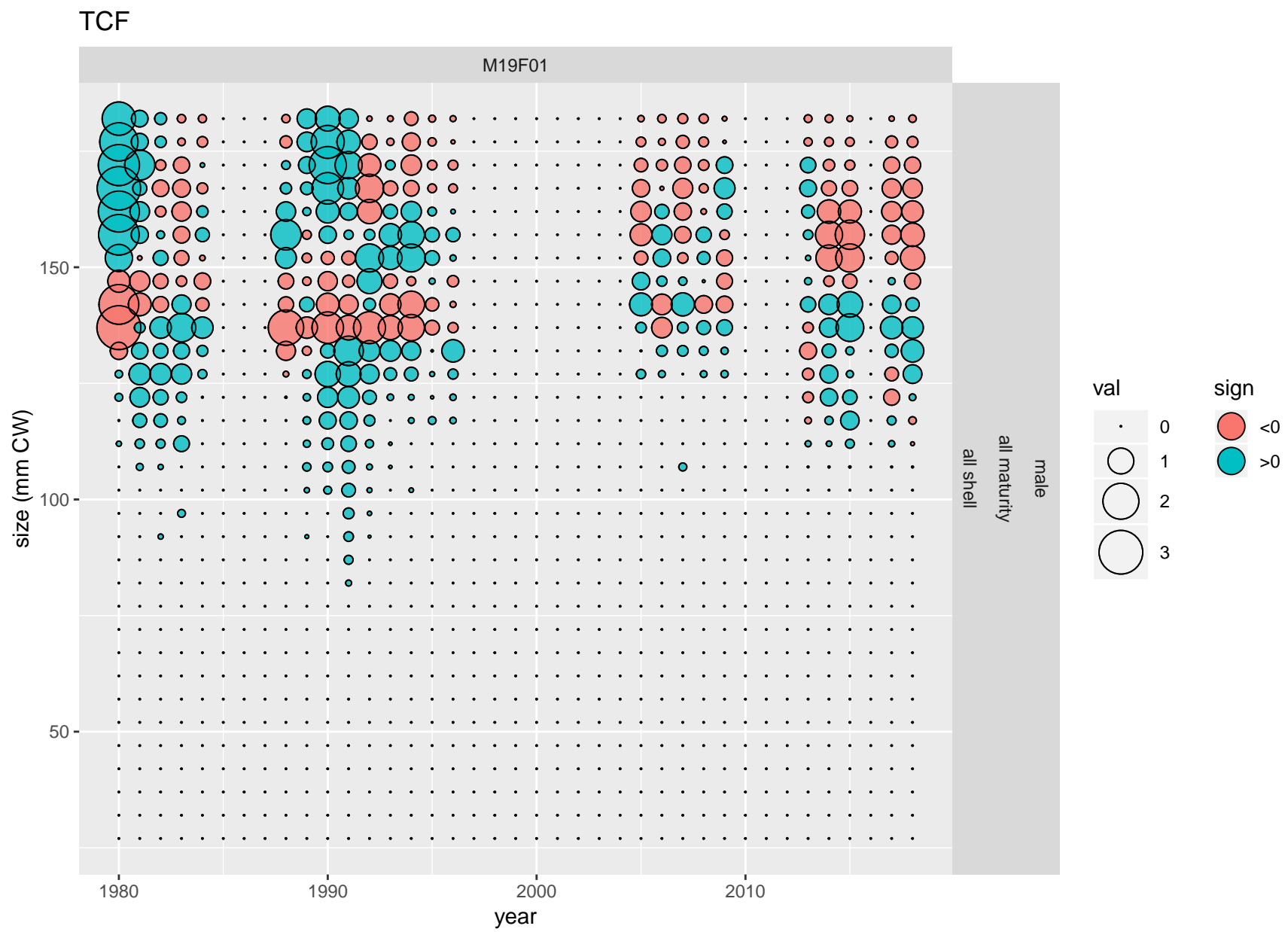


Figure 7: Pearson's residuals for male proportions-at-size from the TCF for scenario M19F01.

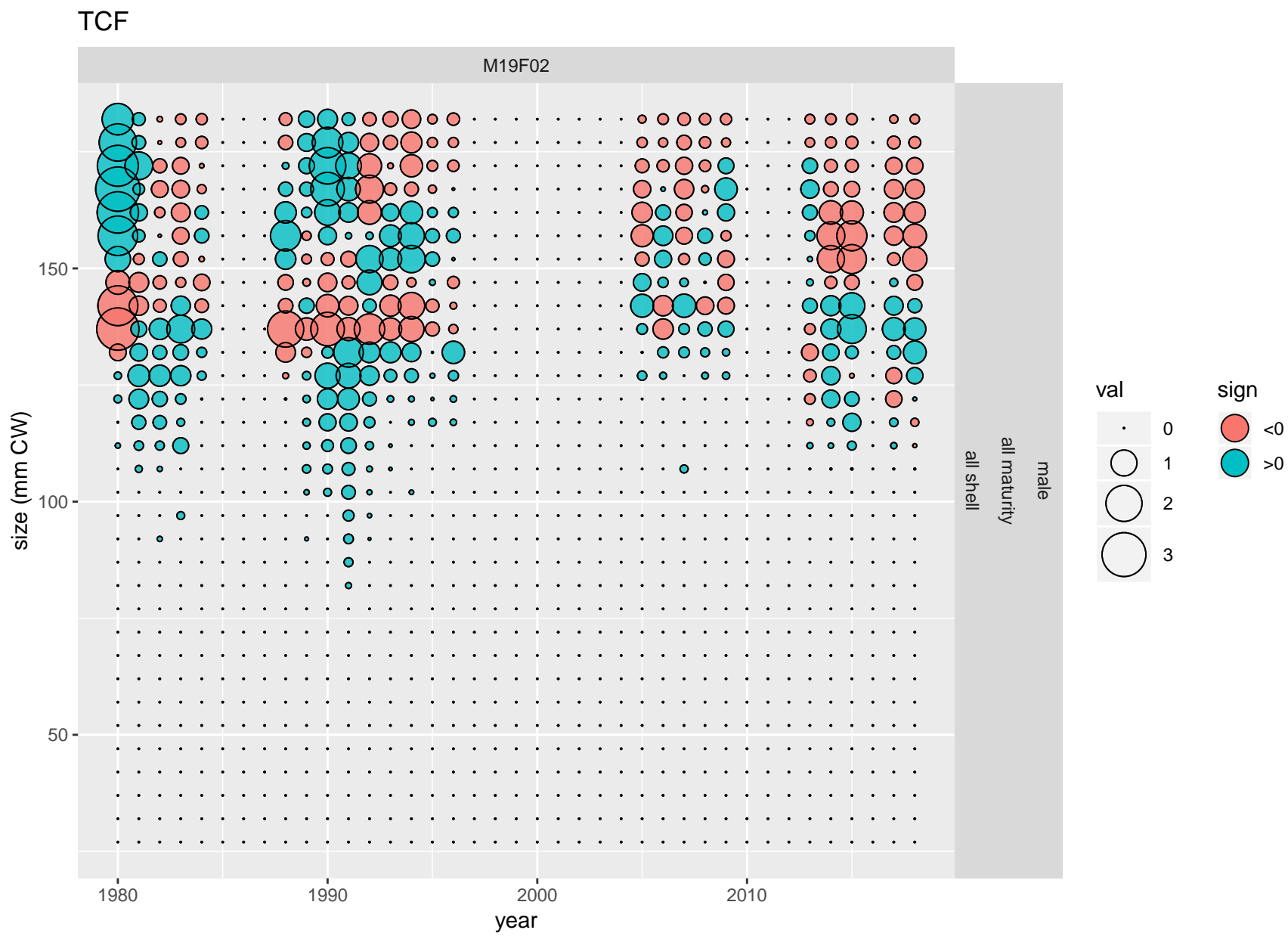


Figure 8: Pearson's residuals for male proportions-at-size from the TCF for scenario M19F02.

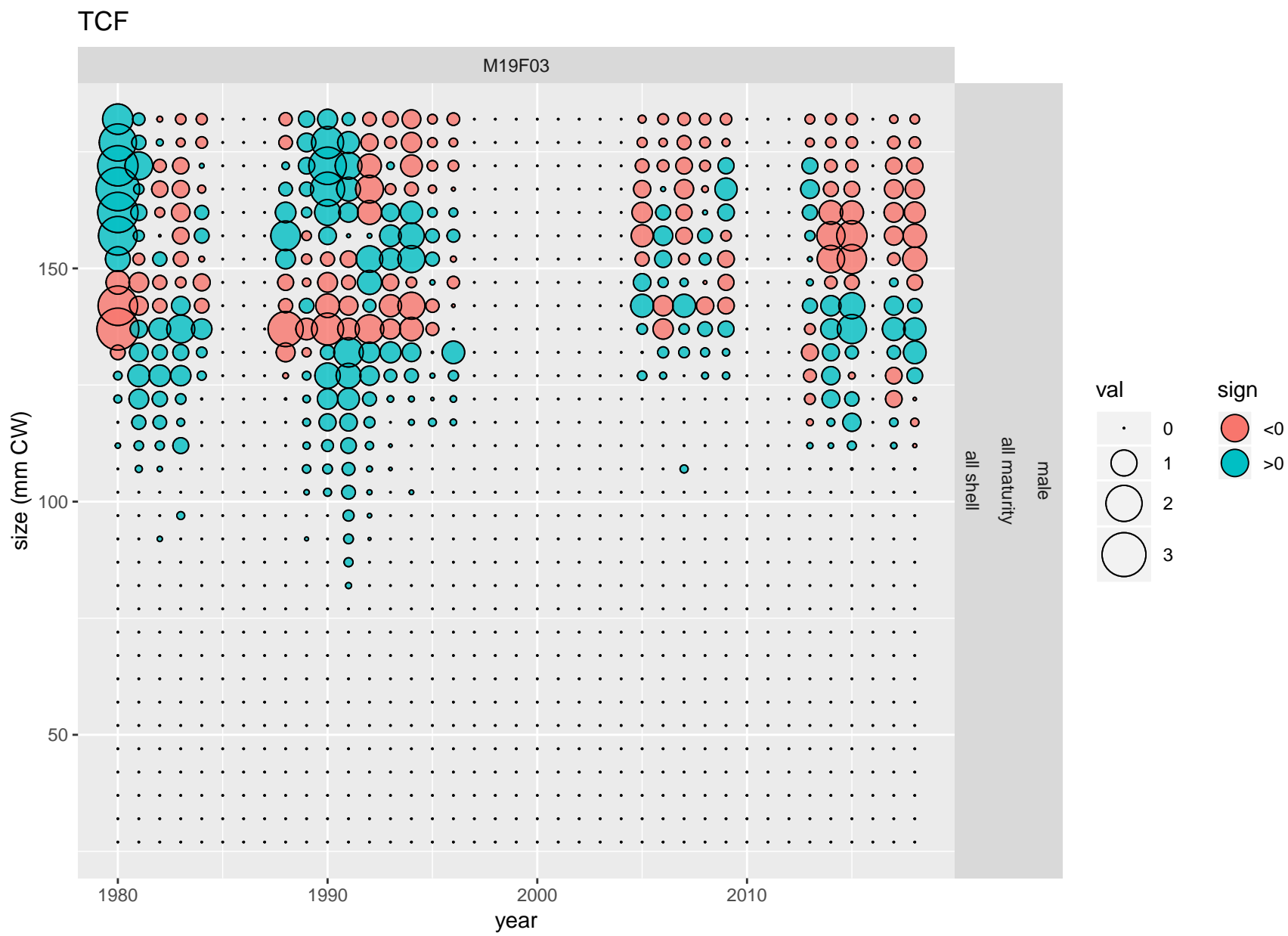


Figure 9: Pearson's residuals for male proportions-at-size from the TCF for scenario M19F03.

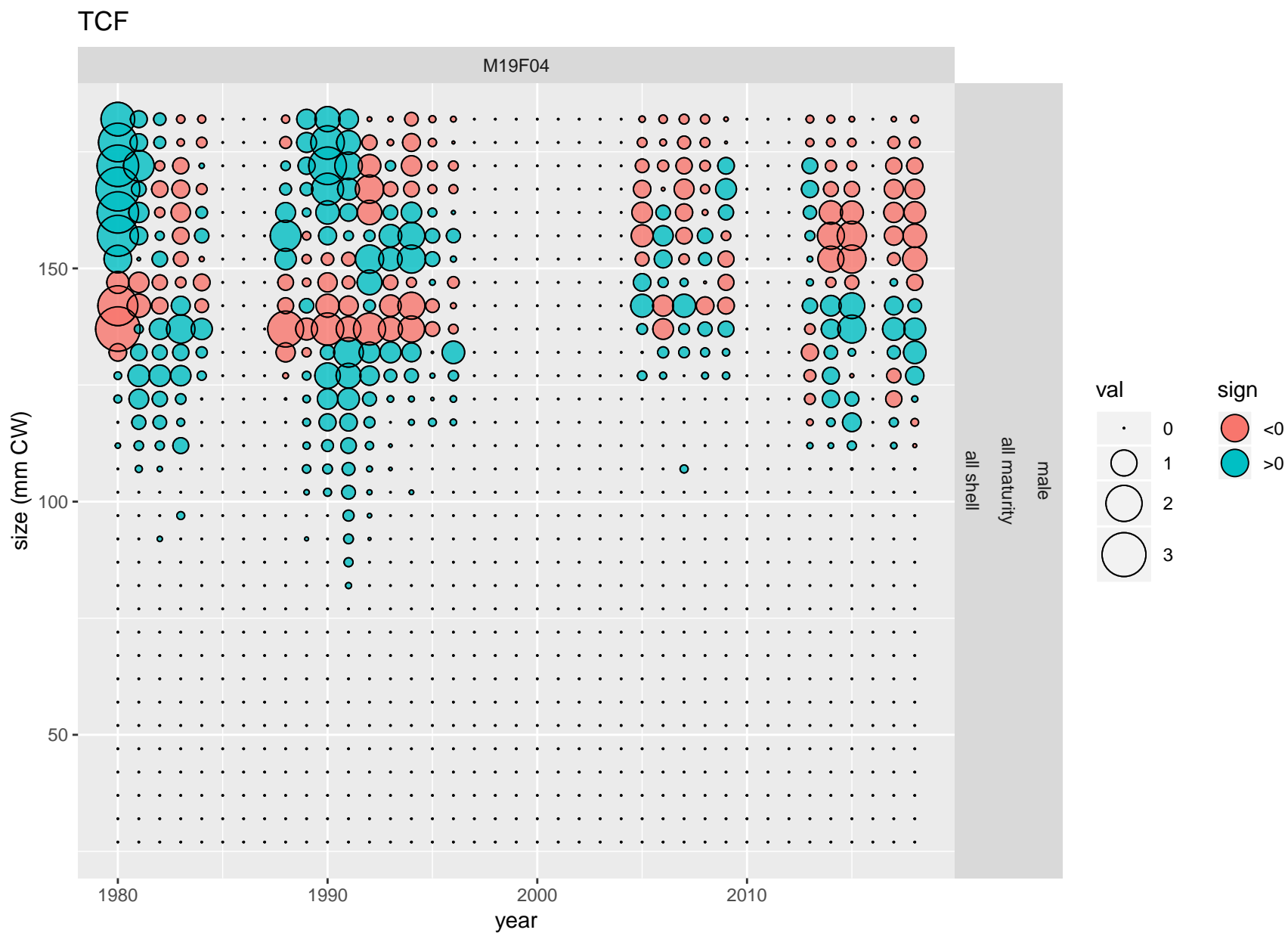


Figure 10: Pearson's residuals for male proportions-at-size from the TCF for scenario M19F04.

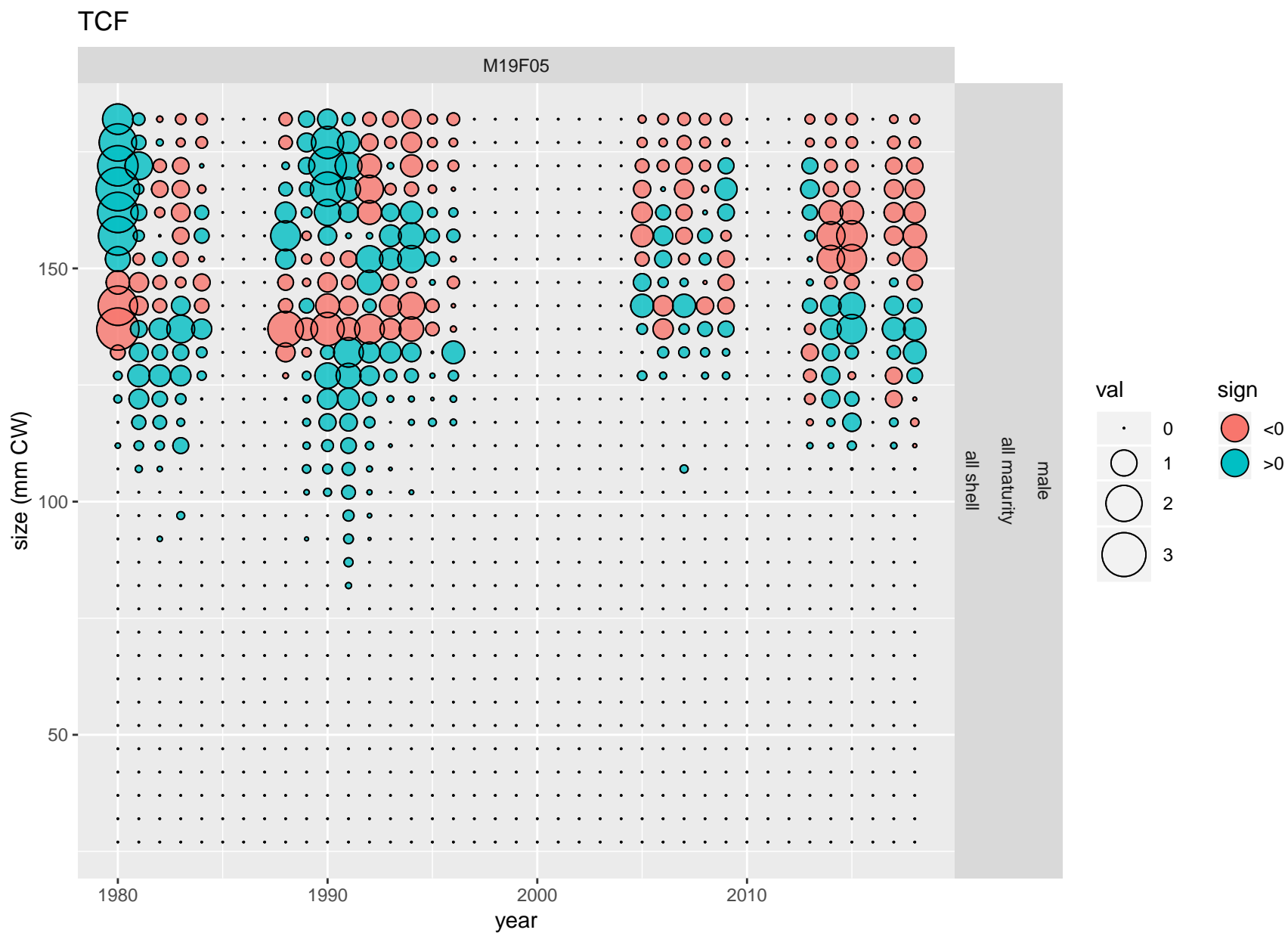


Figure 11: Pearson's residuals for male proportions-at-size from the TCF for scenario M19F05.

# Effective Ns for retained catch size compositions

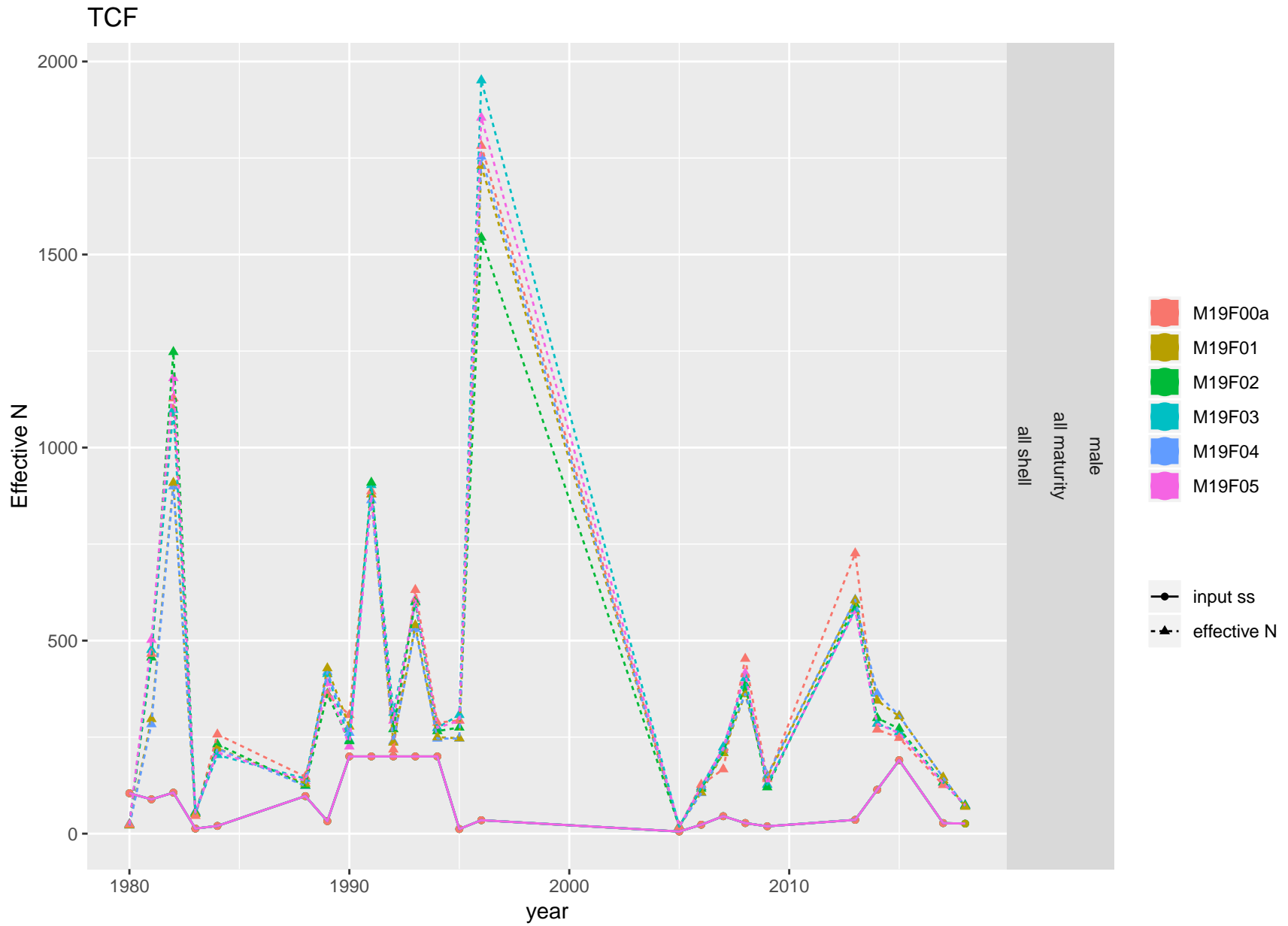


Figure 12: Input and effective sample sizes from retained catch size compositions from the TCF fishery.

# Total catch size composition residuals

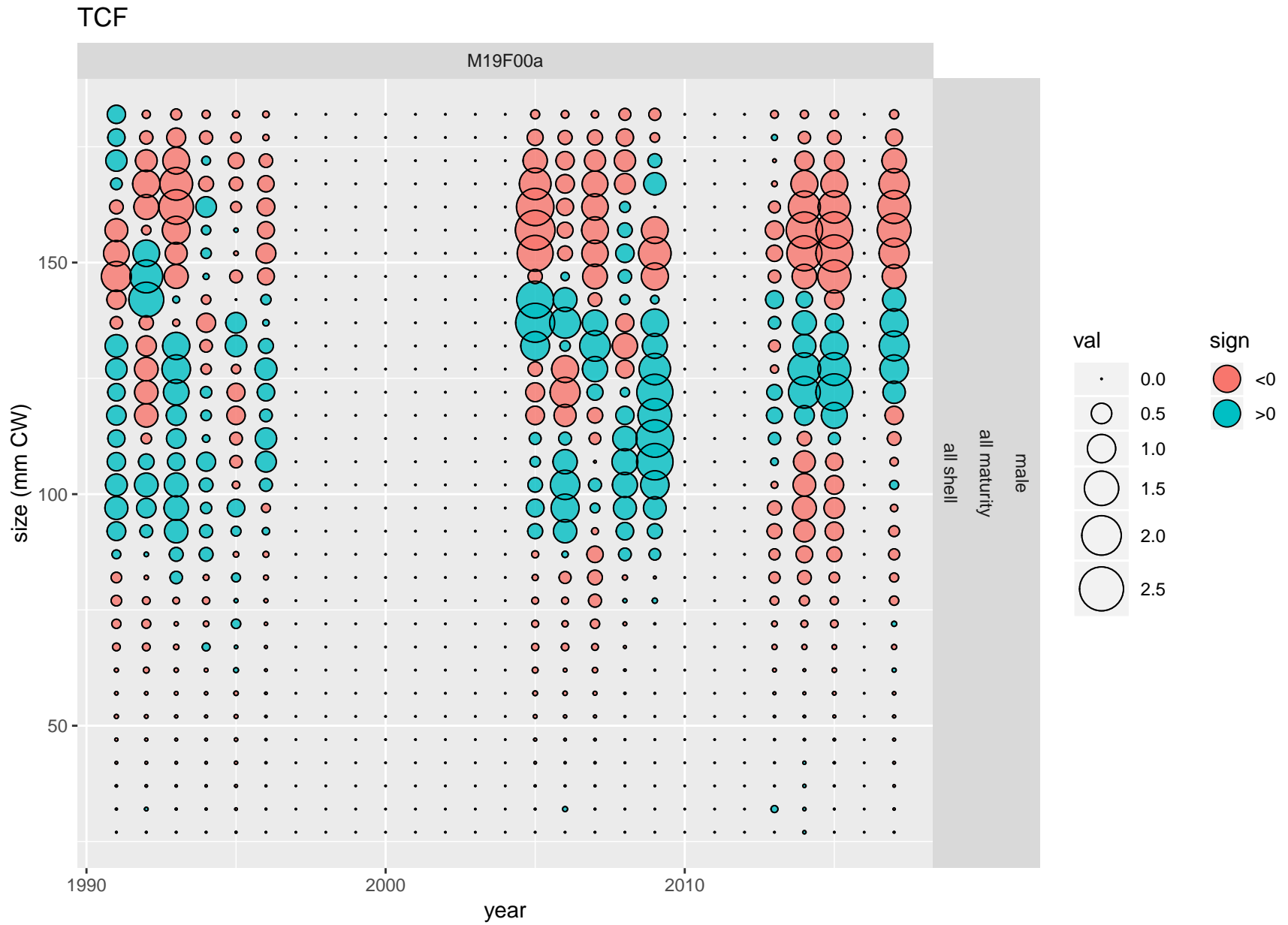


Figure 13: Pearson's residuals for male proportions-at-size from the TCF for scenario M19F00a.

