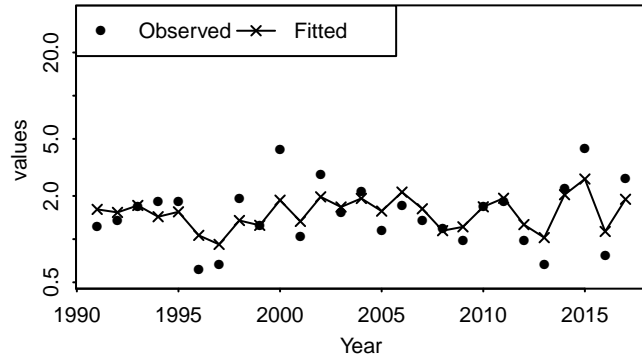
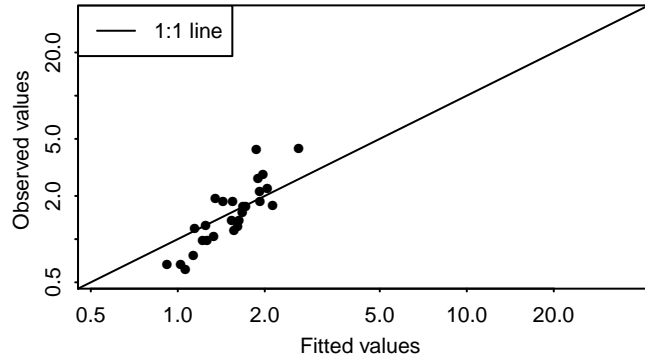


Turbot in IV pgSurvey 4 Diagnostics – BTS–ISIS, age 1

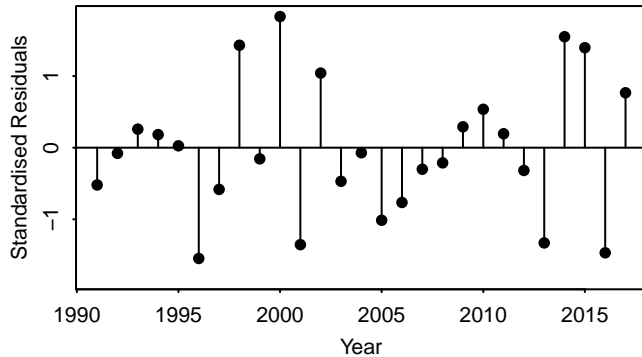
a) Observed and fitted values time series