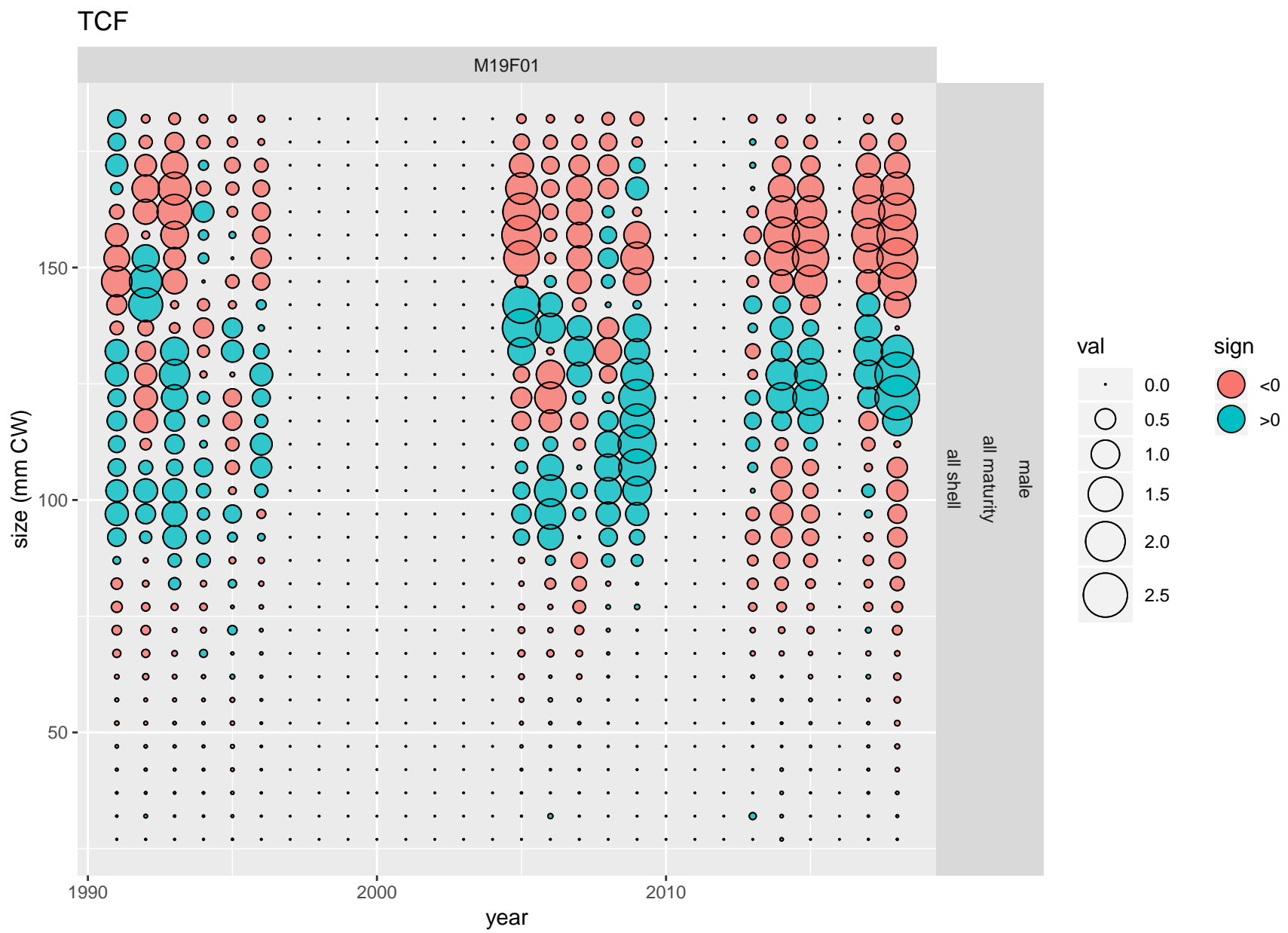


Figure 14: Pearson's residuals for male proportions-at-size from the TCF for scenario M19F01.



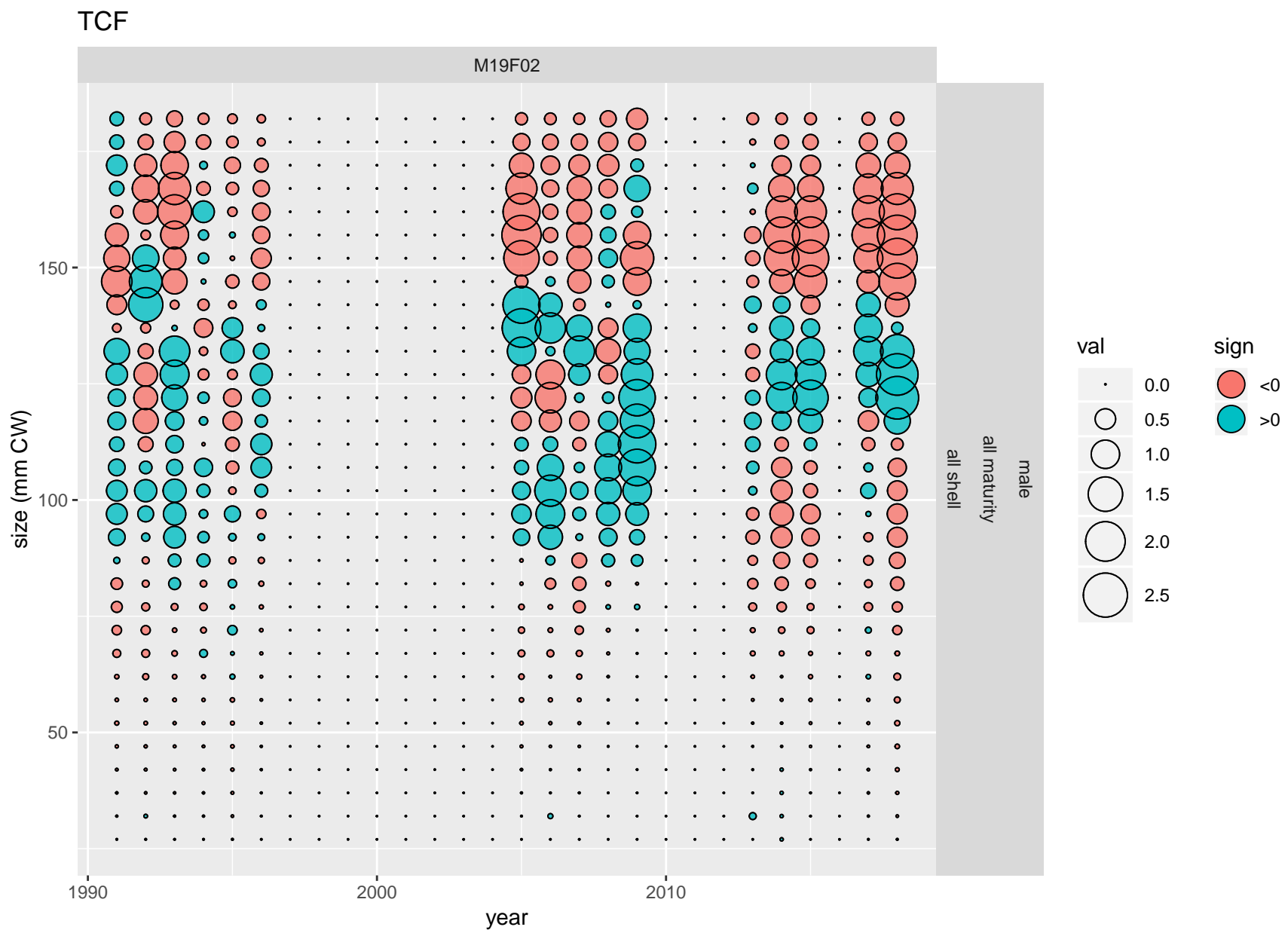


Figure 15: Pearson's residuals for male proportions-at-size from the TCF for scenario M19F02.

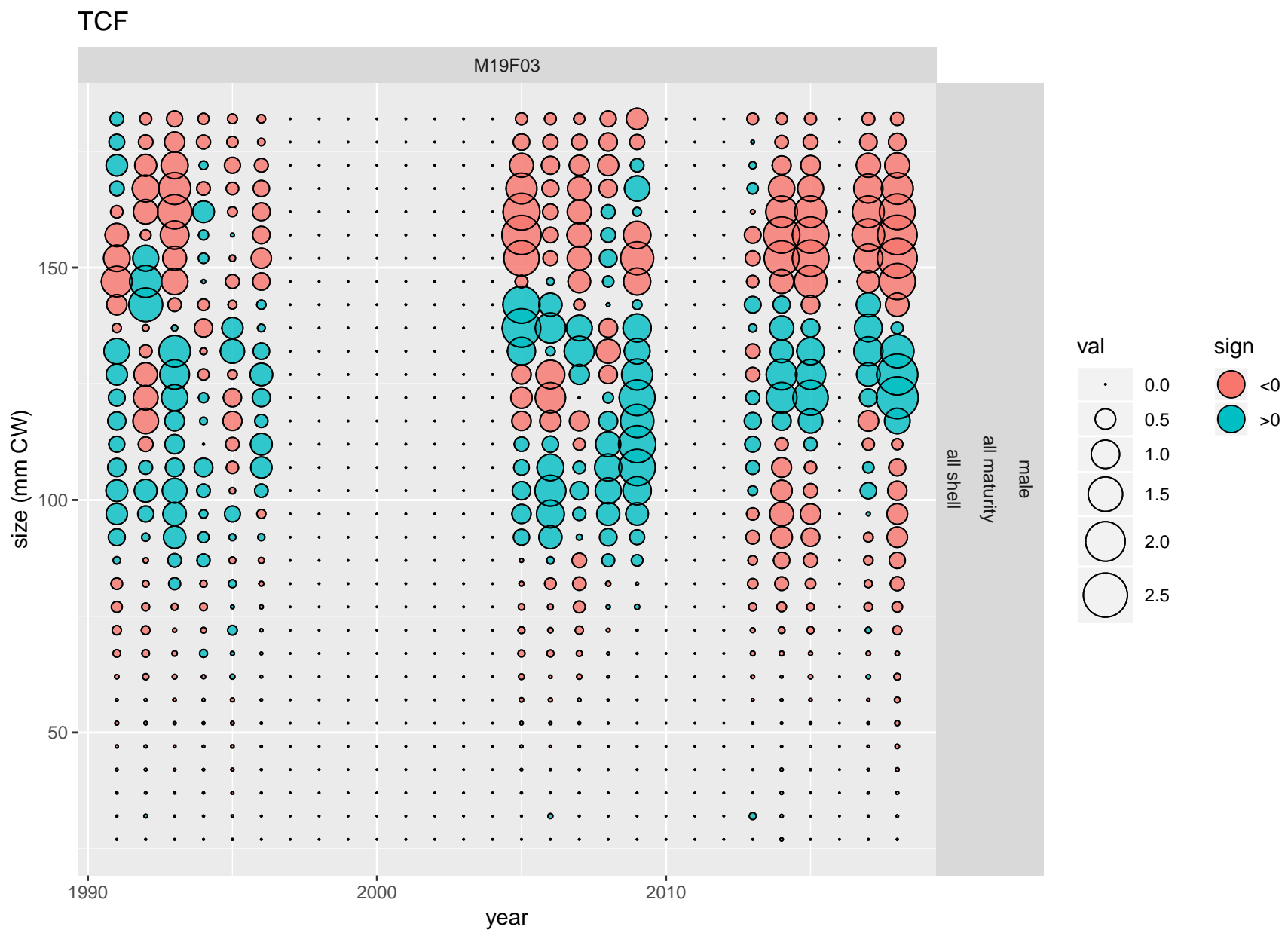


Figure 16: Pearson's residuals for male proportions-at-size from the TCF for scenario M19F03.

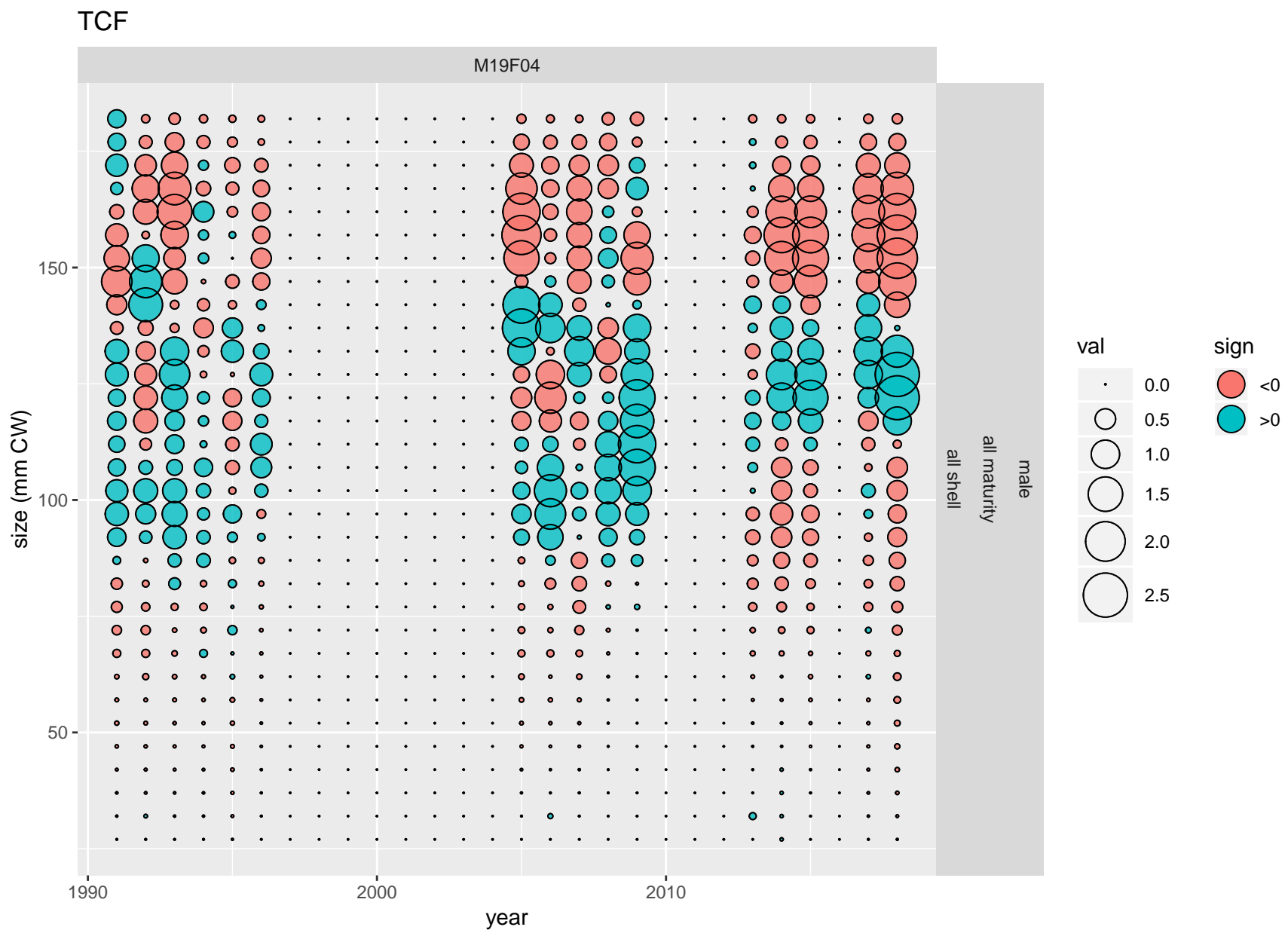


Figure 17: Pearson's residuals for male proportions-at-size from the TCF for scenario M19F04.

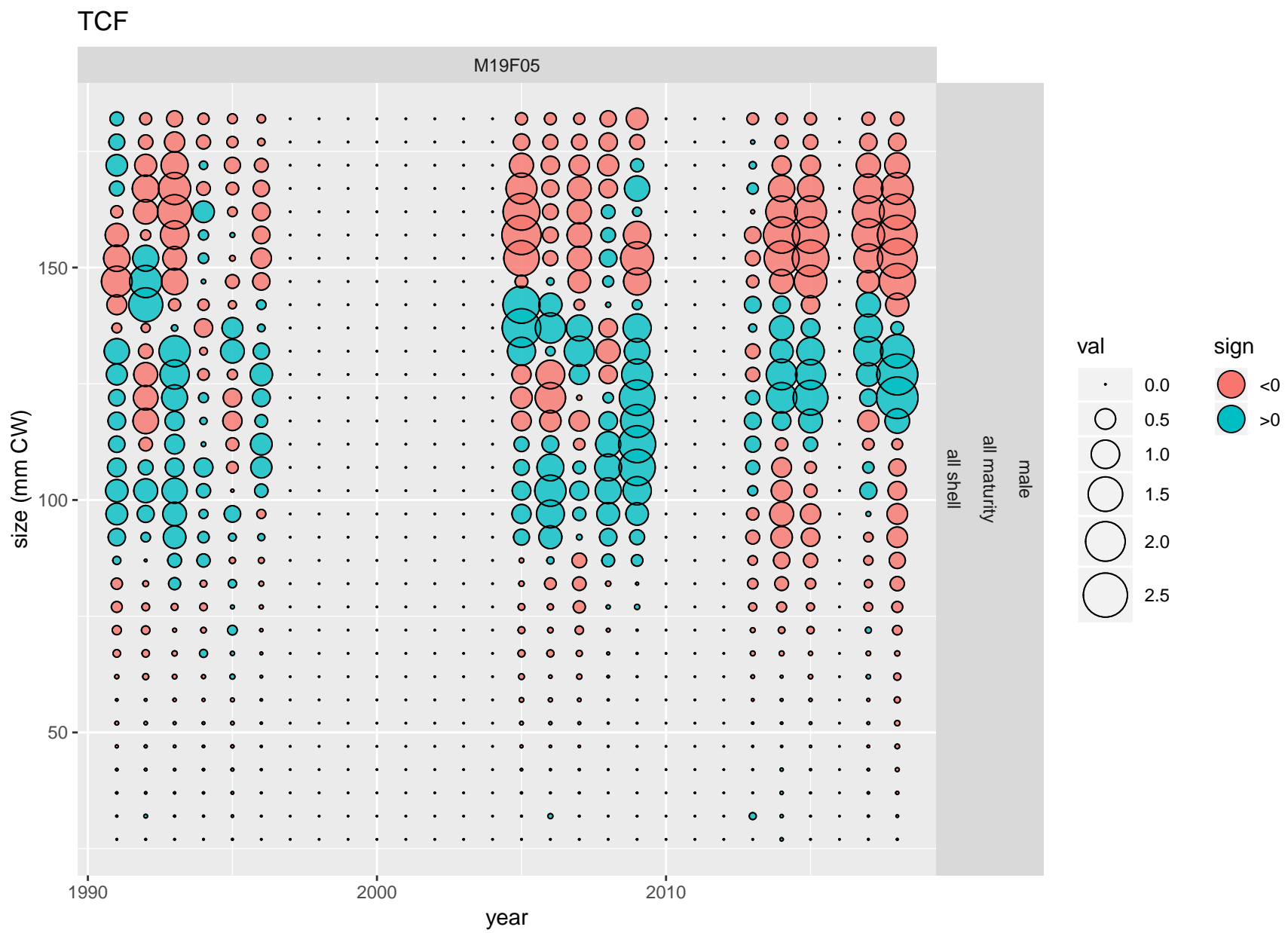


Figure 18: Pearson's residuals for male proportions-at-size from the TCF for scenario M19F05.

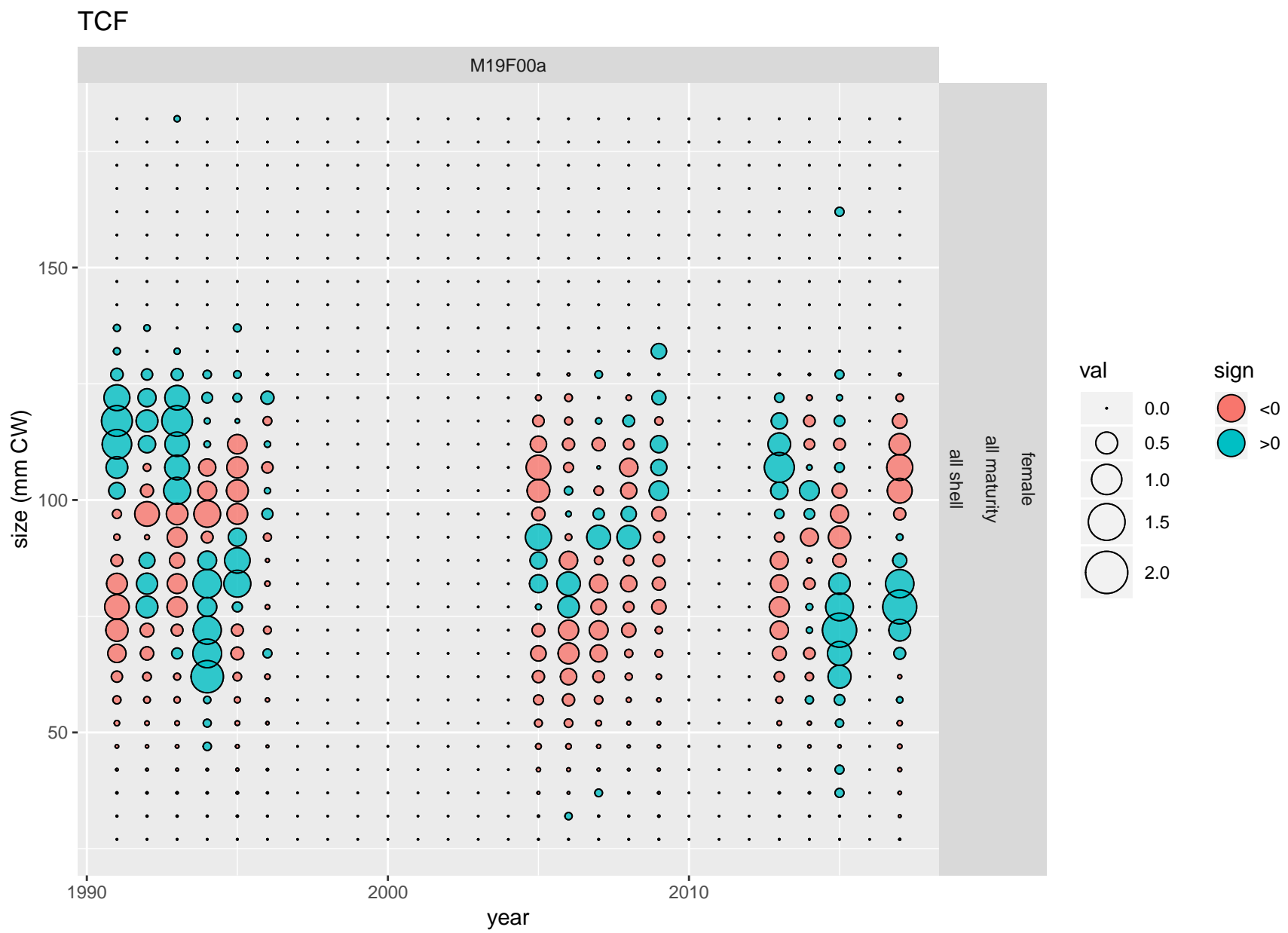


Figure 19: Pearson's residuals for female proportions-at-size from the TCF for scenario M19F00a.

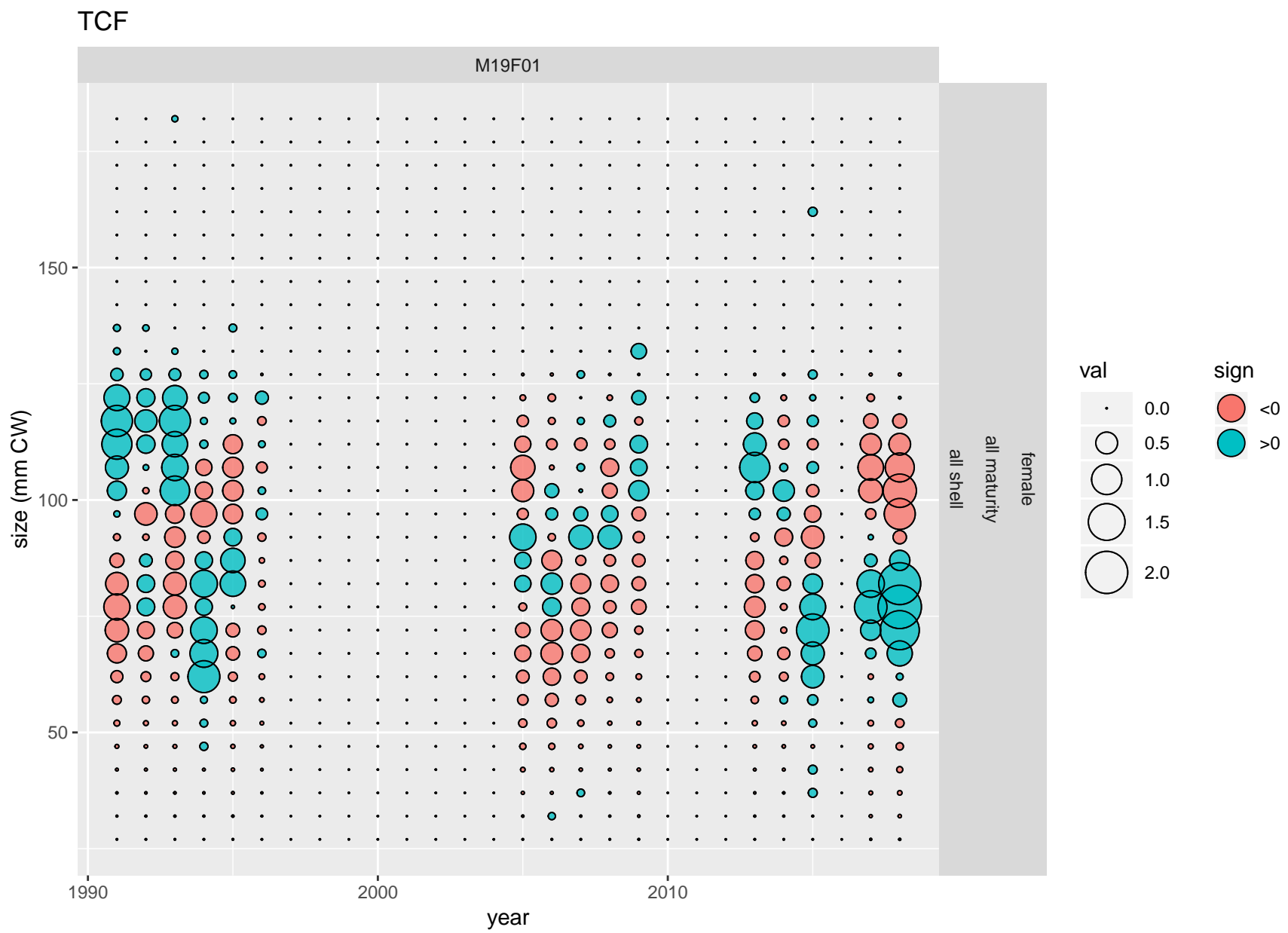


Figure 20: Pearson's residuals for female proportions-at-size from the TCF for scenario M19F01.

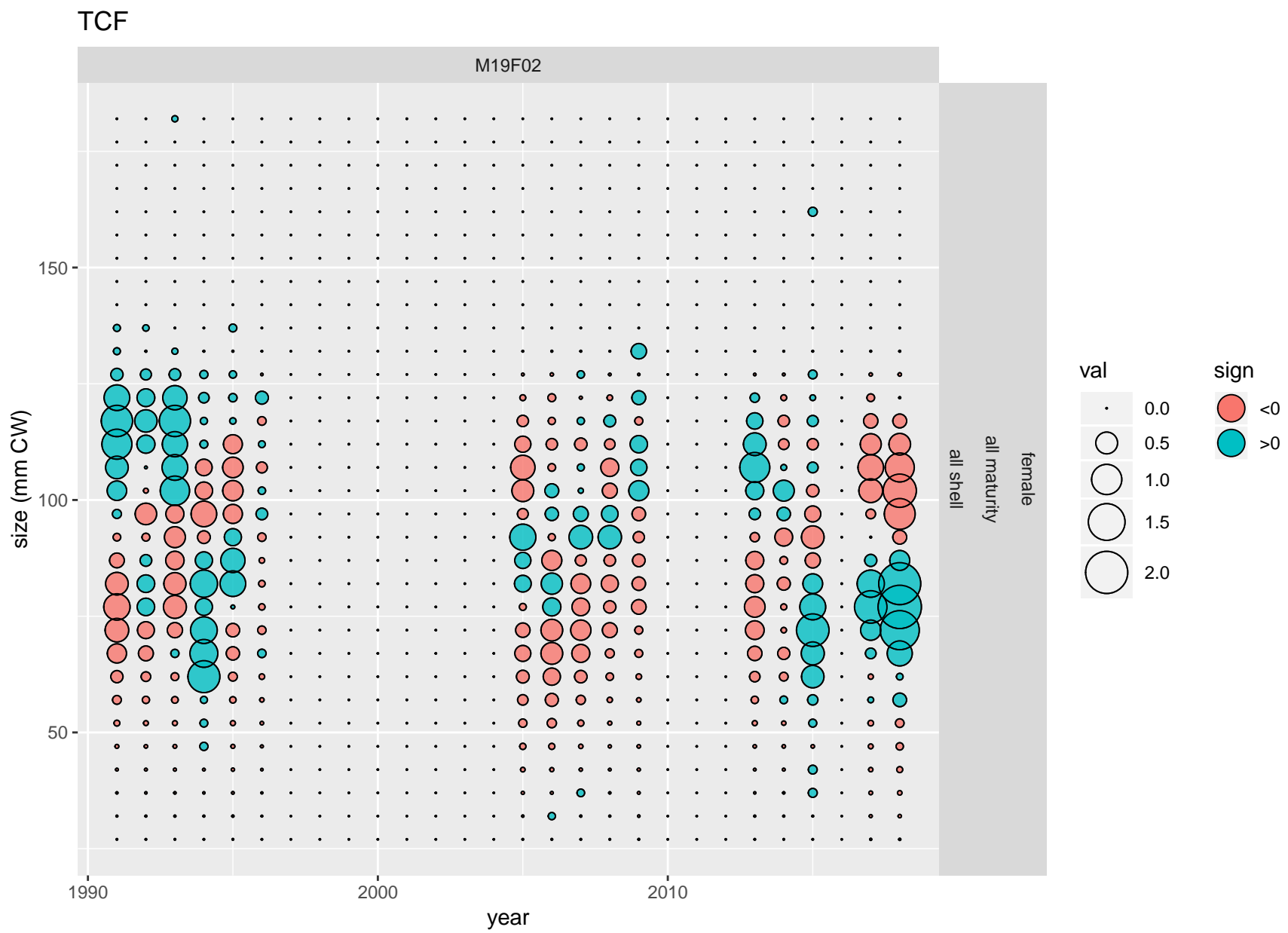


Figure 21: Pearson's residuals for female proportions-at-size from the TCF for scenario M19F02.

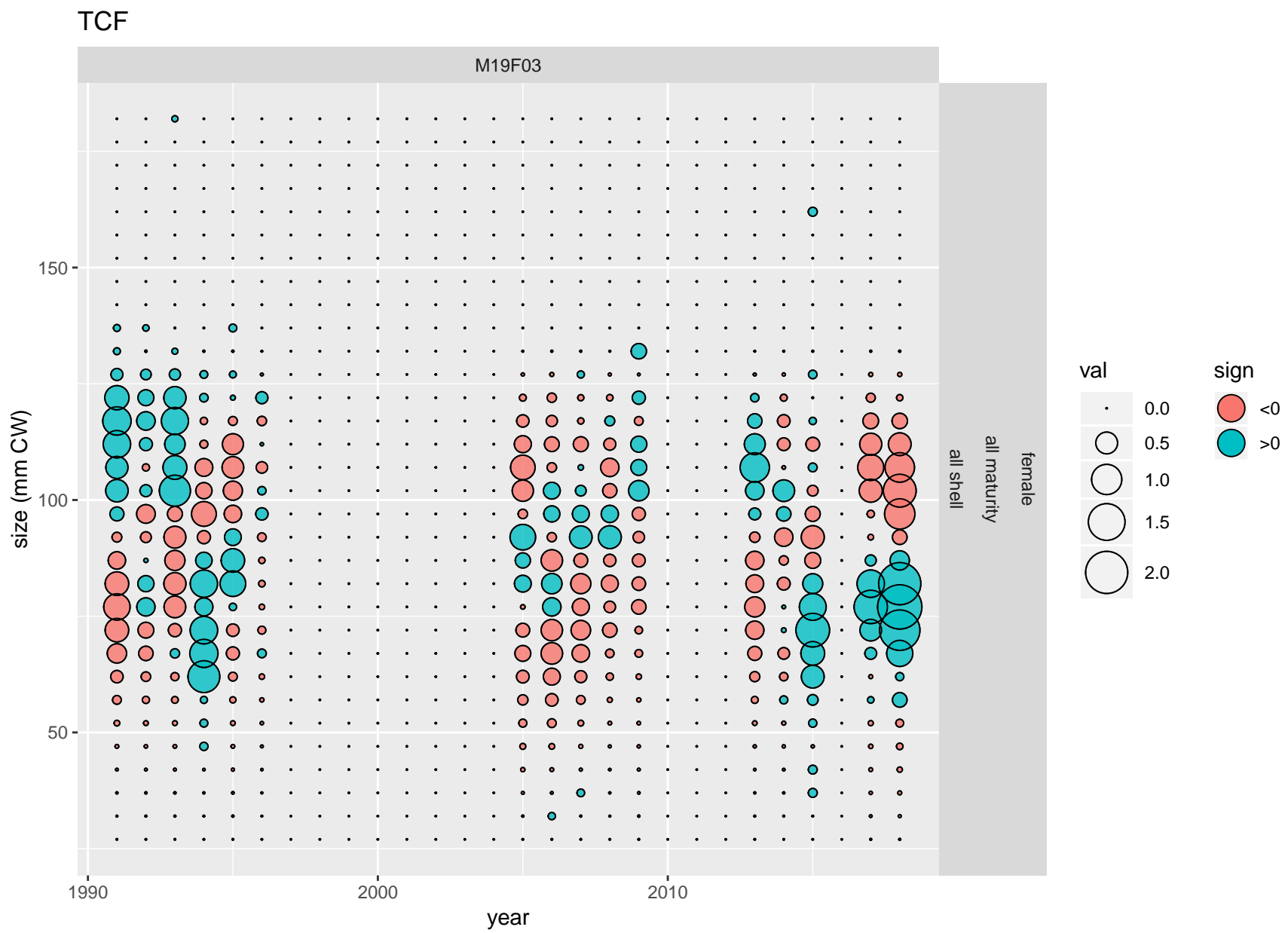


Figure 22: Pearson's residuals for female proportions-at-size from the TCF for scenario M19F03.



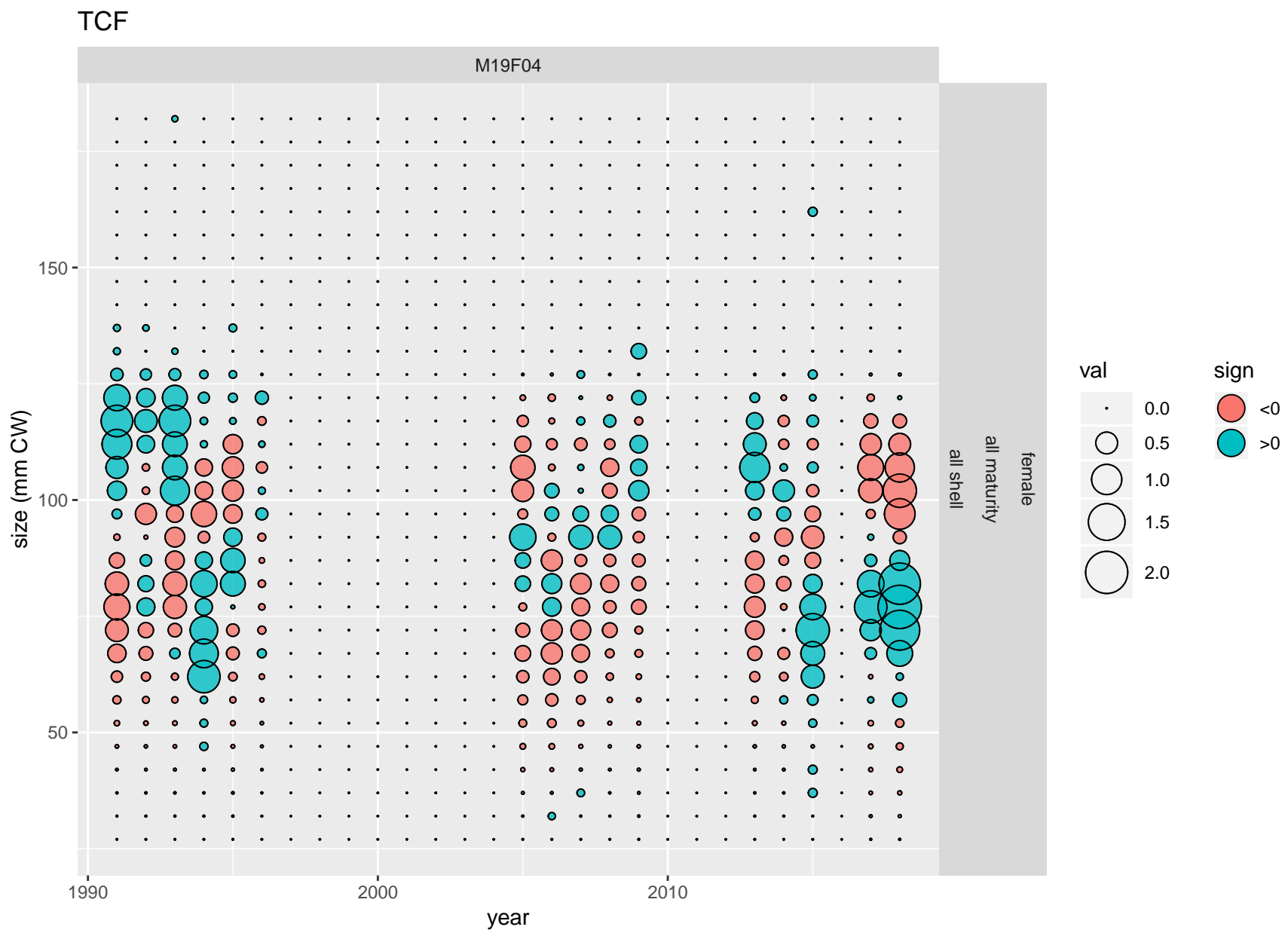


Figure 23: Pearson's residuals for female proportions-at-size from the TCF for scenario M19F04.

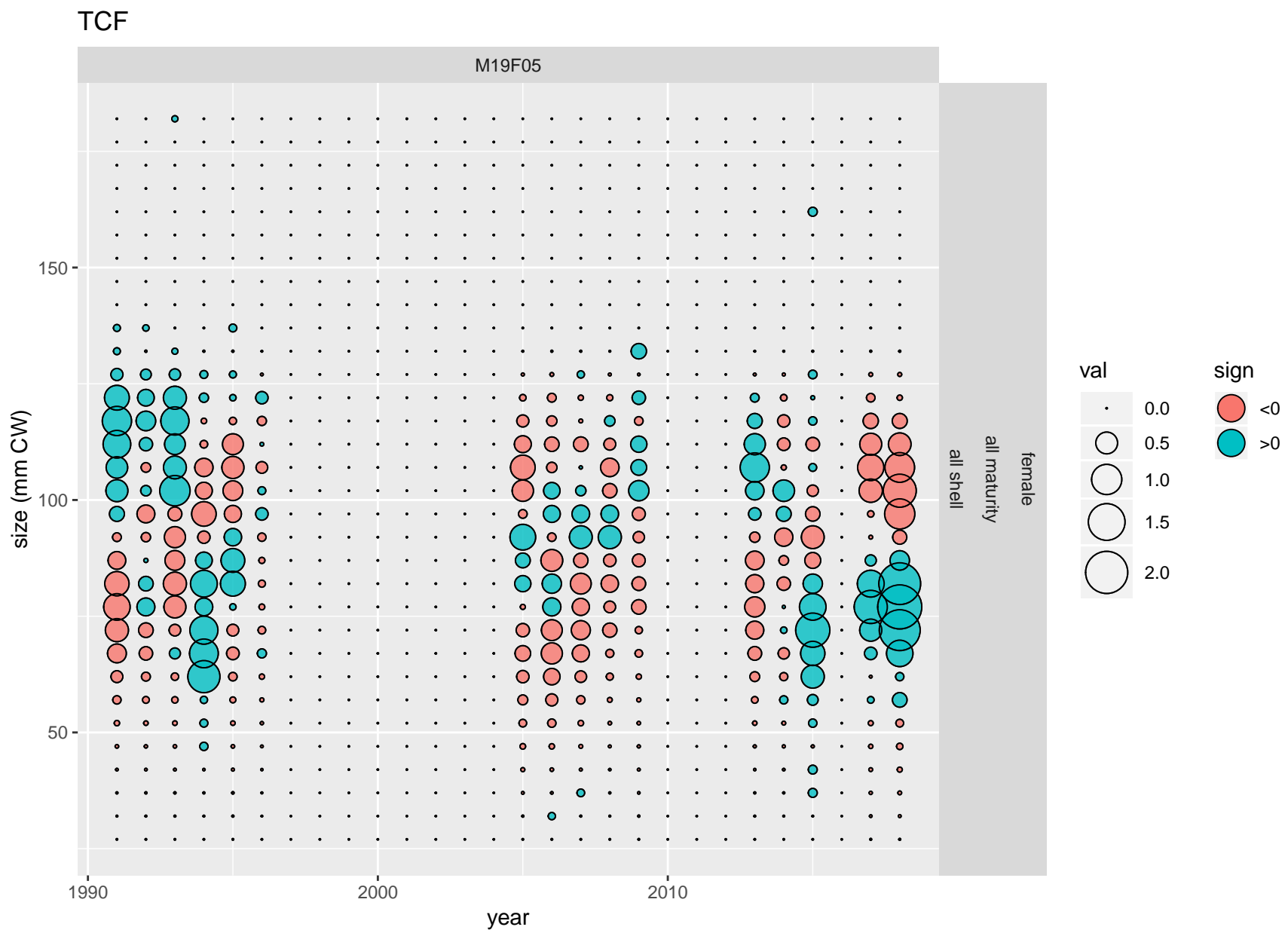


Figure 24: Pearson's residuals for female proportions-at-size from the TCF for scenario M19F05.

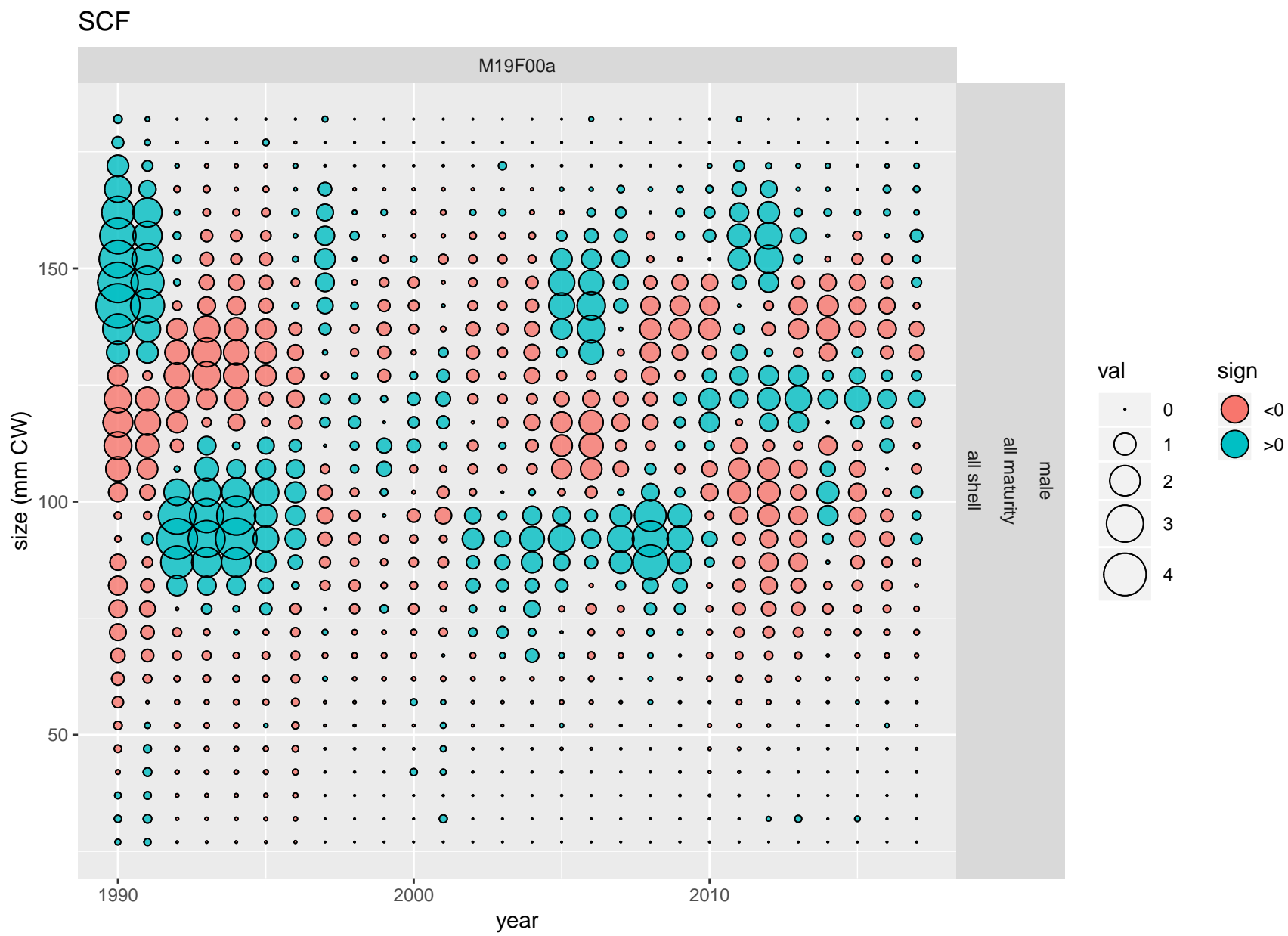


Figure 25: Pearson's residuals for male proportions-at-size from the SCF for scenario M19F00a.

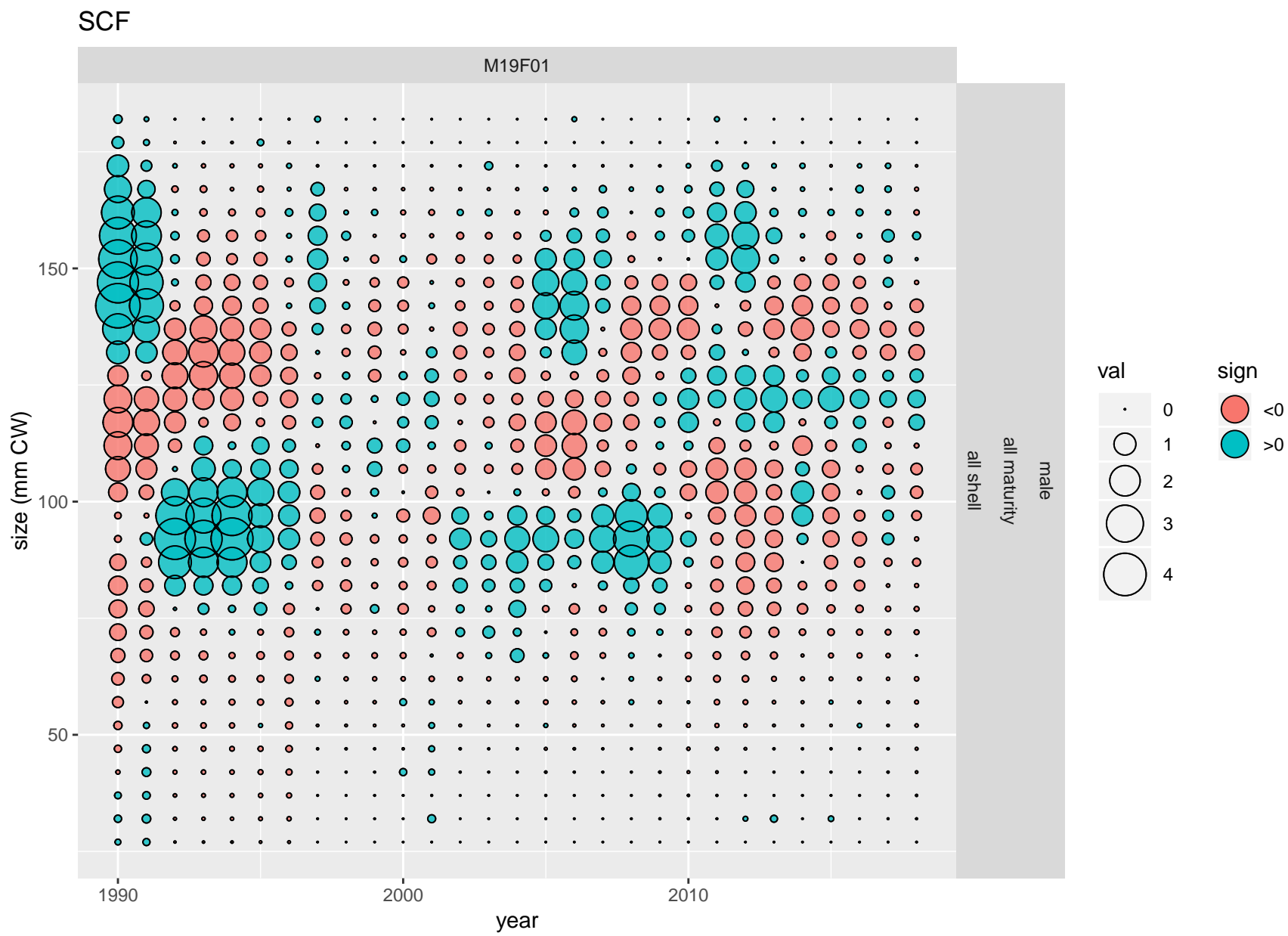


Figure 26: Pearson's residuals for male proportions-at-size from the SCF for scenario M19F01.

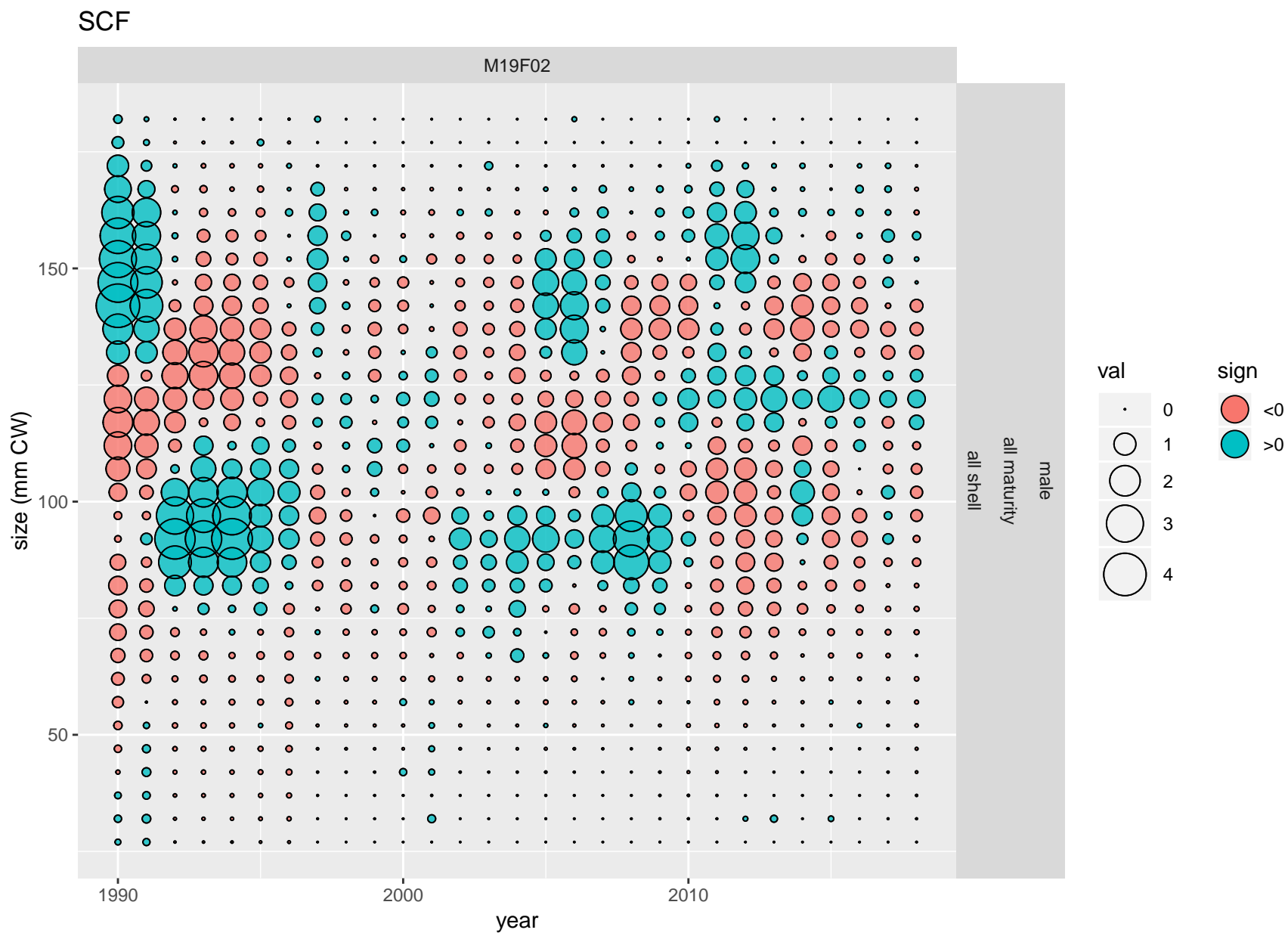


Figure 27: Pearson's residuals for male proportions-at-size from the SCF for scenario M19F02.

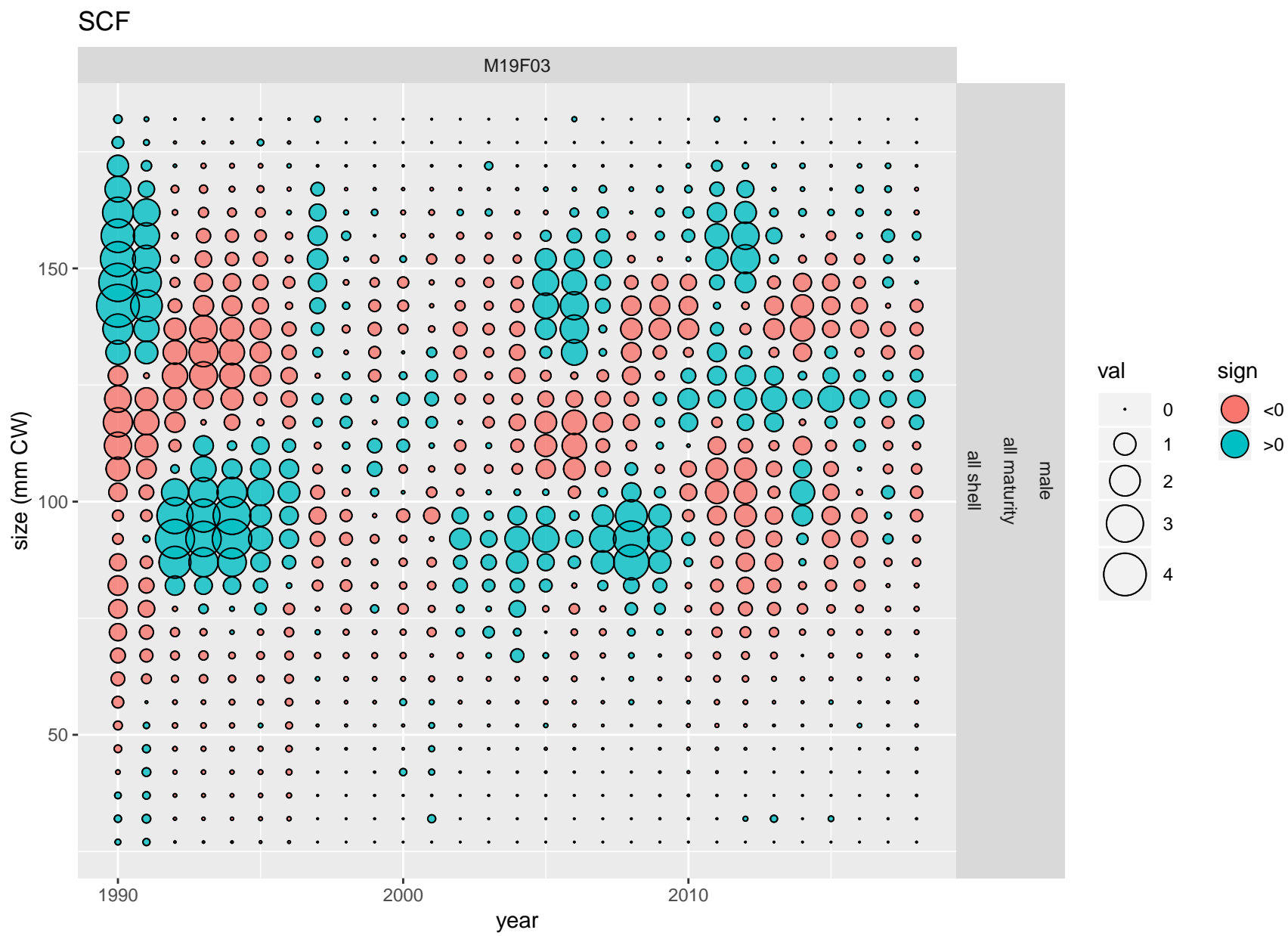


Figure 28: Pearson's residuals for male proportions-at-size from the SCF for scenario M19F03.

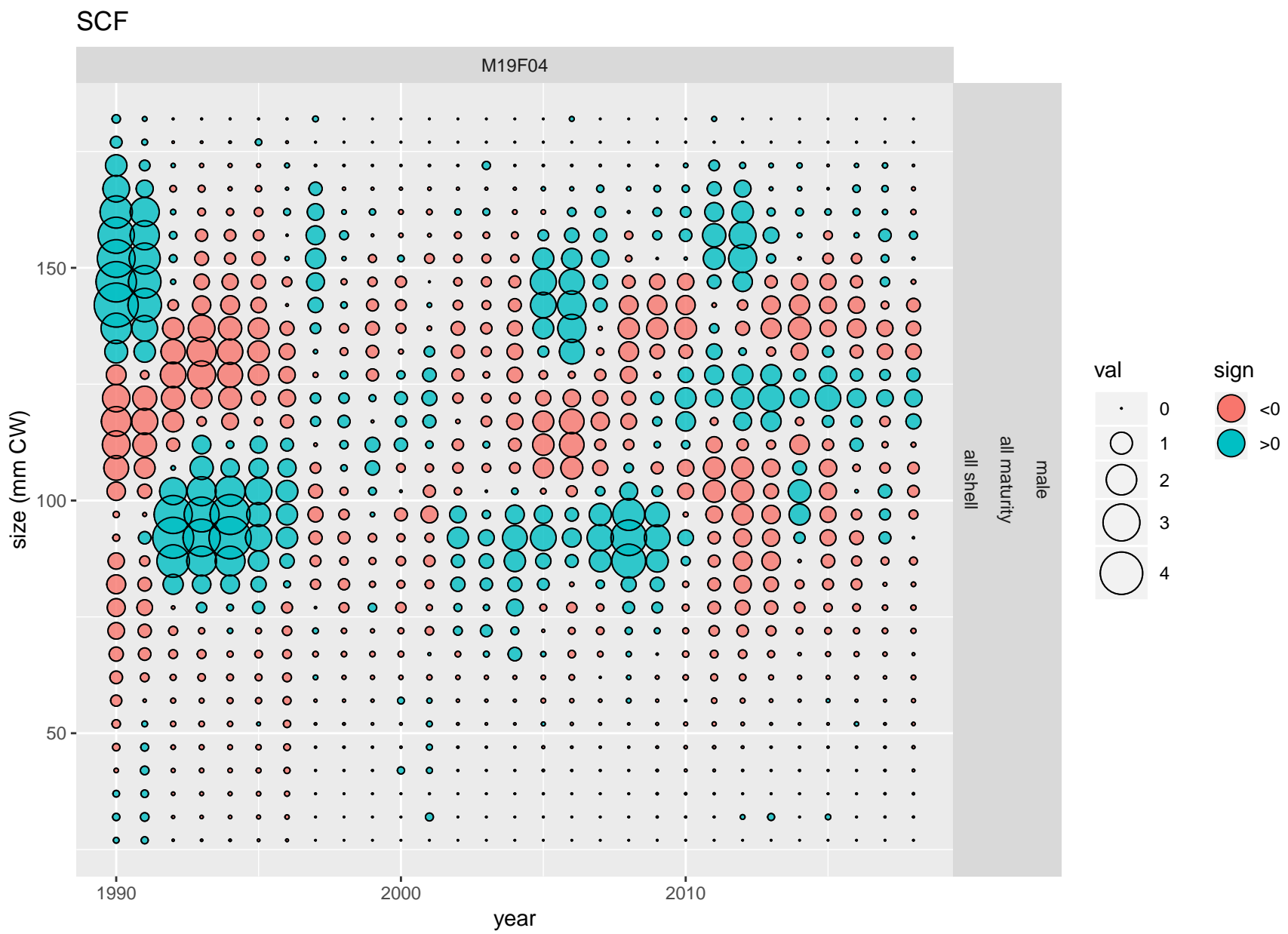


Figure 29: Pearson's residuals for male proportions-at-size from the SCF for scenario M19F04.

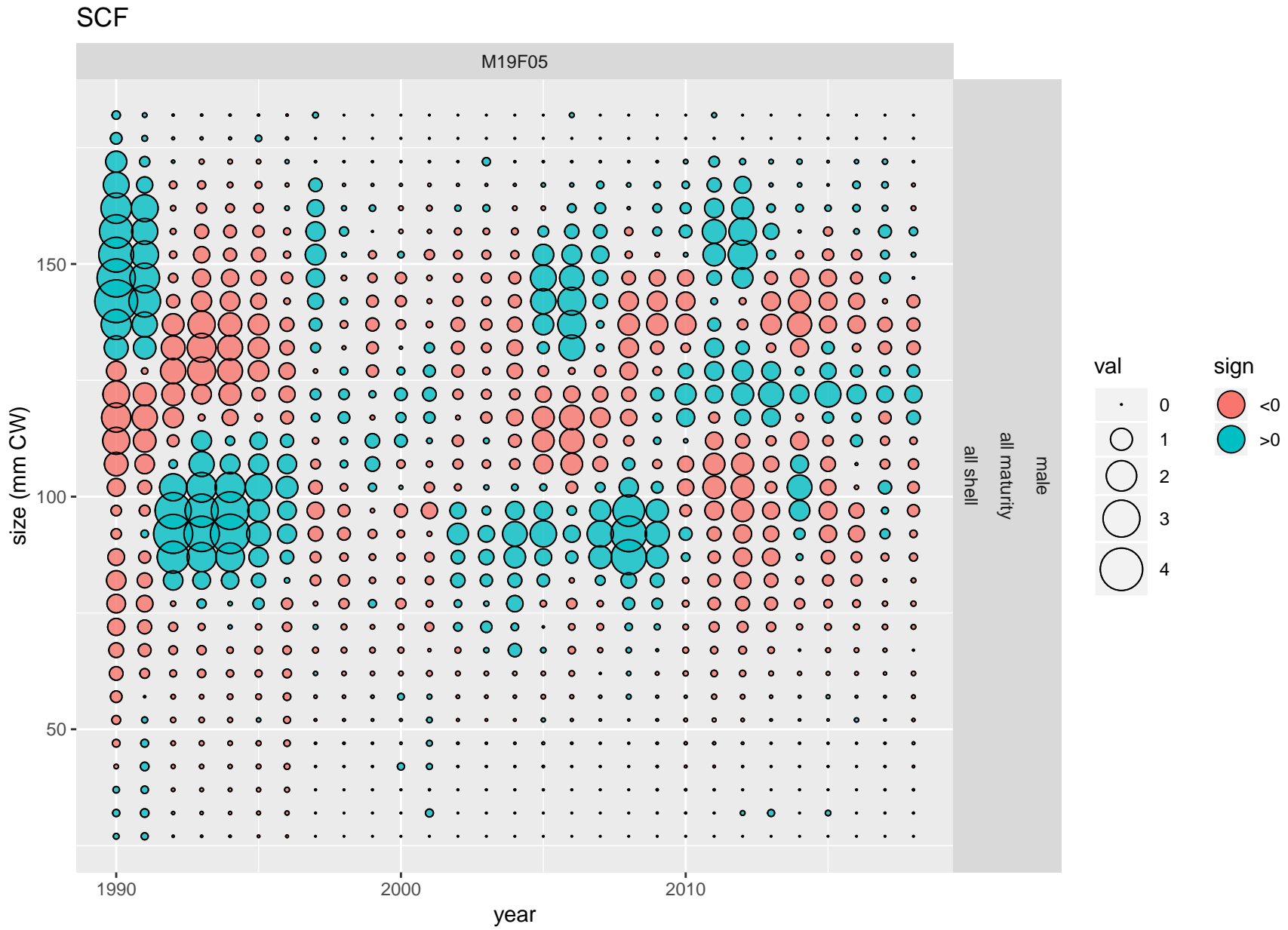


Figure 30: Pearson's residuals for male proportions-at-size from the SCF for scenario M19F05.



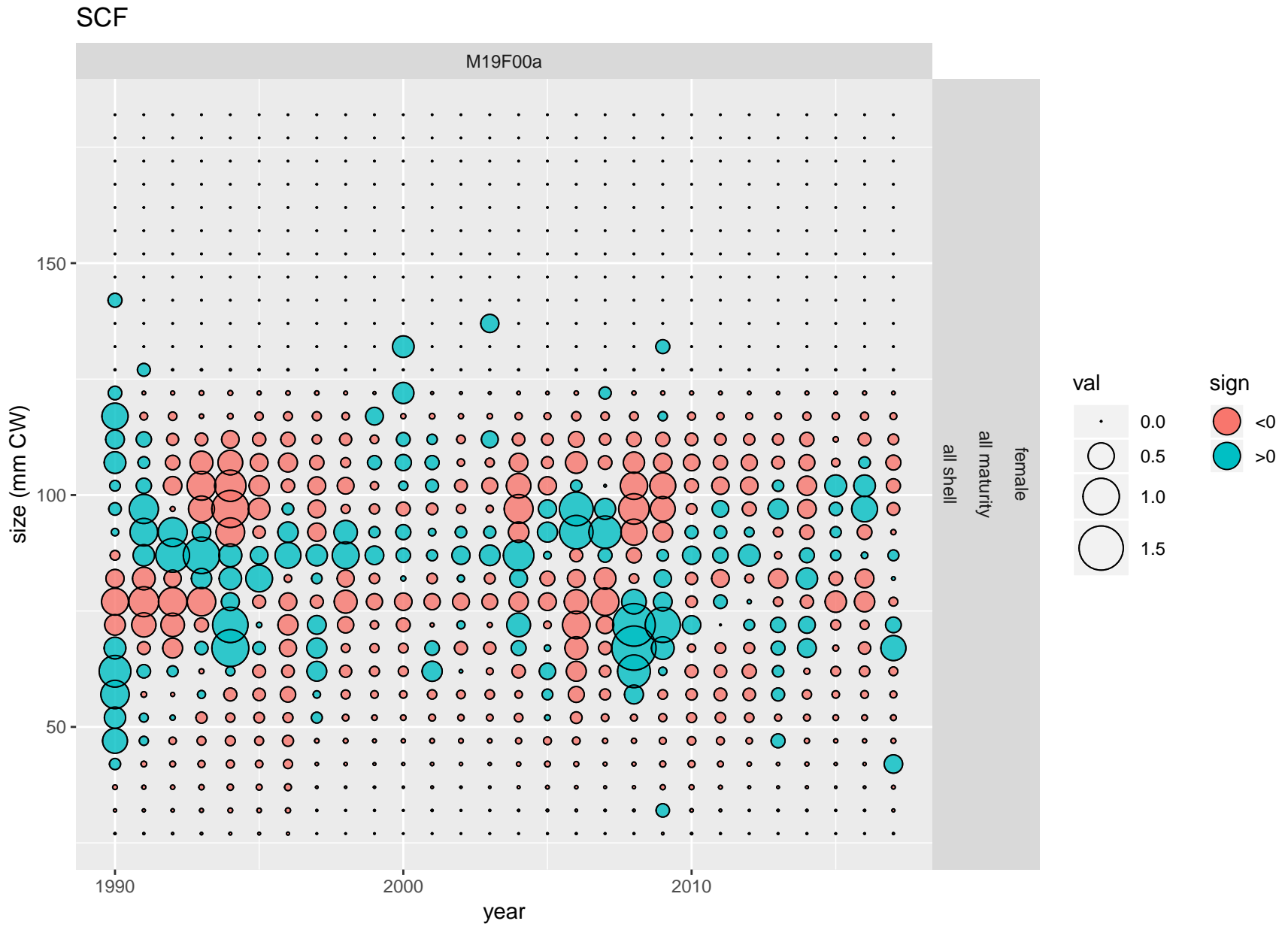


Figure 31: Pearson's residuals for female proportions-at-size from the SCF for scenario M19F00a.

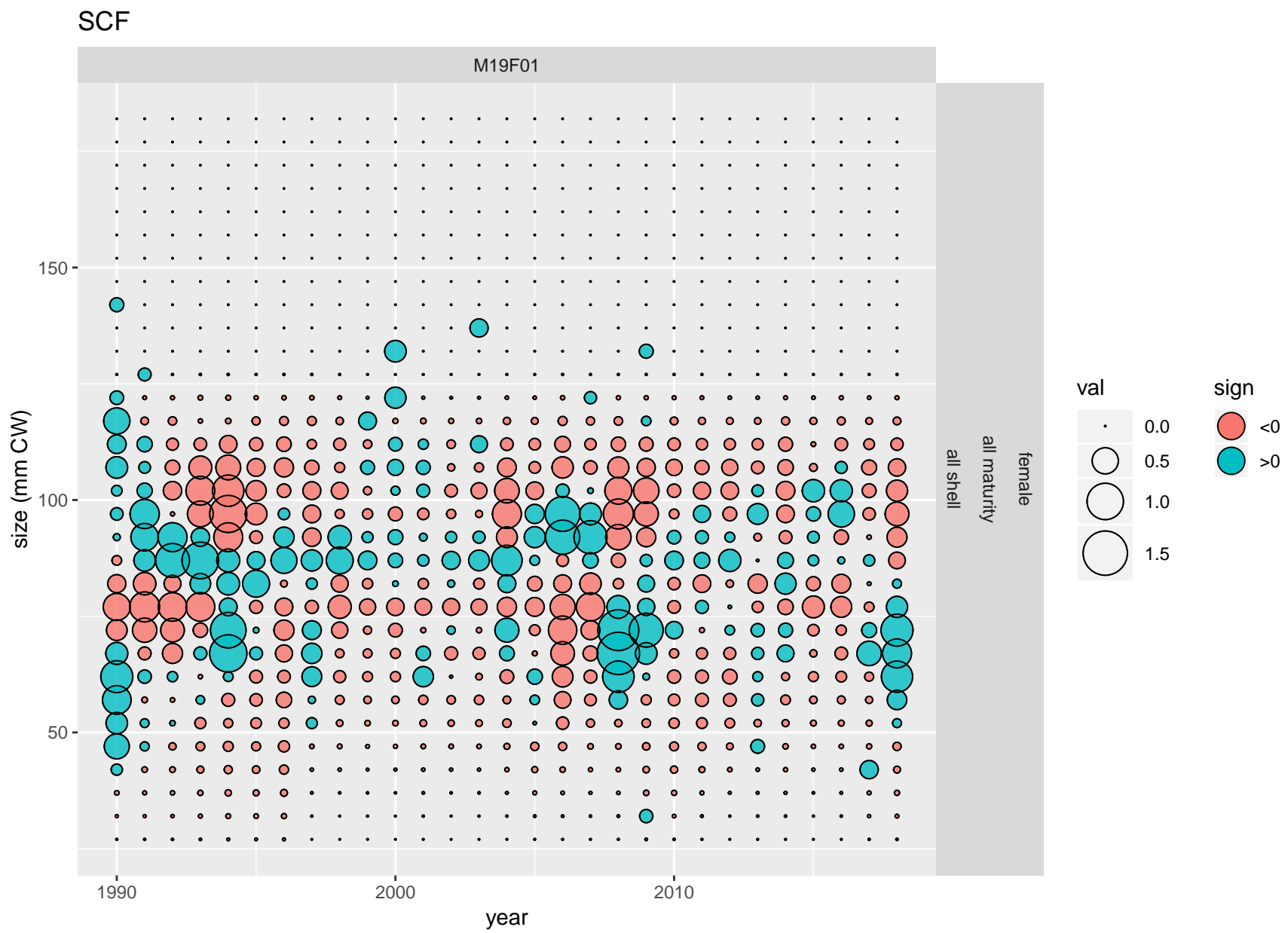


Figure 32: Pearson's residuals for female proportions-at-size from the SCF for scenario M19F01.

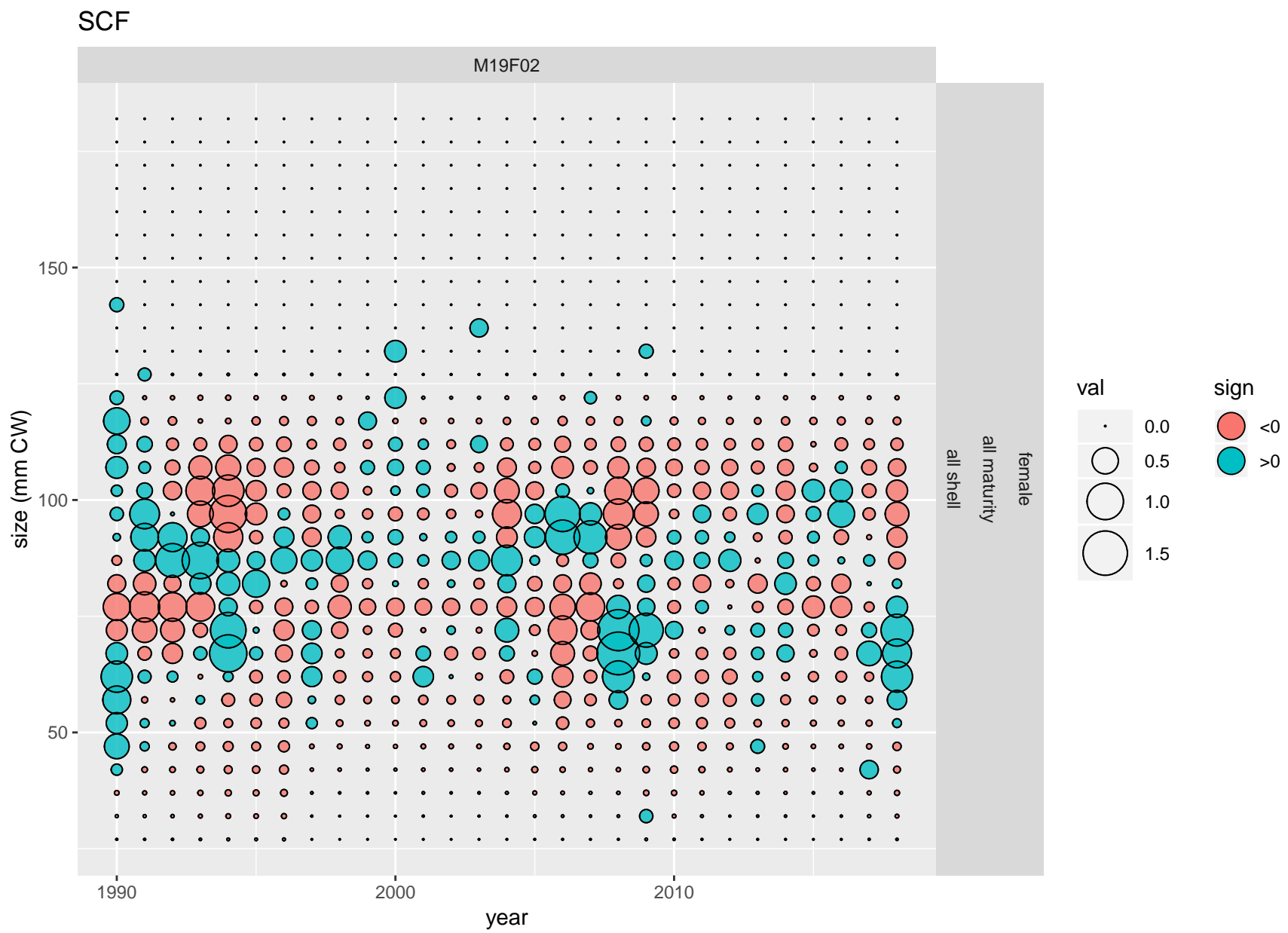


Figure 33: Pearson's residuals for female proportions-at-size from the SCF for scenario M19F02.

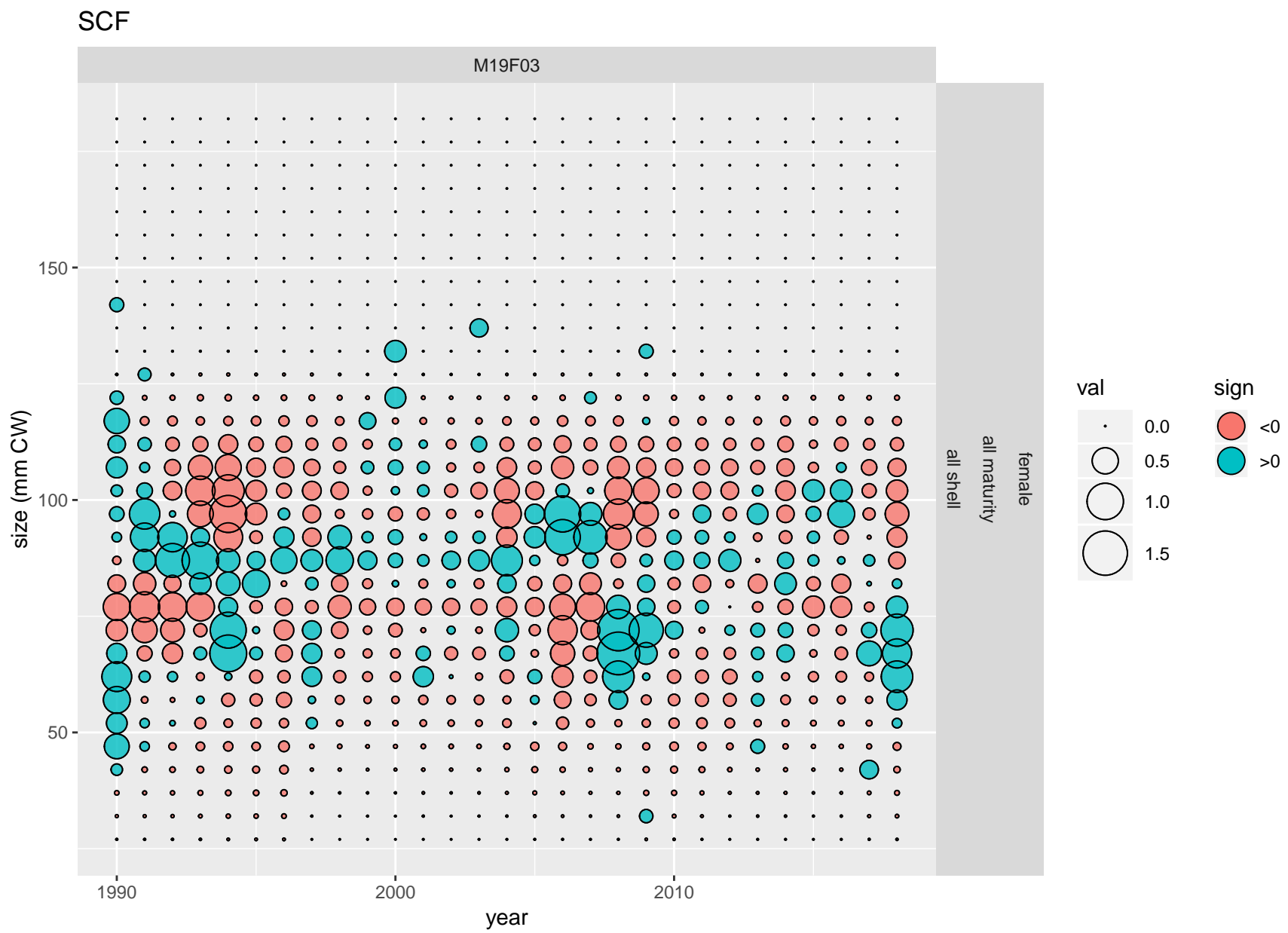


Figure 34: Pearson's residuals for female proportions-at-size from the SCF for scenario M19F03.

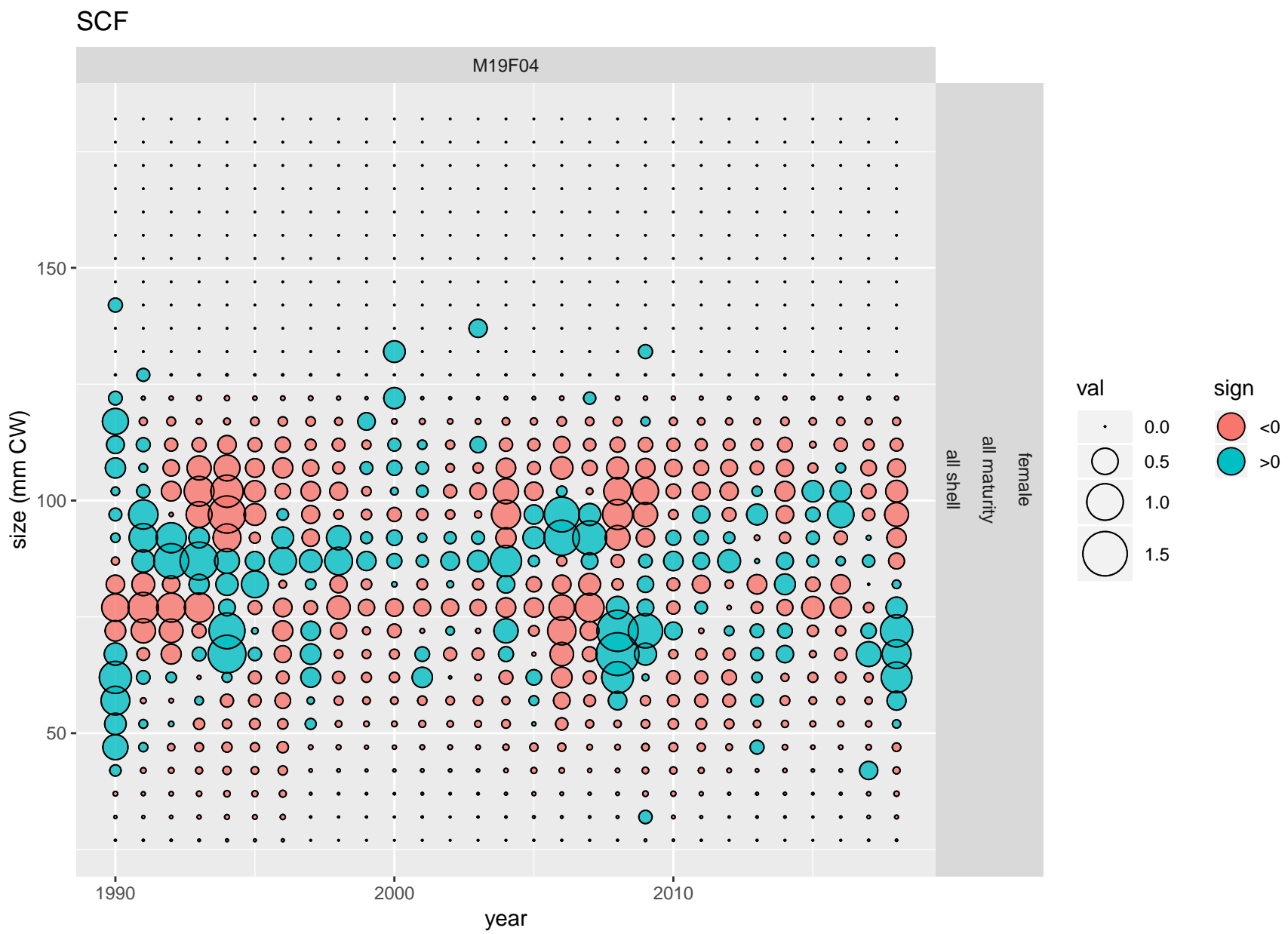


Figure 35: Pearson's residuals for female proportions-at-size from the SCF for scenario M19F04.

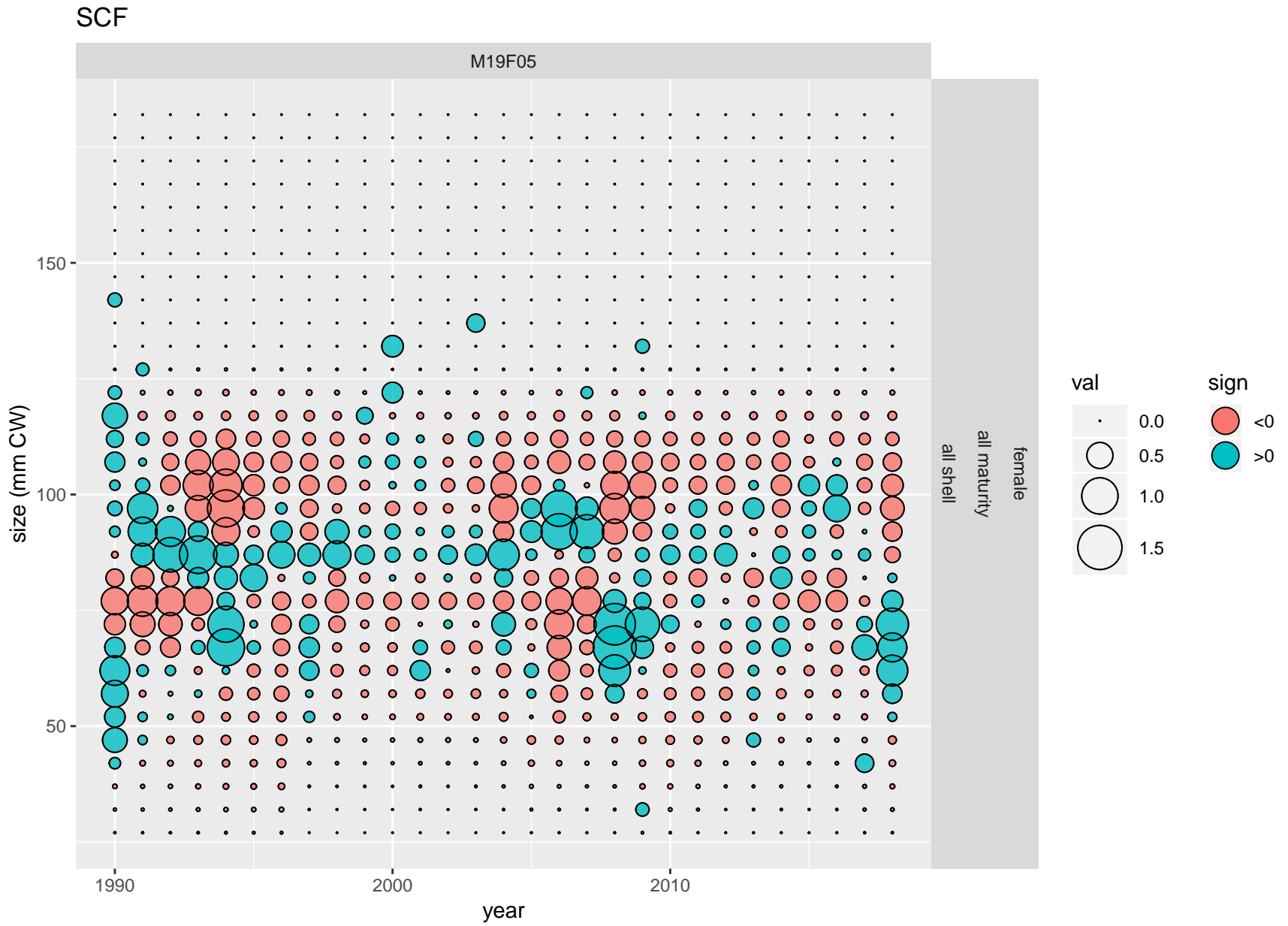


Figure 36: Pearson's residuals for female proportions-at-size from the SCF for scenario M19F05.

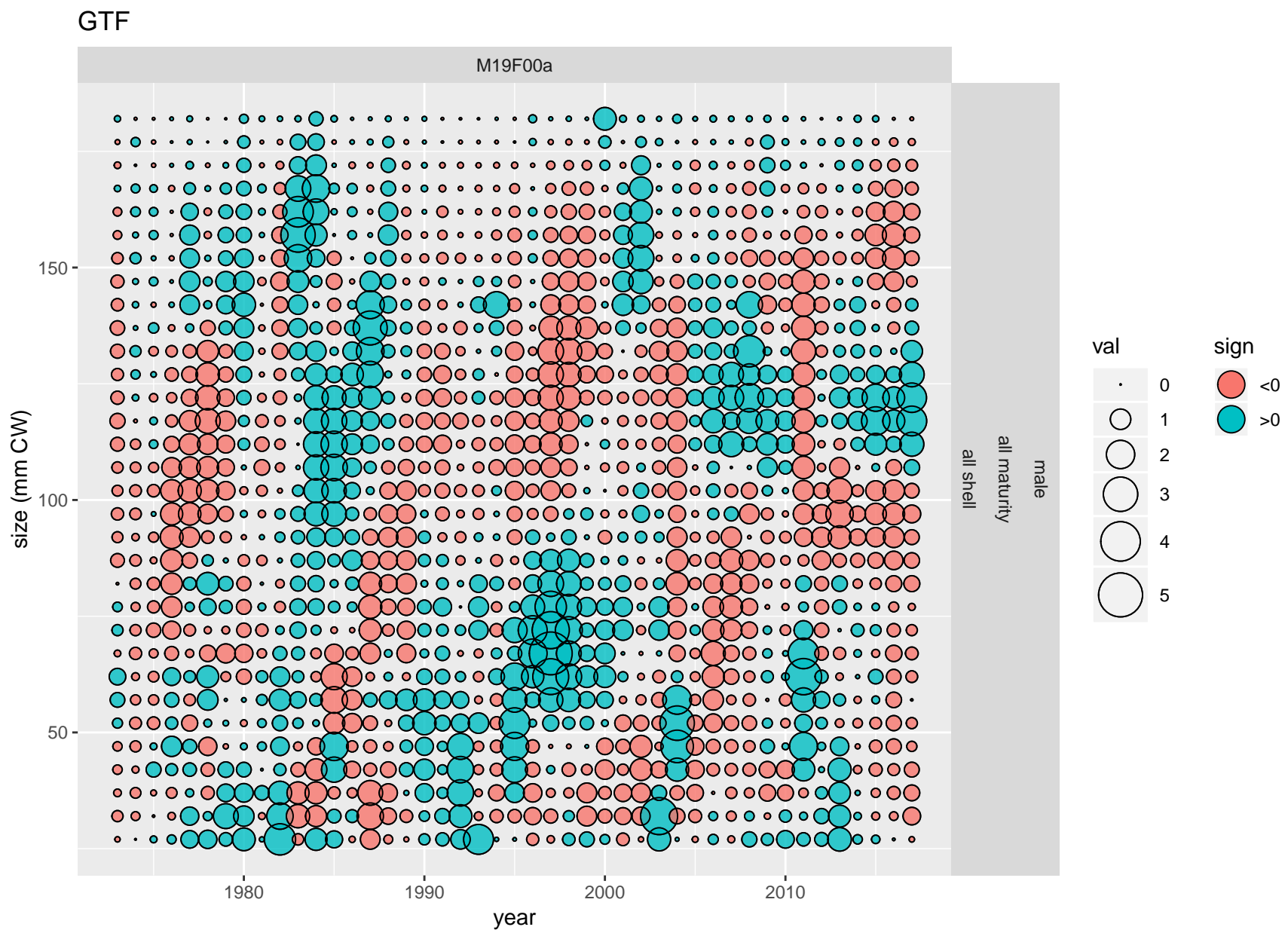


Figure 37: Pearson's residuals for male proportions-at-size from the GTF for scenario M19F00a.



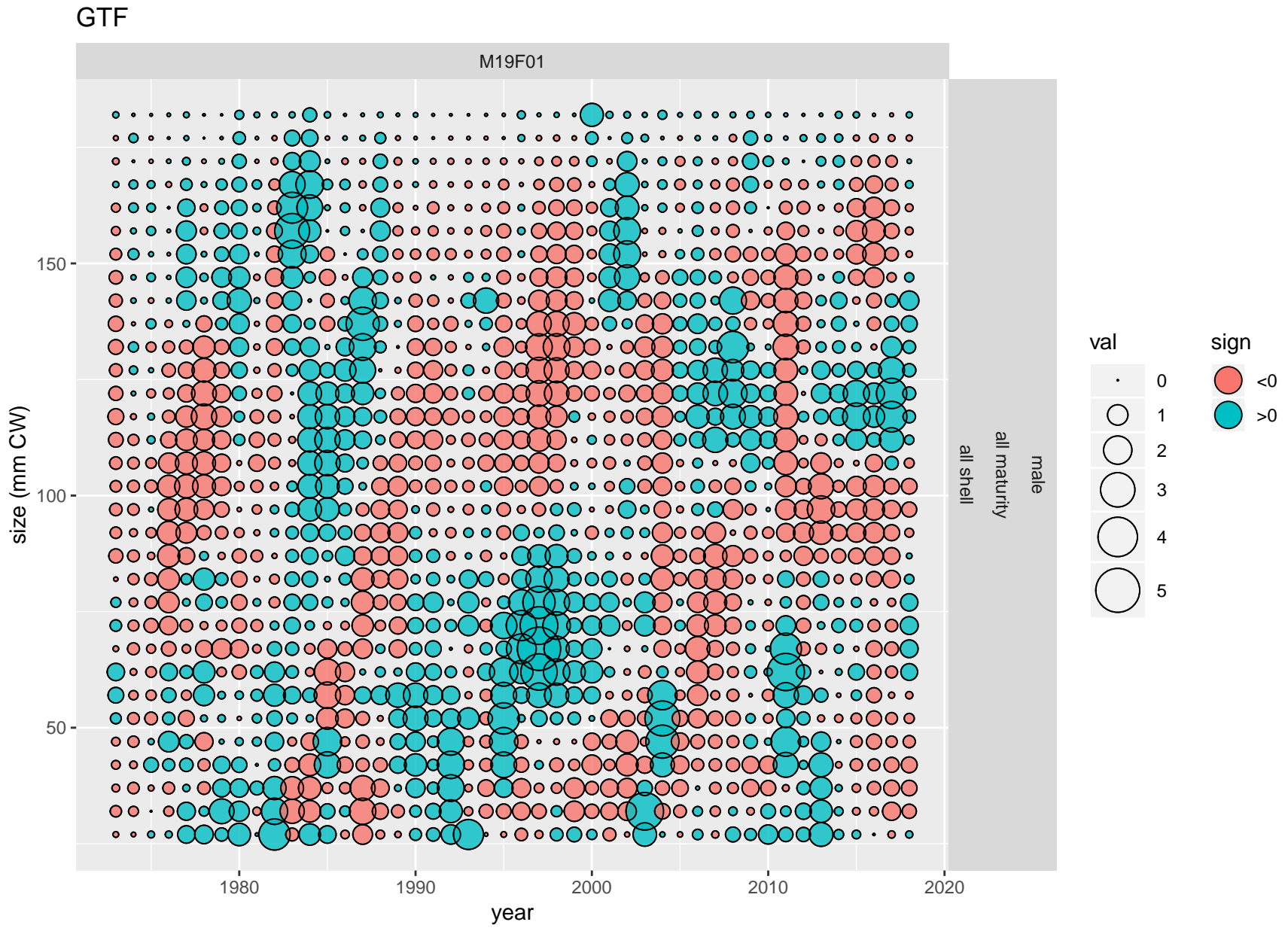


Figure 38: Pearson's residuals for male proportions-at-size from the GTF for scenario M19F01.



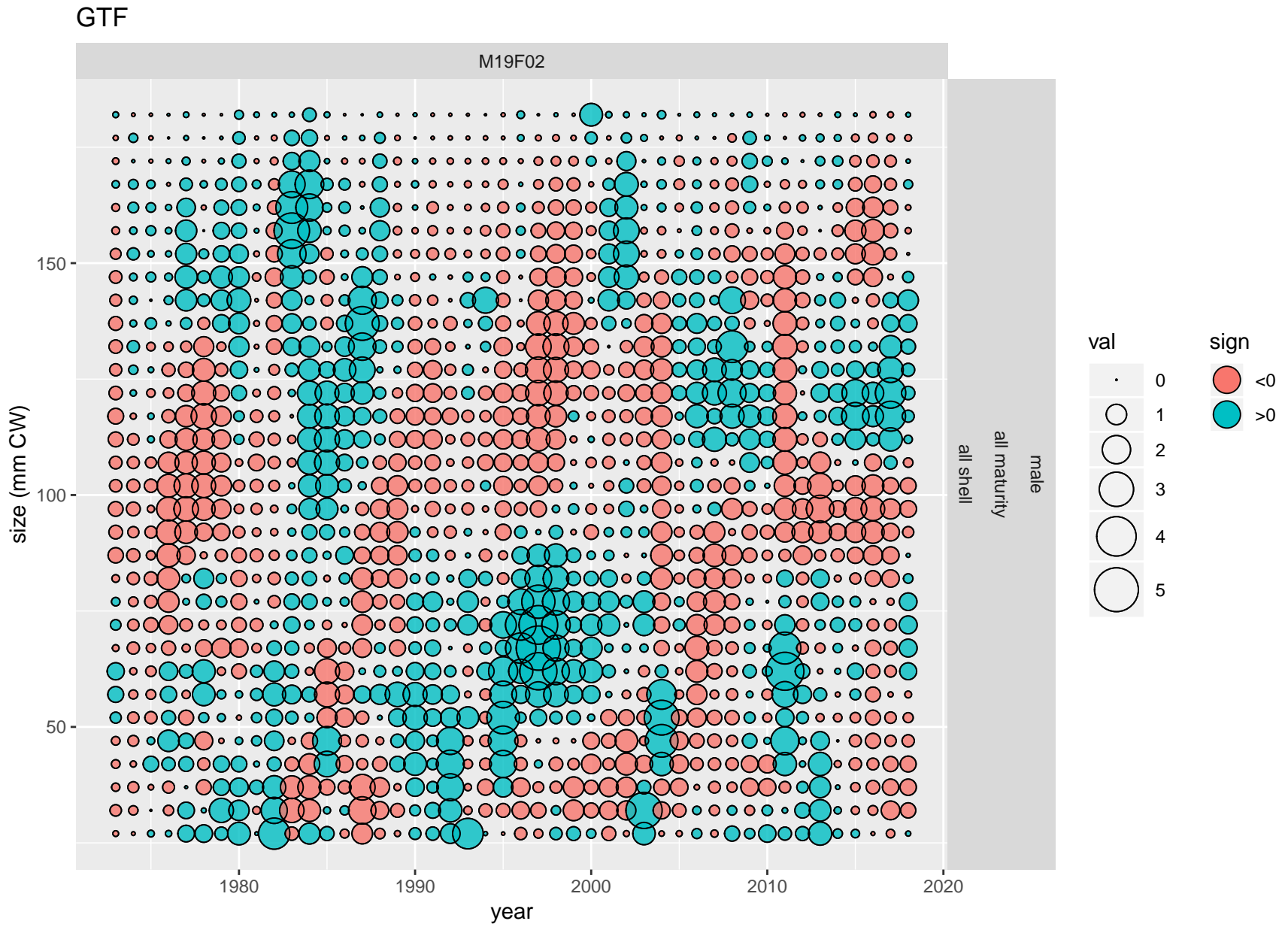


Figure 39: Pearson's residuals for male proportions-at-size from the GTF for scenario M19F02.

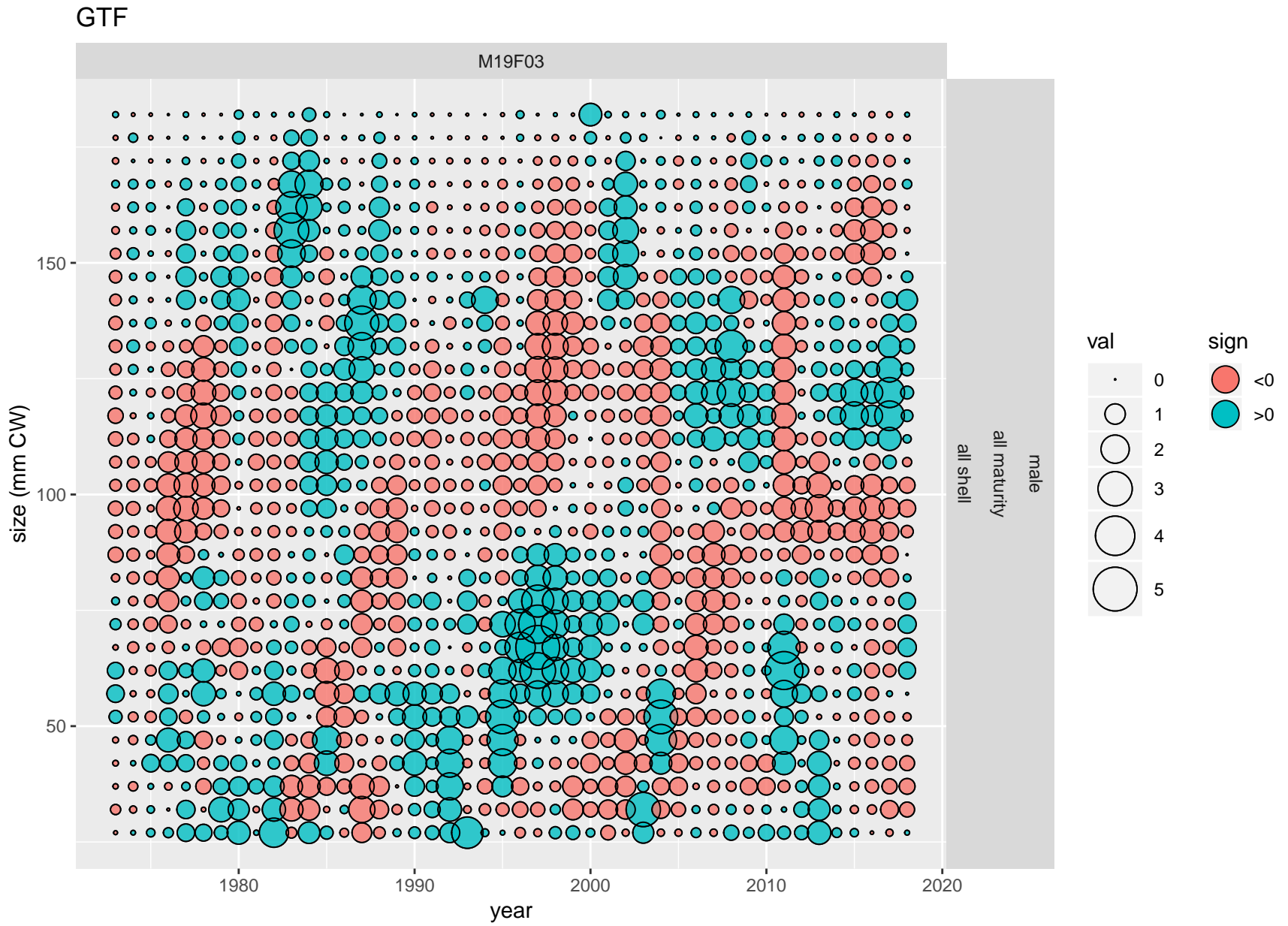


Figure 40: Pearson's residuals for male proportions-at-size from the GTF for scenario M19F03.

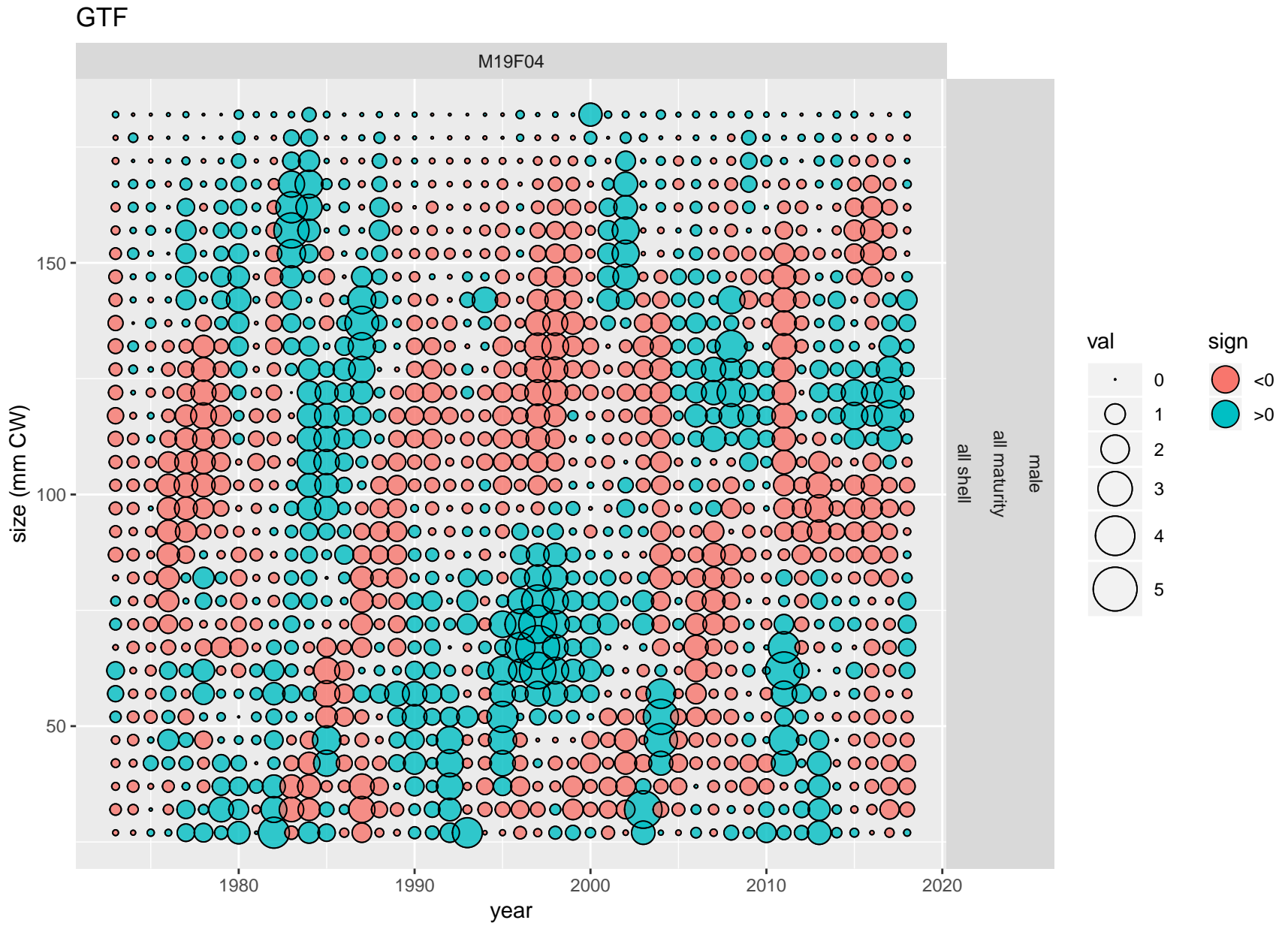


Figure 41: Pearson's residuals for male proportions-at-size from the GTF for scenario M19F04.

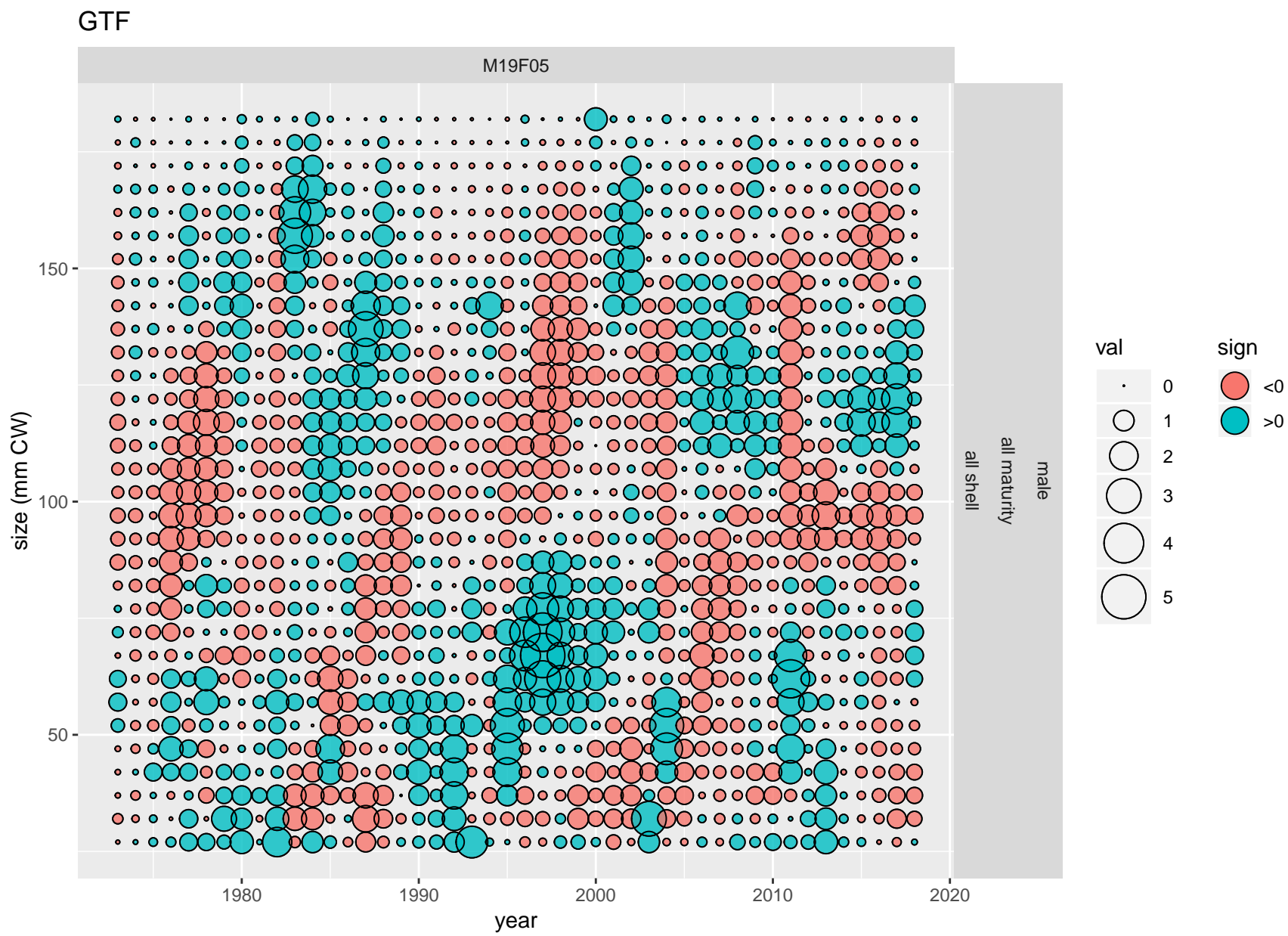


Figure 42: Pearson's residuals for male proportions-at-size from the GTF for scenario M19F05.



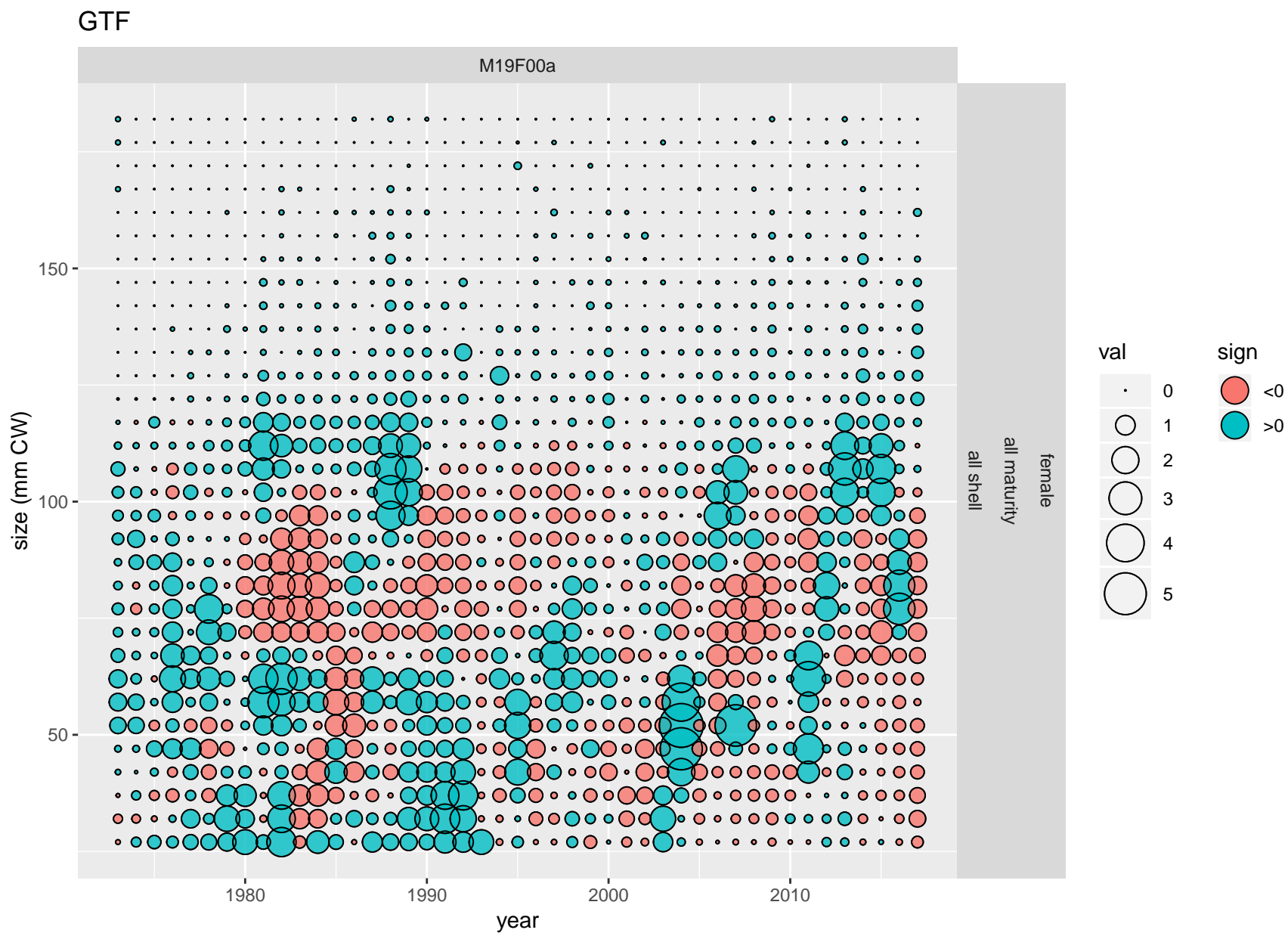


Figure 43: Pearson's residuals for female proportions-at-size from the GTF for scenario M19F00a.

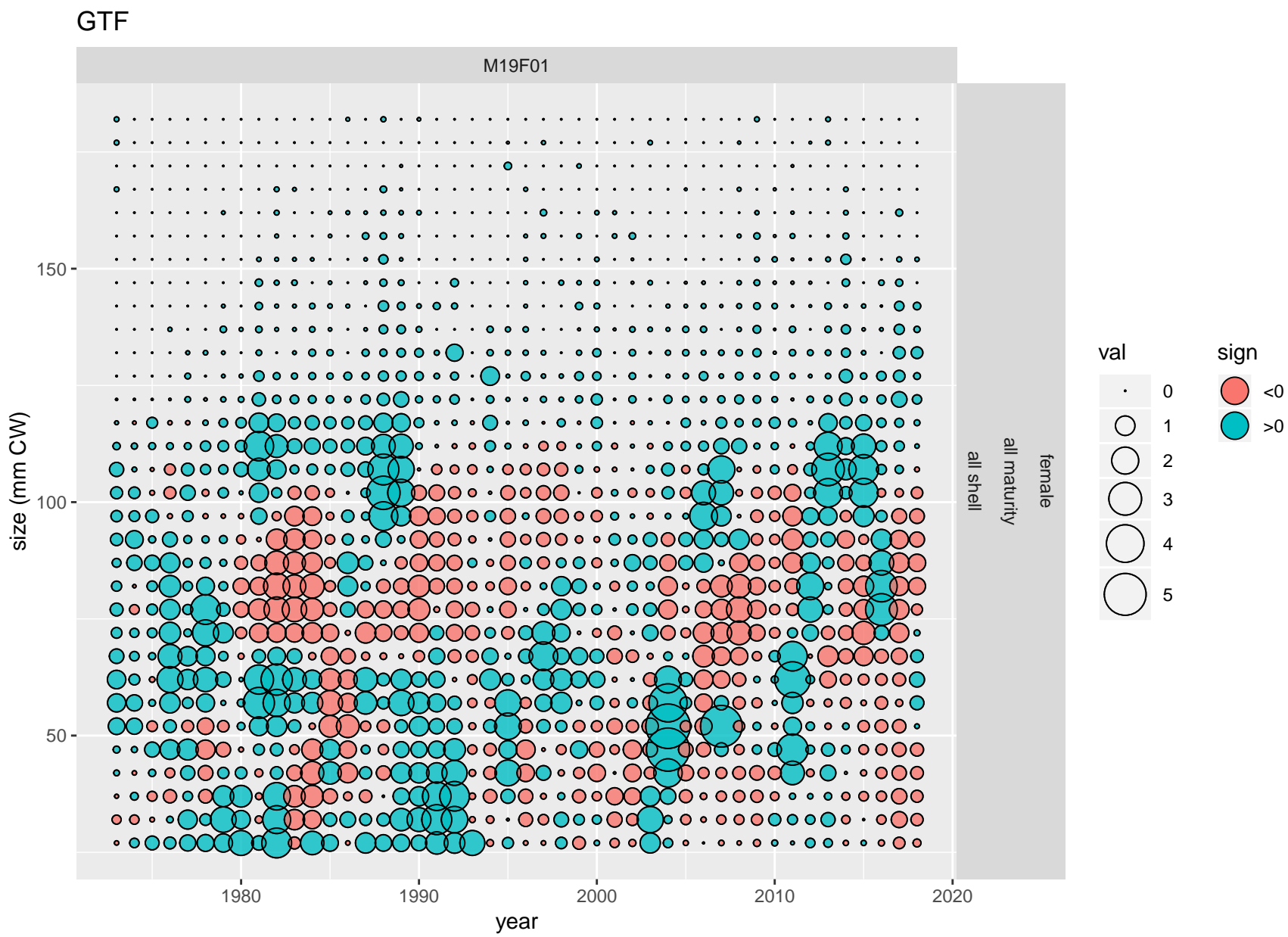


Figure 44: Pearson's residuals for female proportions-at-size from the GTF for scenario M19F01.

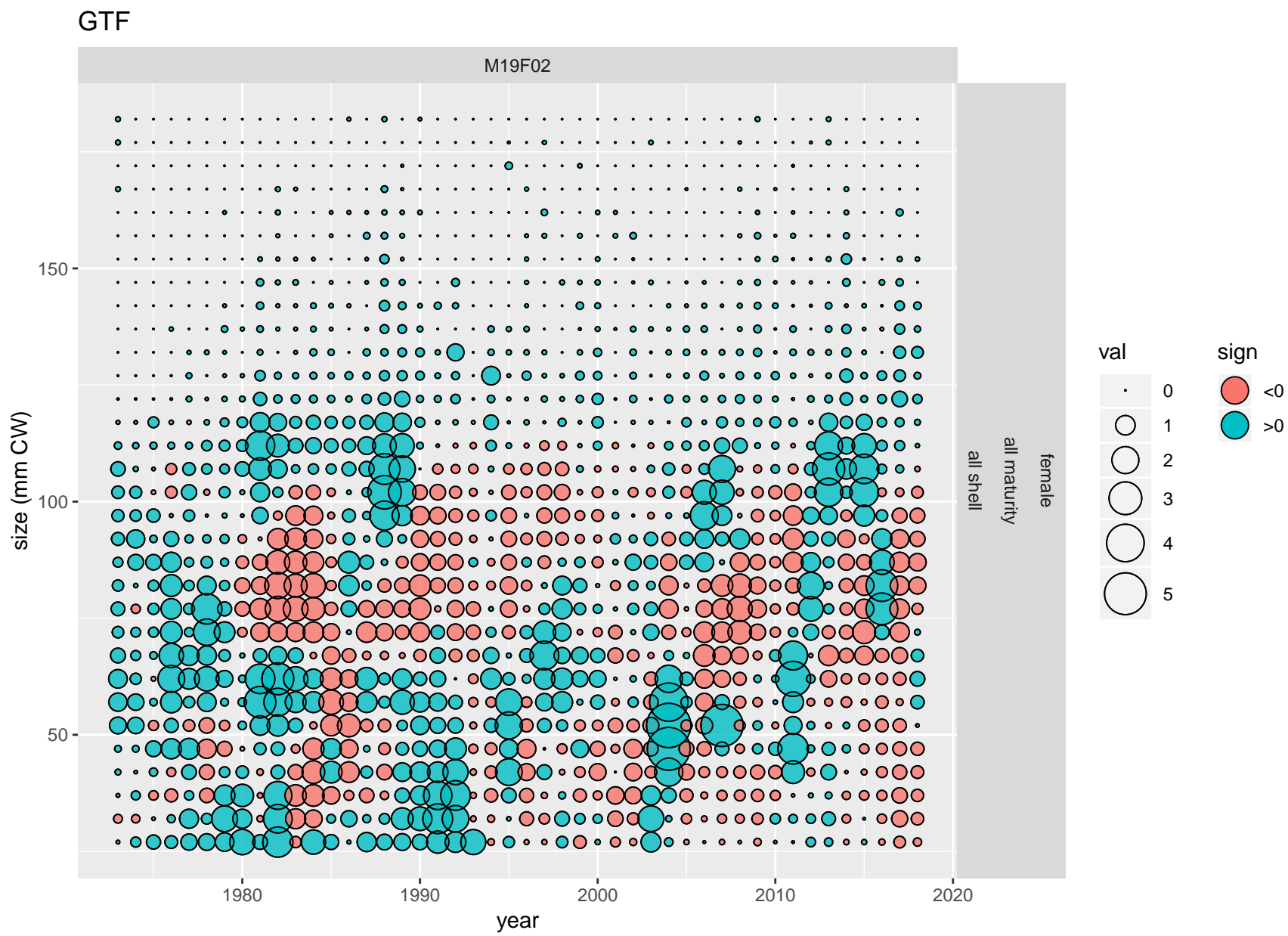


Figure 45: Pearson's residuals for female proportions-at-size from the GTF for scenario M19F02.

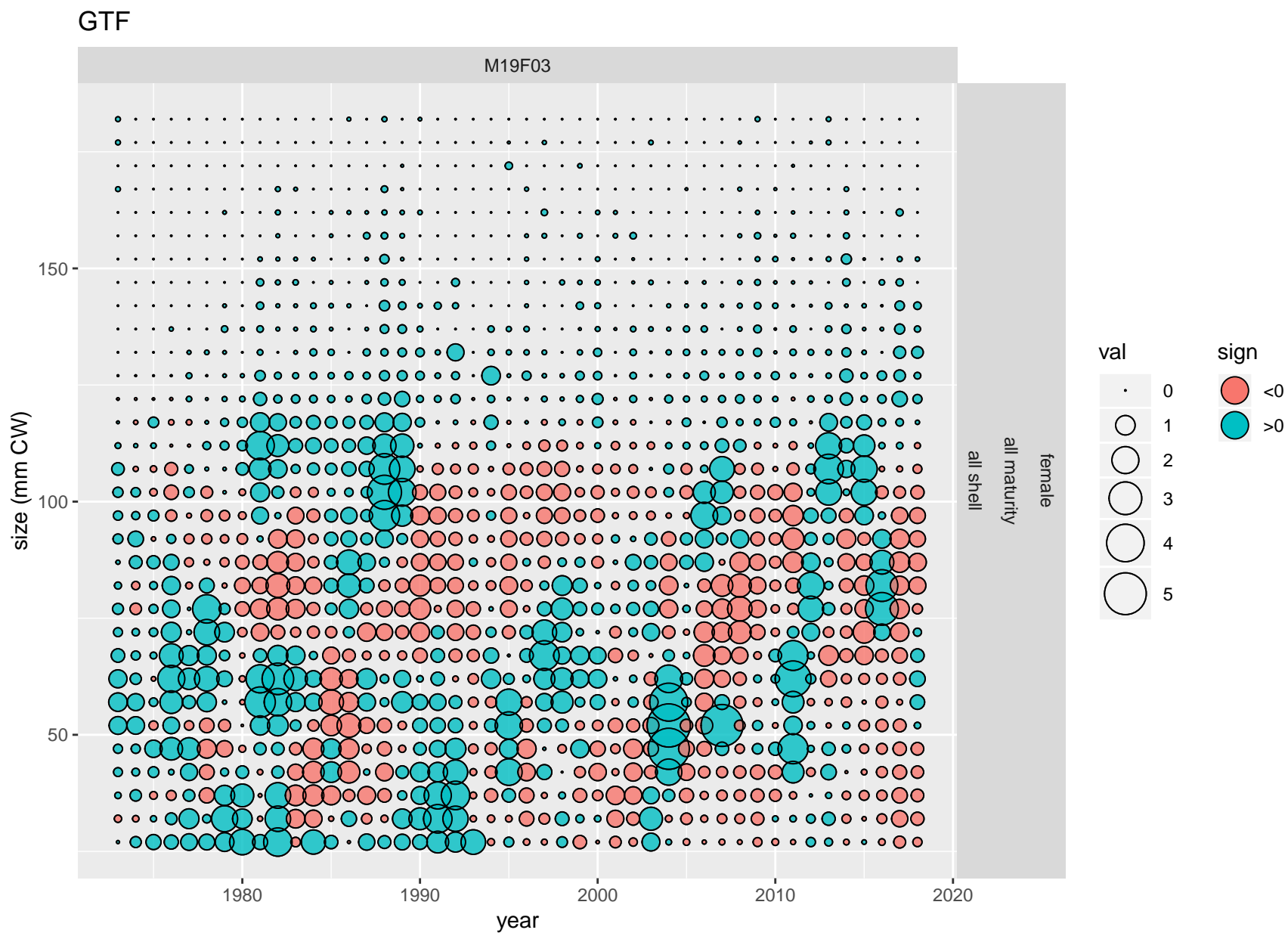


Figure 46: Pearson's residuals for female proportions-at-size from the GTF for scenario M19F03.



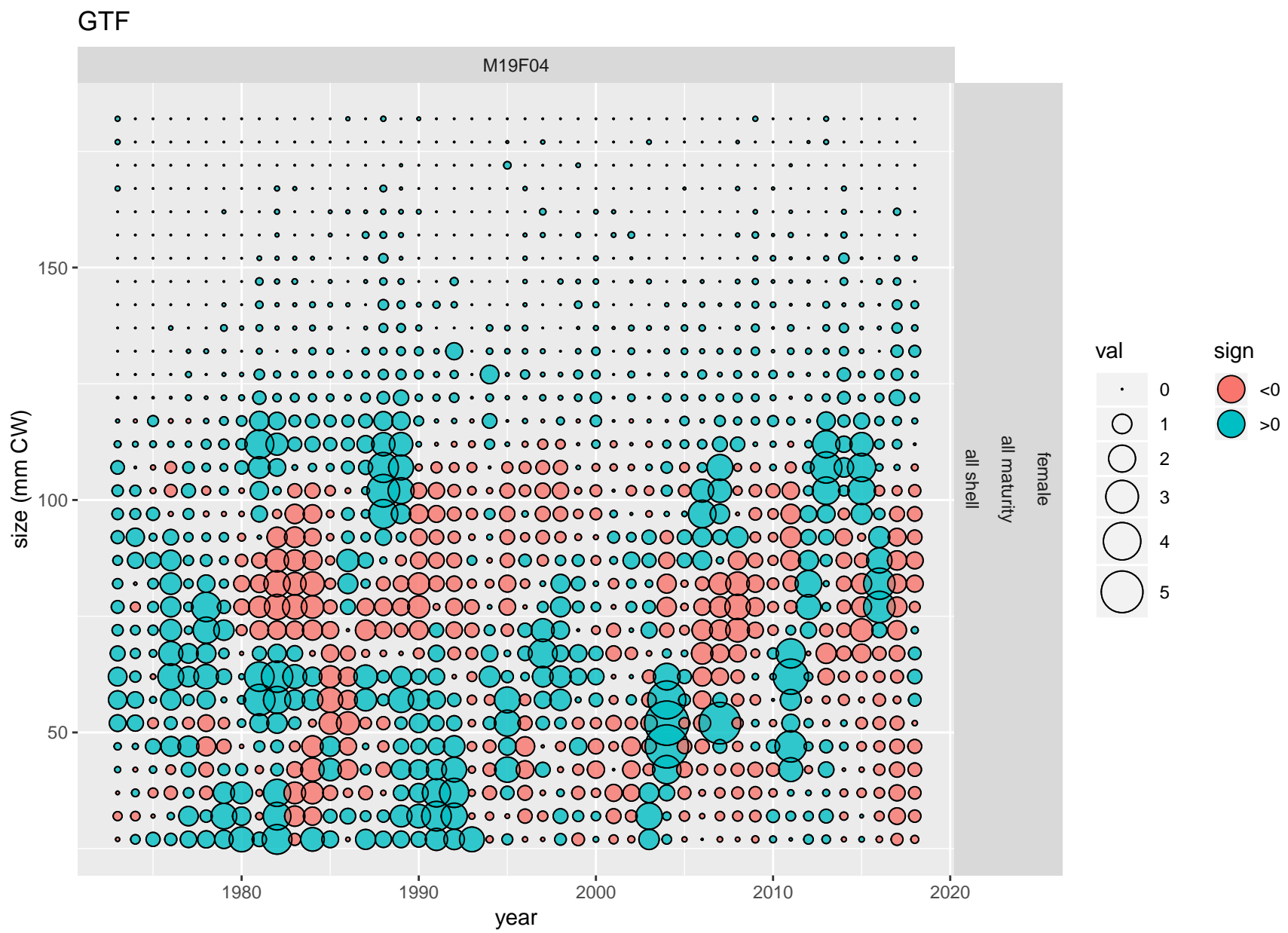


Figure 47: Pearson's residuals for female proportions-at-size from the GTF for scenario M19F04.

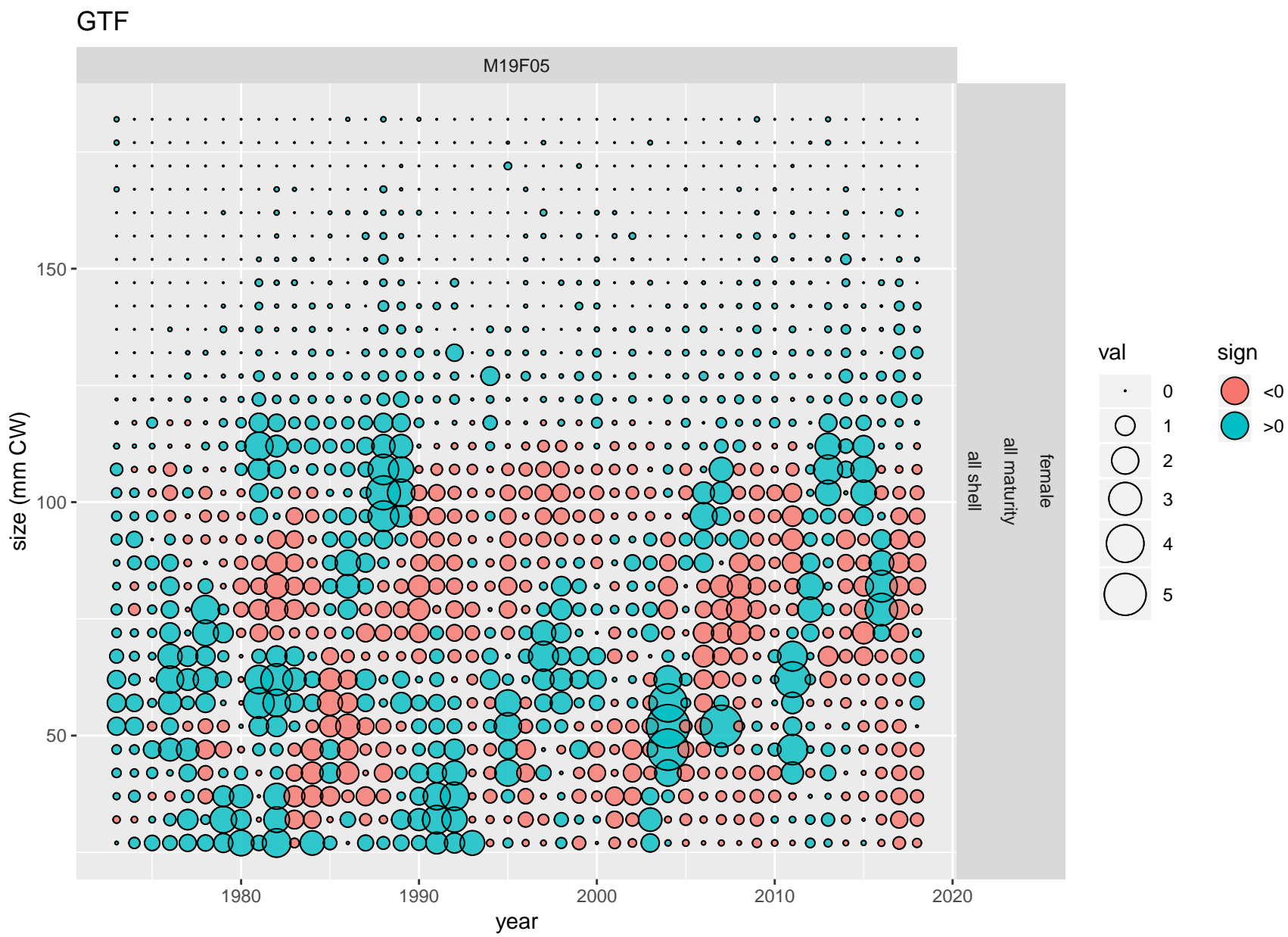


Figure 48: Pearson's residuals for female proportions-at-size from the GTF for scenario M19F05.

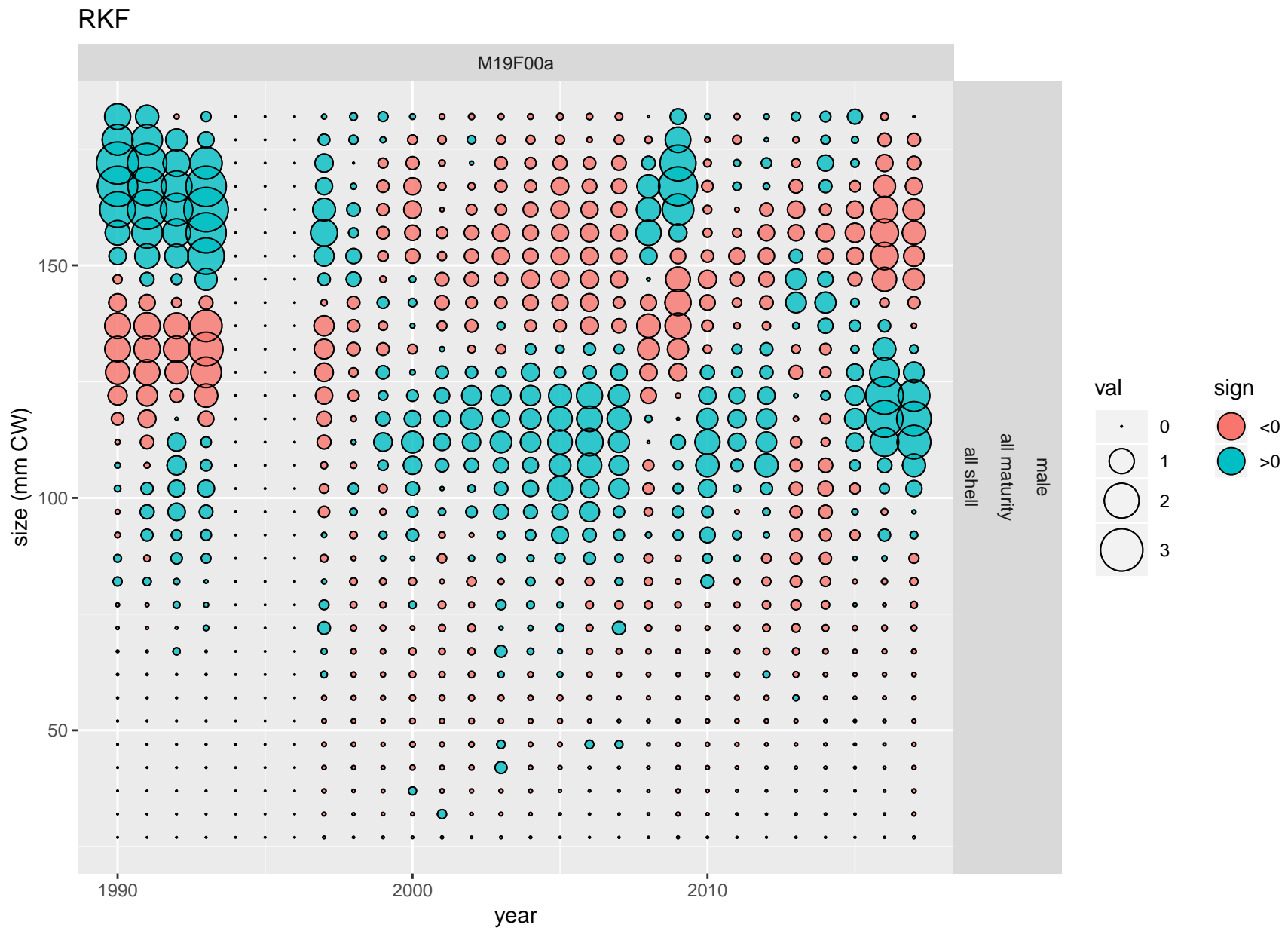


Figure 49: Pearson's residuals for male proportions-at-size from the RKF for scenario M19F00a.

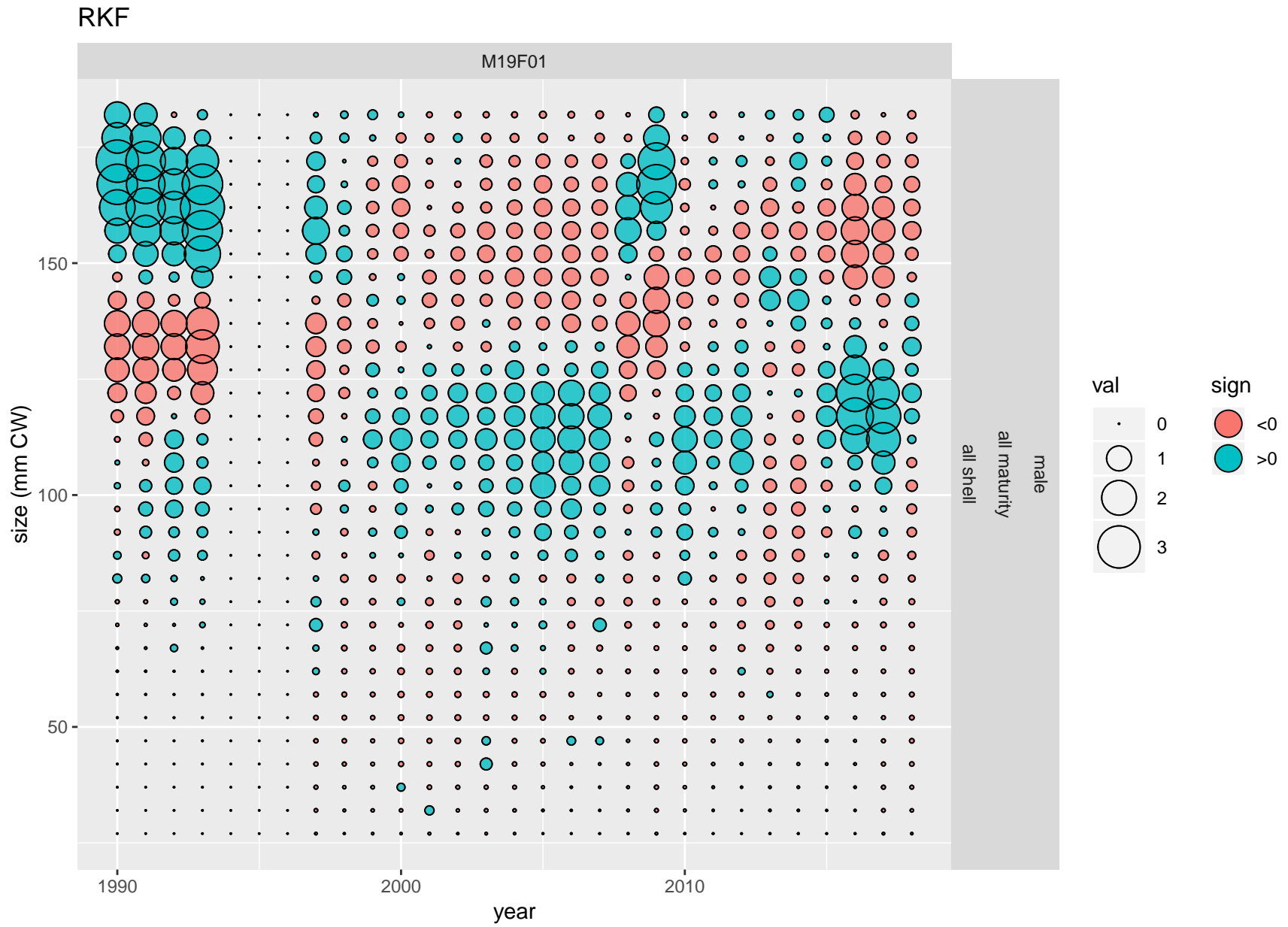


Figure 50: Pearson's residuals for male proportions-at-size from the RKF for scenario M19F01.

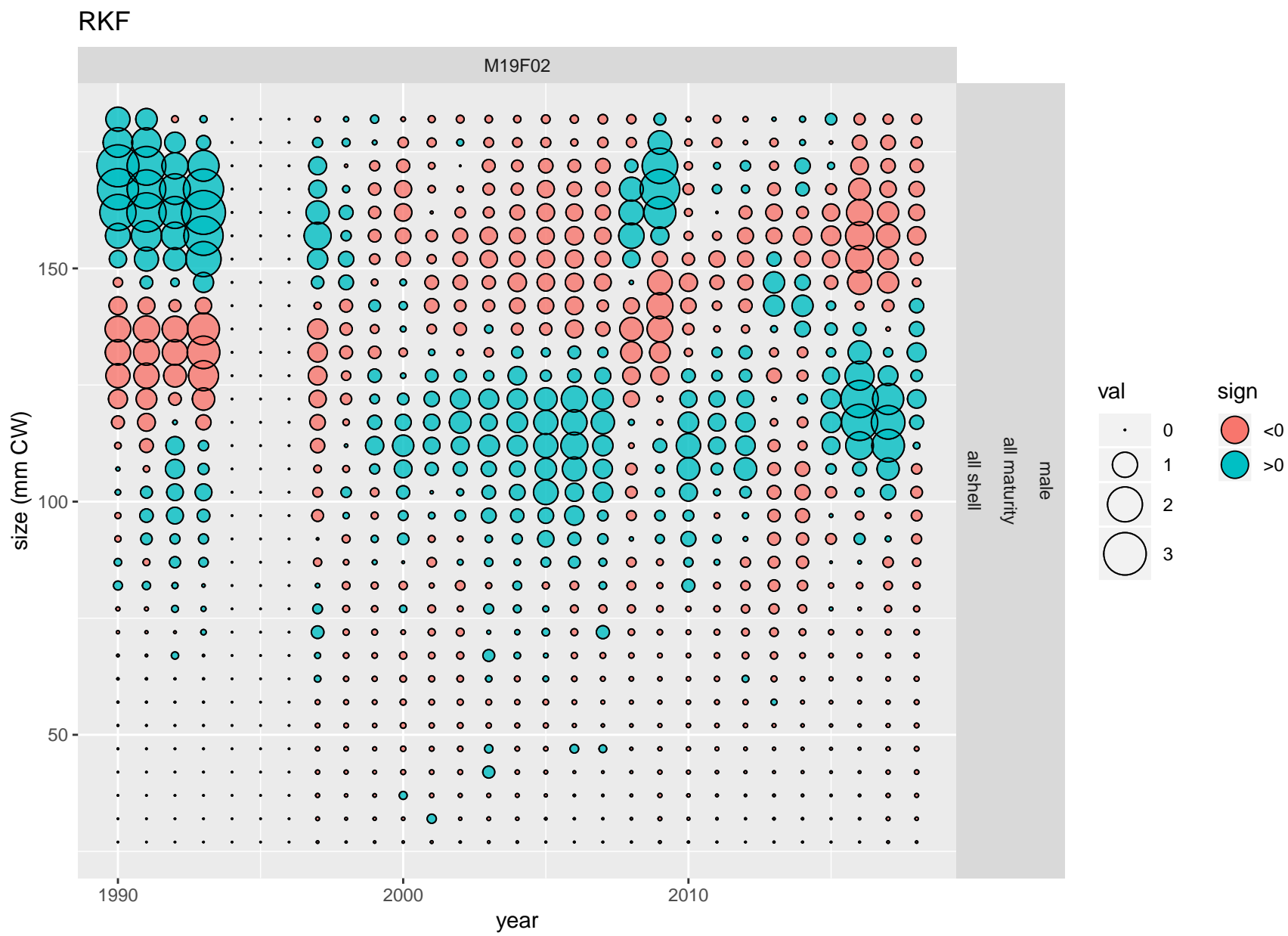


Figure 51: Pearson's residuals for male proportions-at-size from the RKF for scenario M19F02.

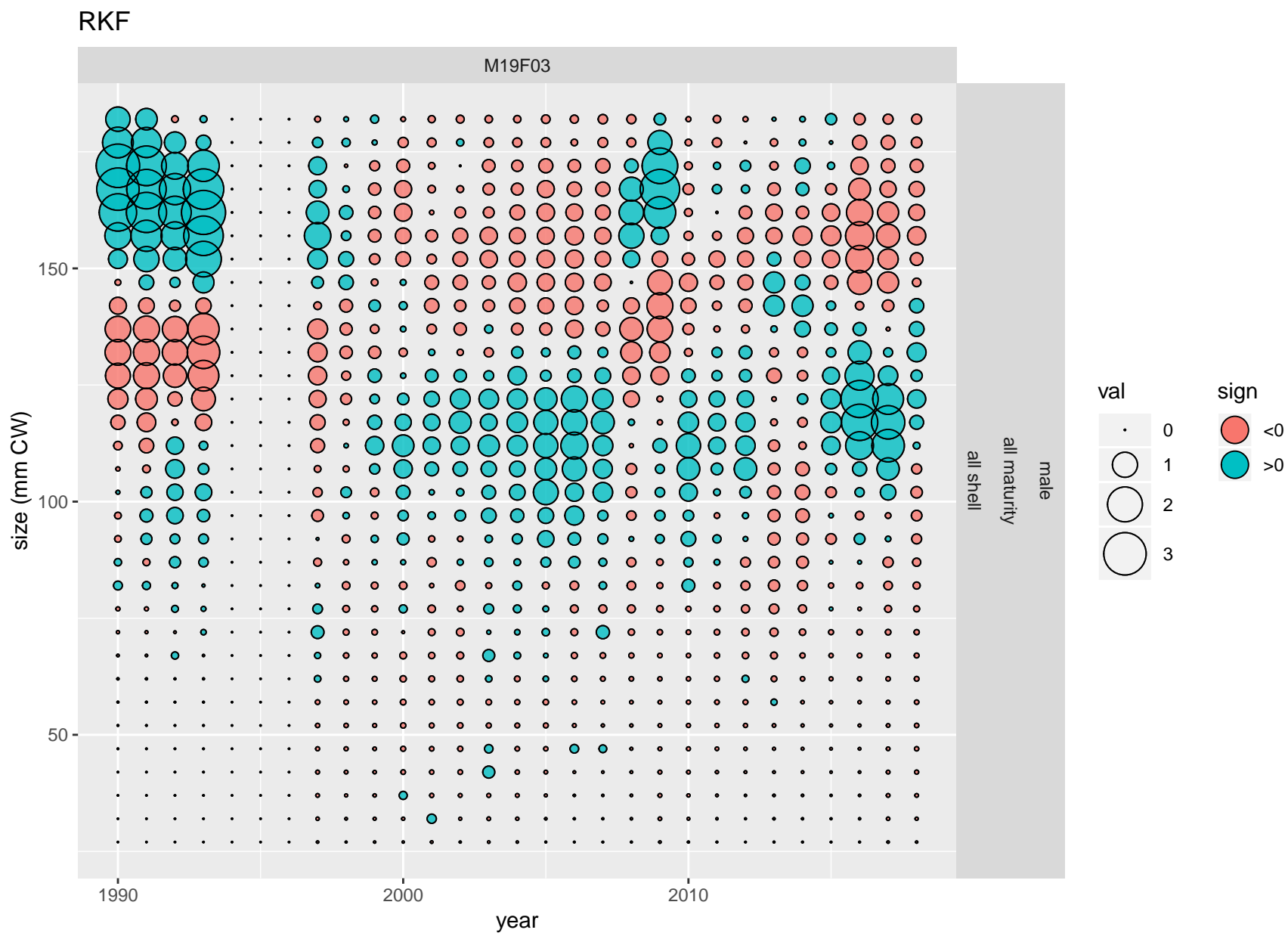


Figure 52: Pearson's residuals for male proportions-at-size from the RKF for scenario M19F03.

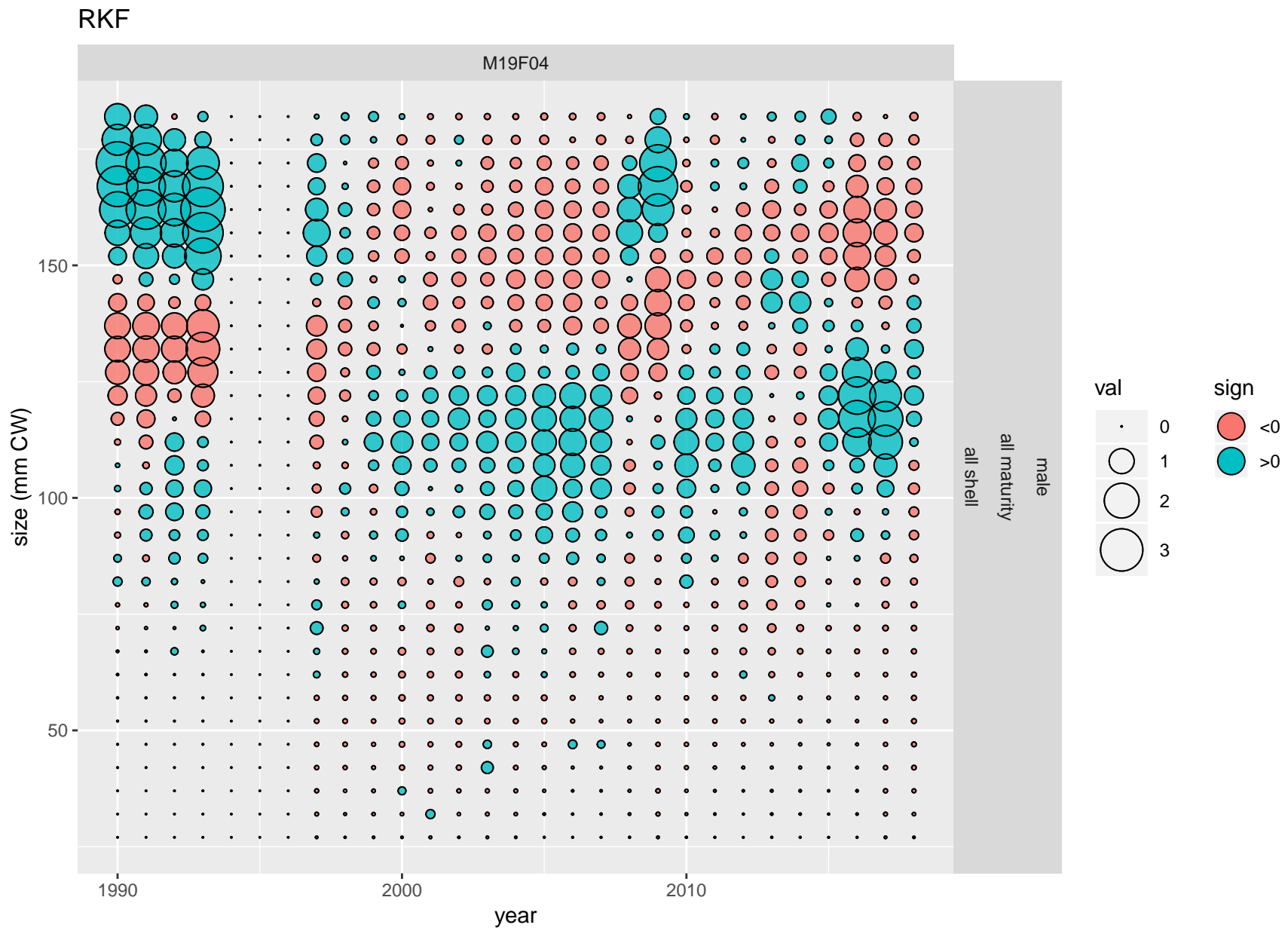


Figure 53: Pearson's residuals for male proportions-at-size from the RKF for scenario M19F04.



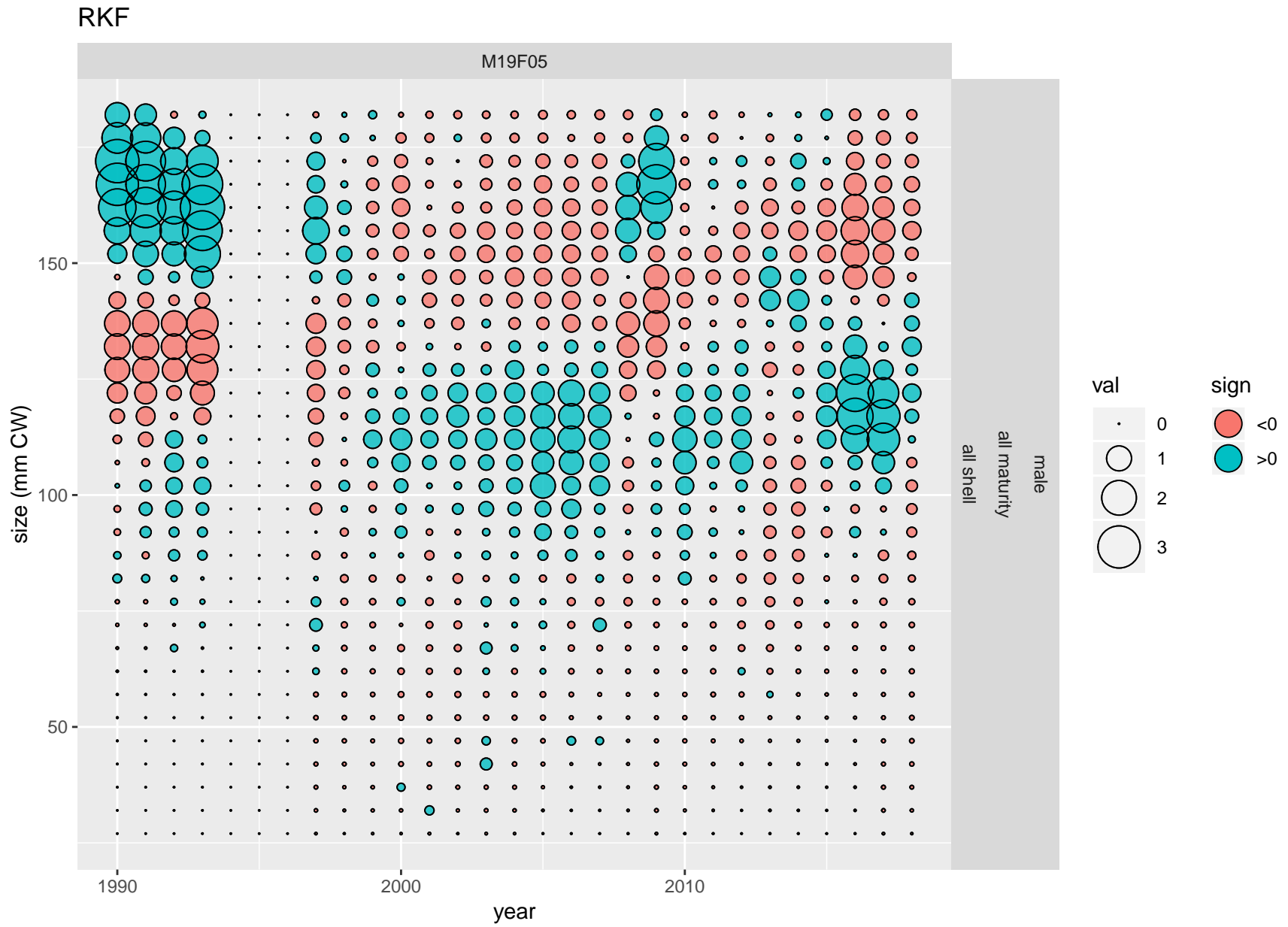


Figure 54: Pearson's residuals for male proportions-at-size from the RKF for scenario M19F05.



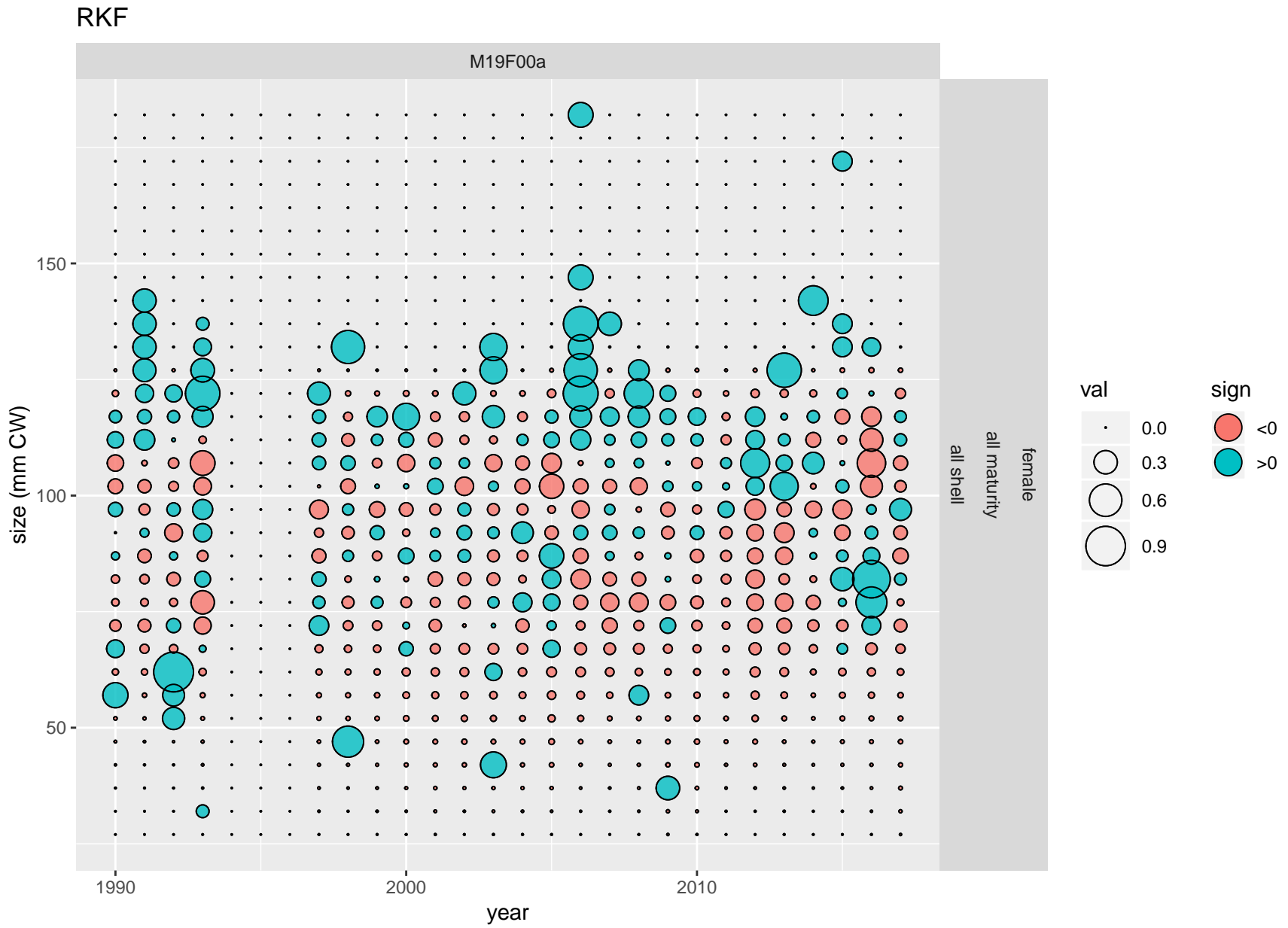


Figure 55: Pearson's residuals for female proportions-at-size from the RKF for scenario M19F00a.

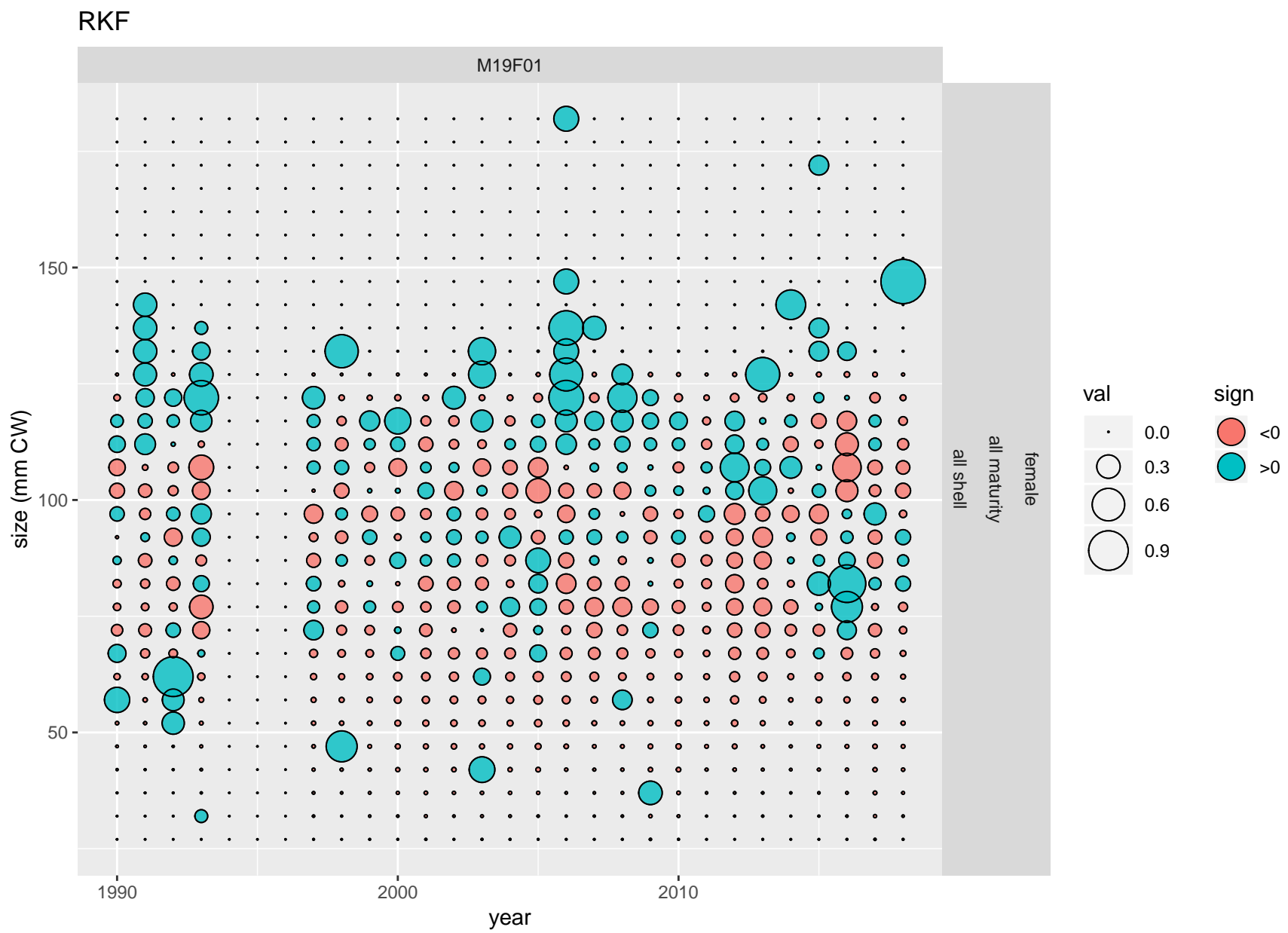


Figure 56: Pearson's residuals for female proportions-at-size from the RKF for scenario M19F01.

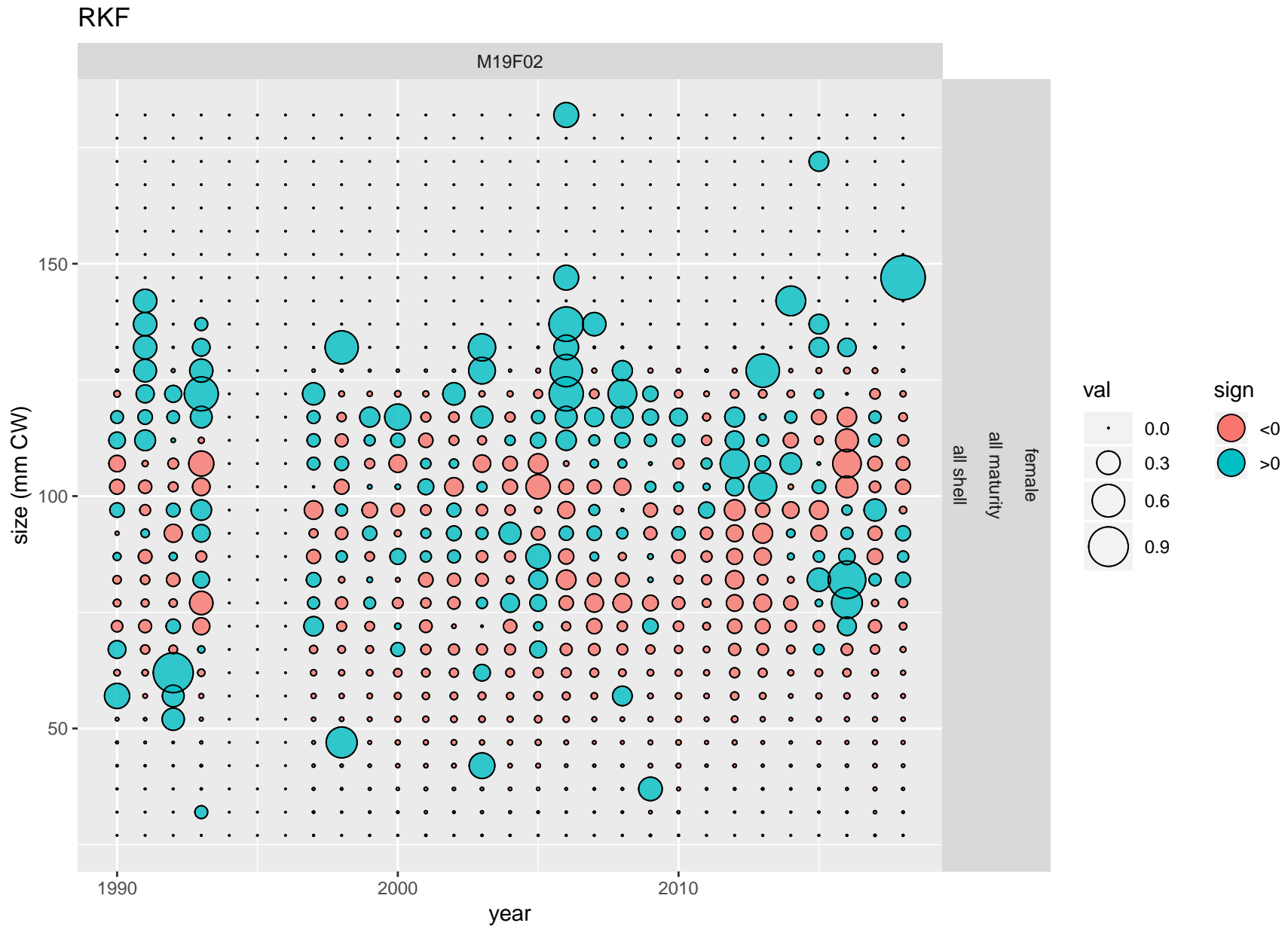


Figure 57: Pearson's residuals for female proportions-at-size from the RKF for scenario M19F02.

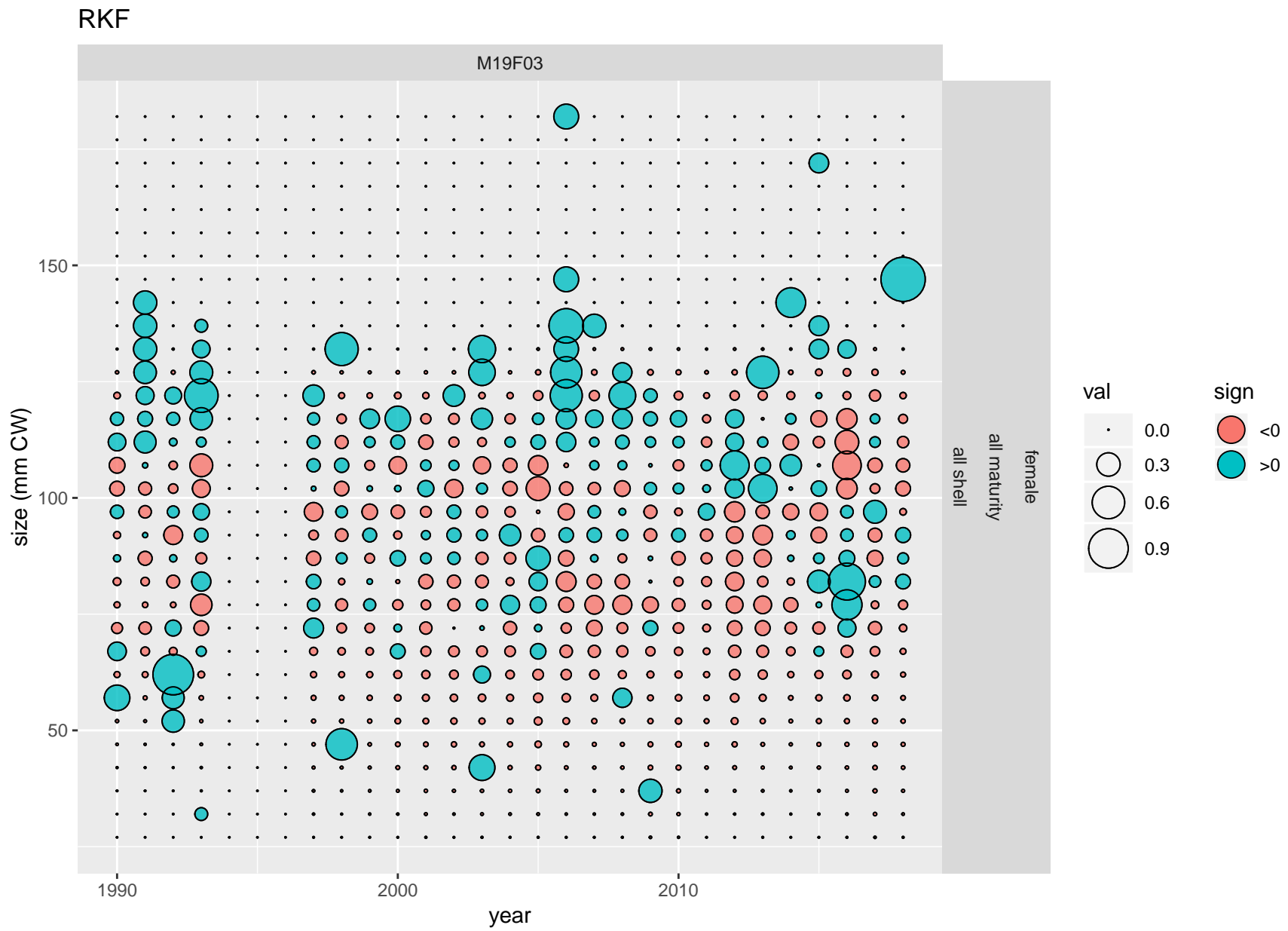


Figure 58: Pearson's residuals for female proportions-at-size from the RKF for scenario M19F03.

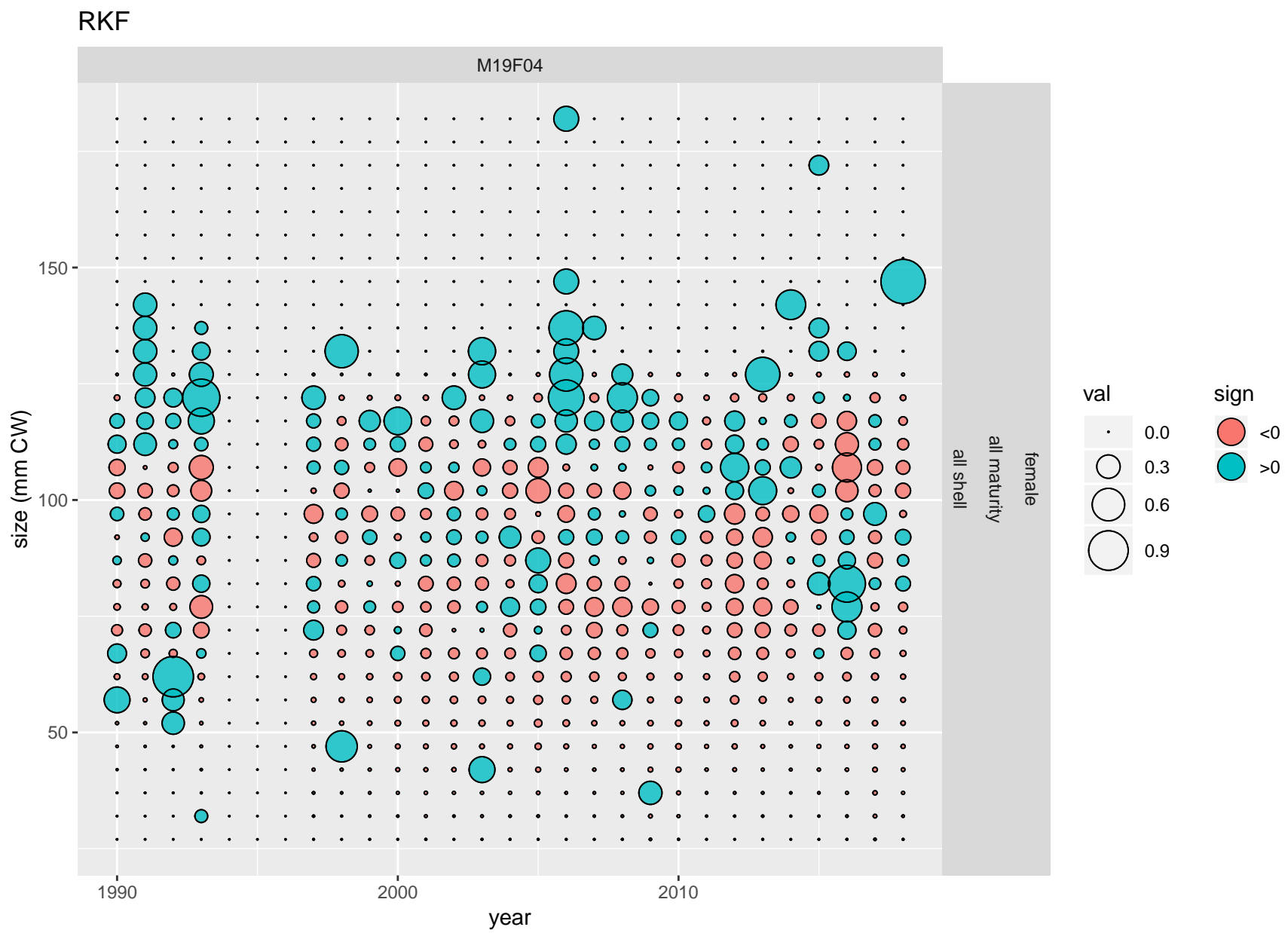


Figure 59: Pearson's residuals for female proportions-at-size from the RKF for scenario M19F04.

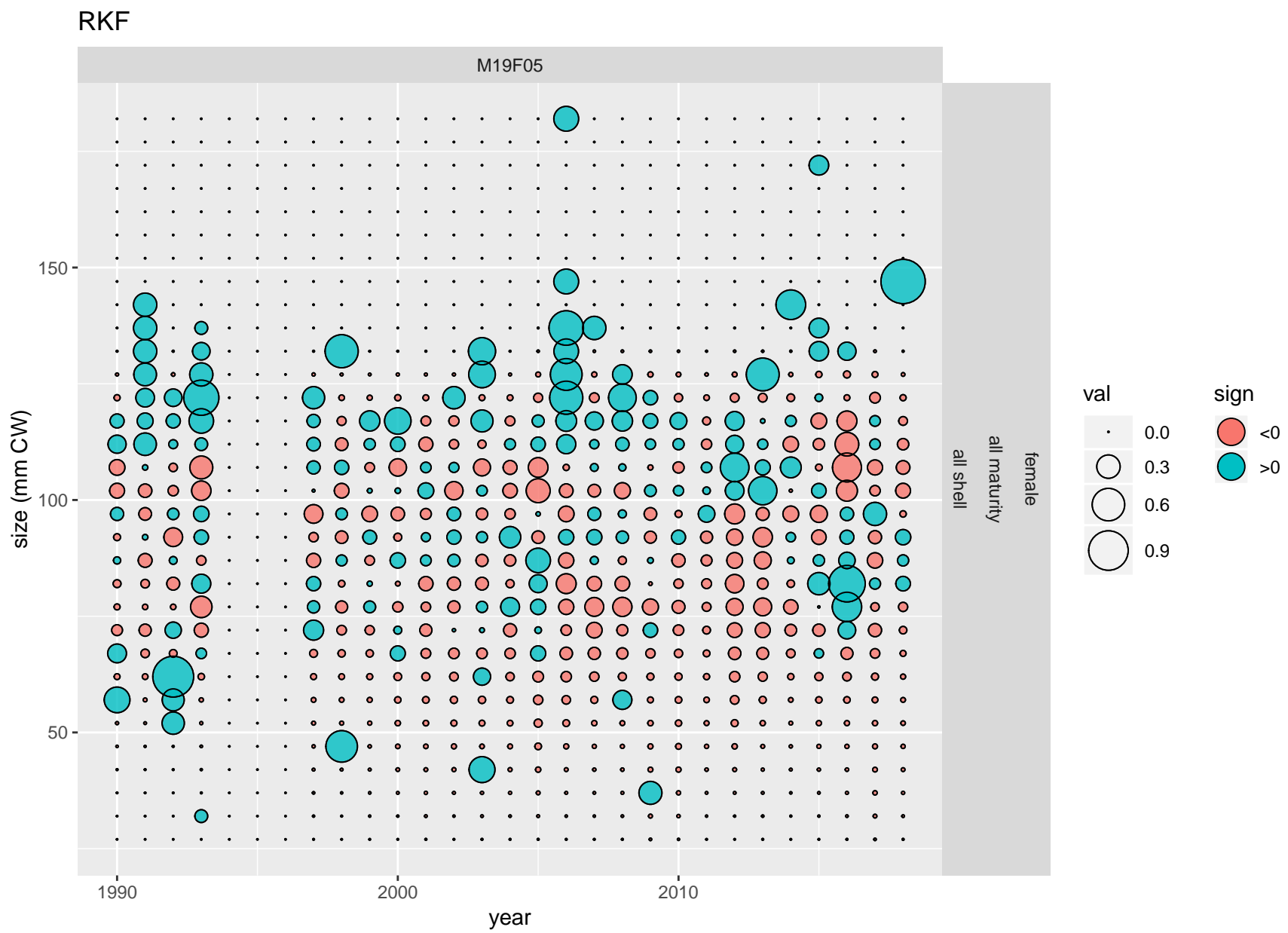


Figure 60: Pearson's residuals for female proportions-at-size from the RKF for scenario M19F05.

# Effective Ns for total catch size compositions

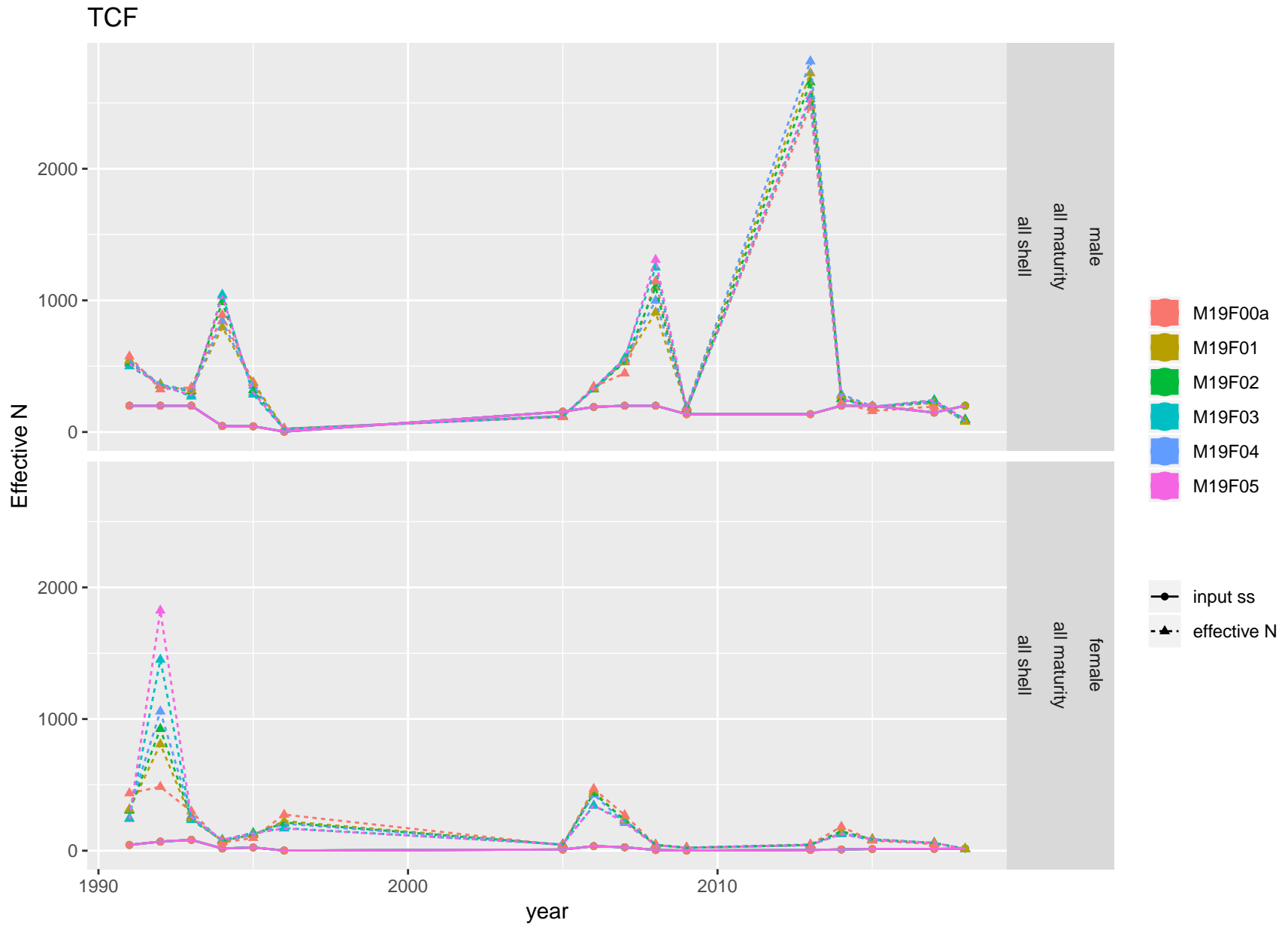


Figure 61: Input and effective sample sizes from total catch size compositions from the TCF fishery.

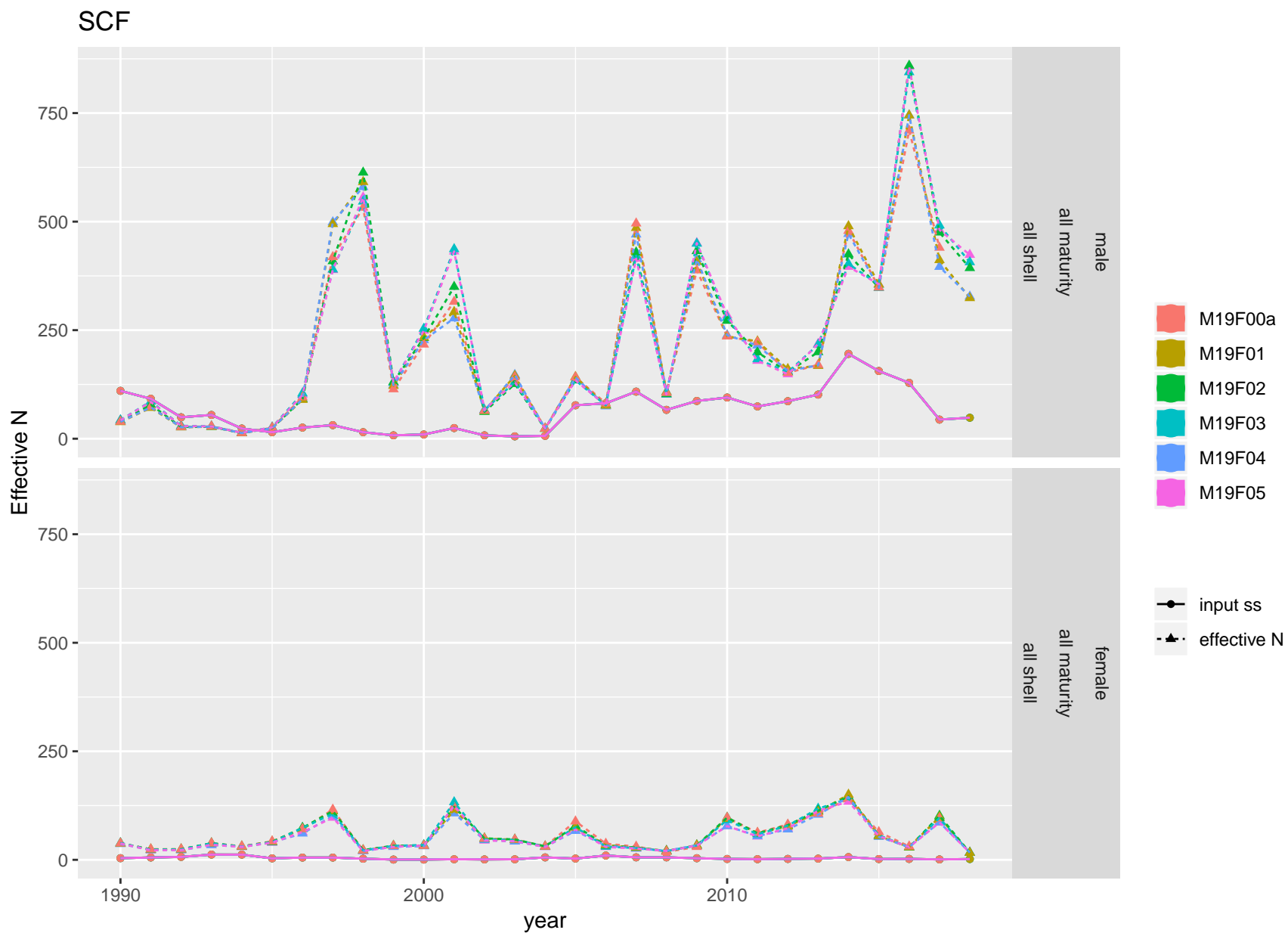


Figure 62: Input and effective sample sizes from total catch size compositions from the SCF fishery.



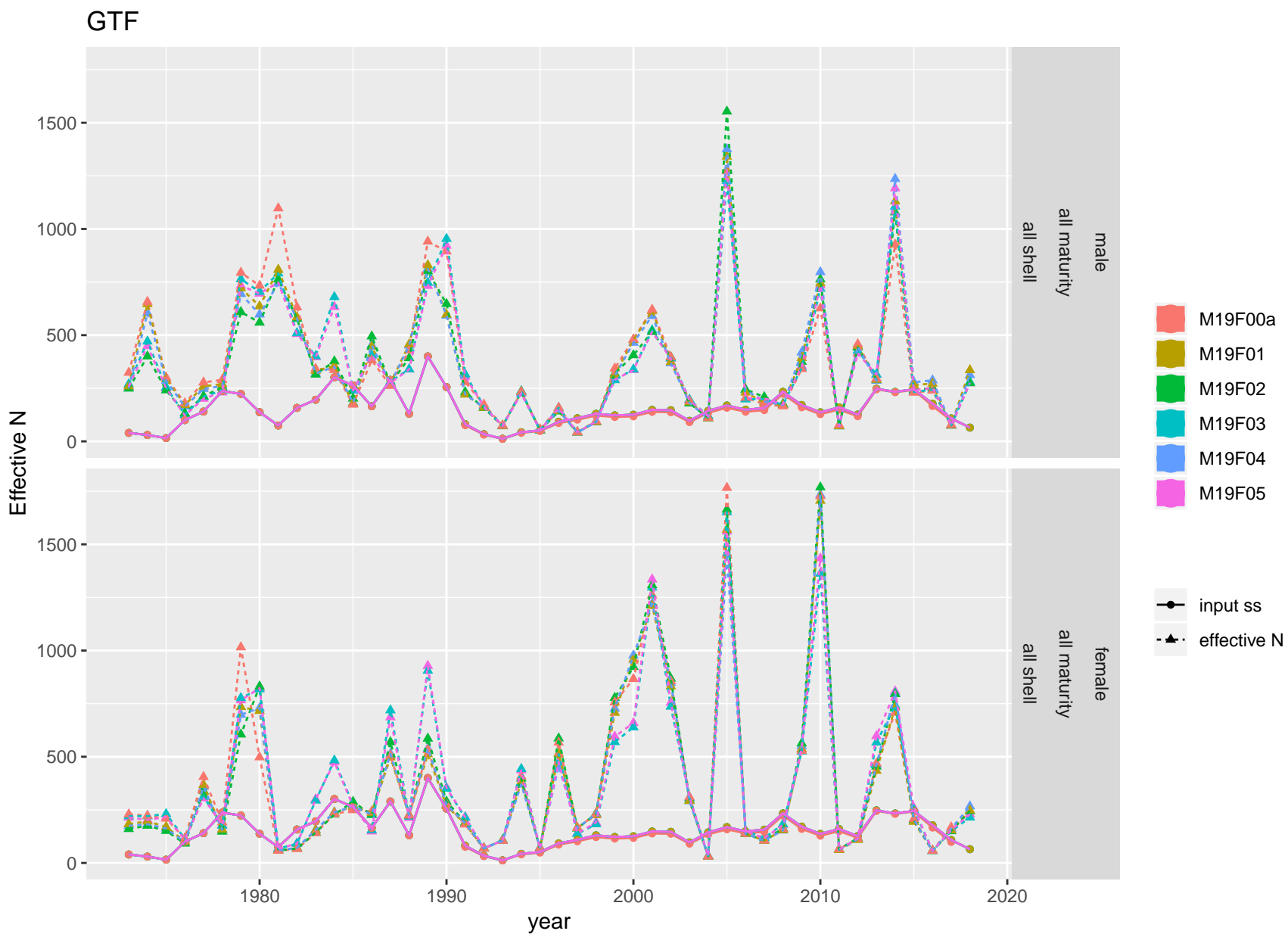


Figure 63: Input and effective sample sizes from total catch size compositions from the GTF fishery.

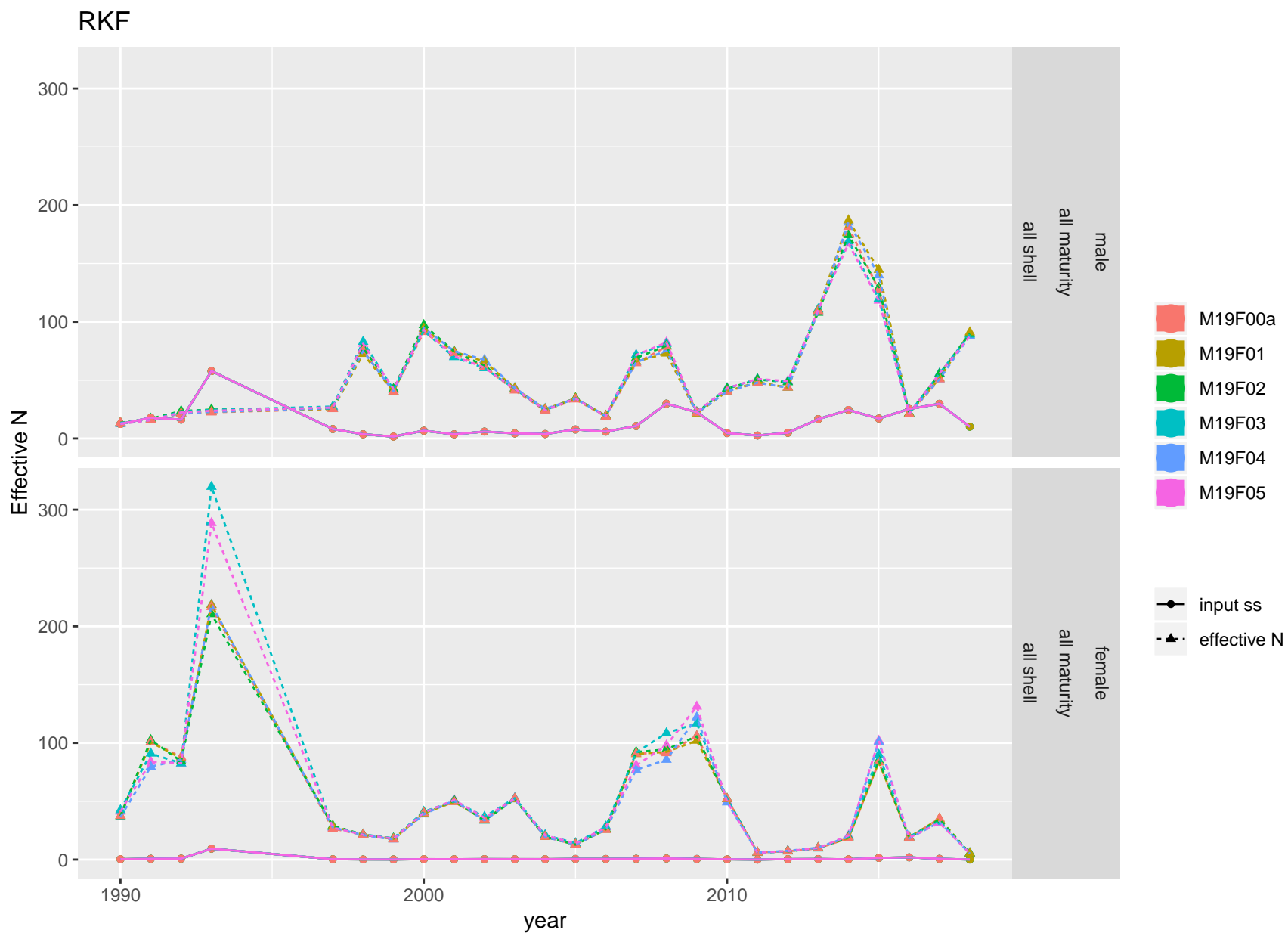


Figure 64: Input and effective sample sizes from total catch size compositions from the RKF fishery.