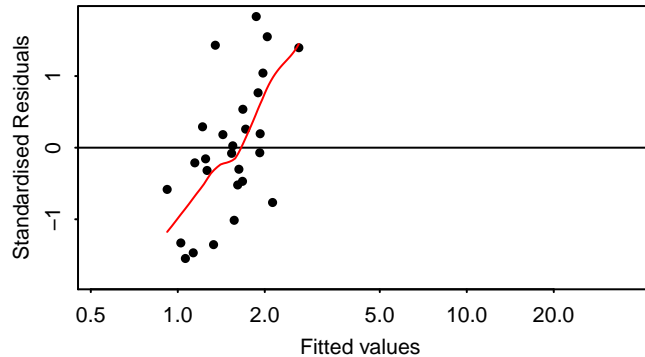
b) Observed vs fitted values



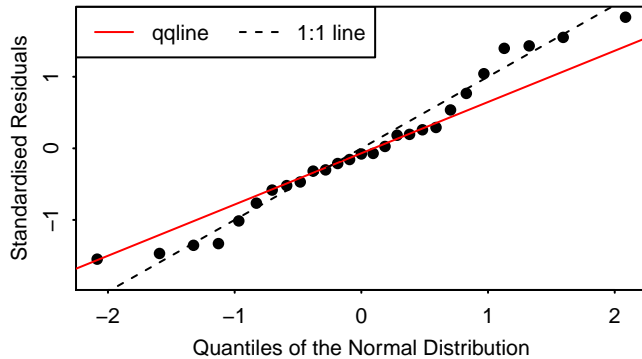
c) Standardised residuals over time



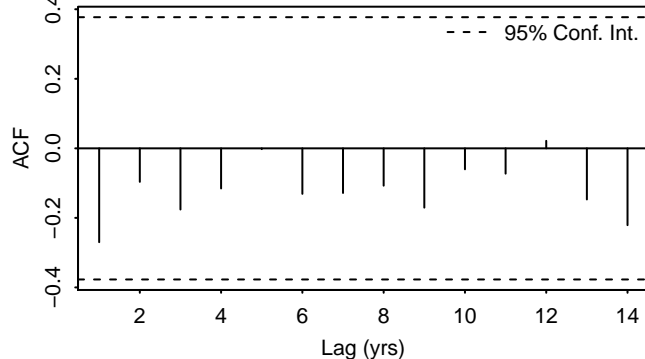
d) Tukey–Anscombe plot



e) Normal Q–Q plot

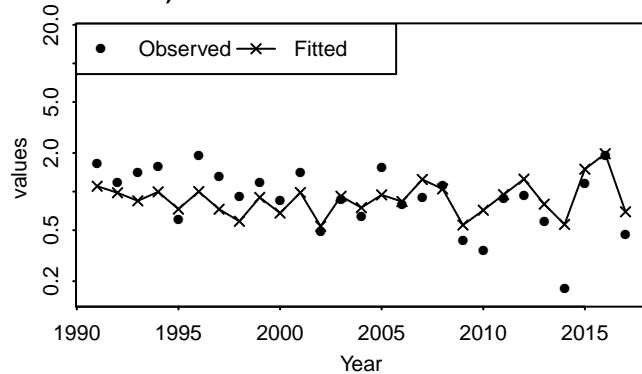


f) Autocorrelation of Residuals

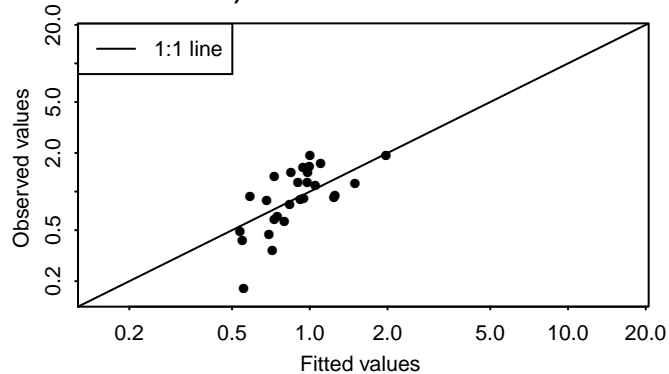


Turbot in IV pgSurvey 4 Diagnostics – BTS–ISIS, age 2

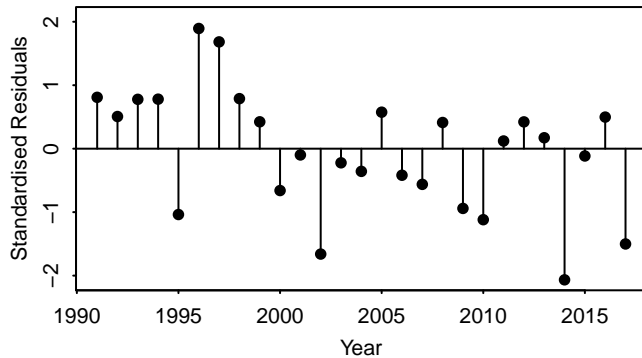
a) Observed and fitted values time series



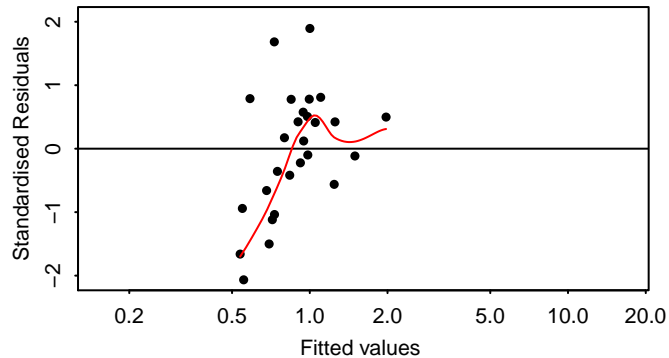
b) Observed vs fitted values



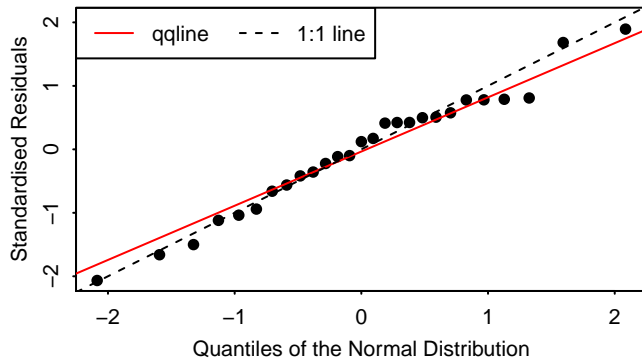
c) Standardised residuals over time



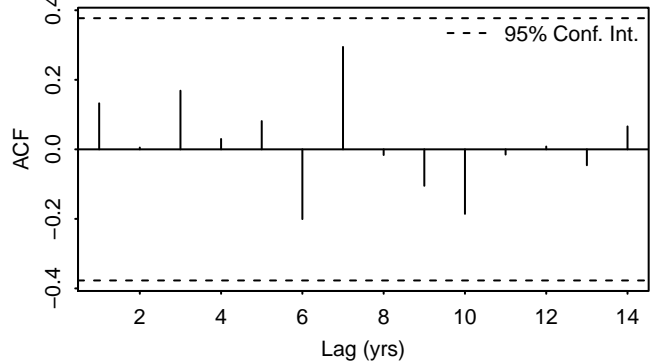
d) Tukey–Anscombe plot



e) Normal Q–Q plot

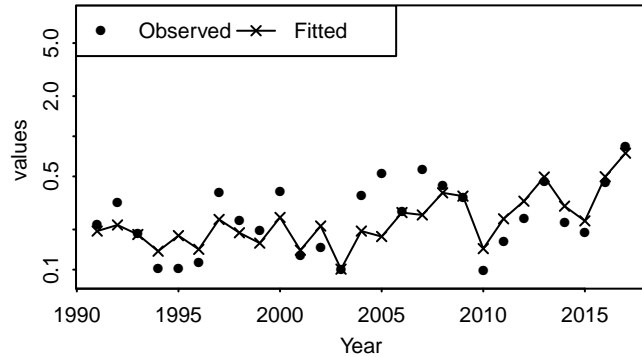


f) Autocorrelation of Residuals

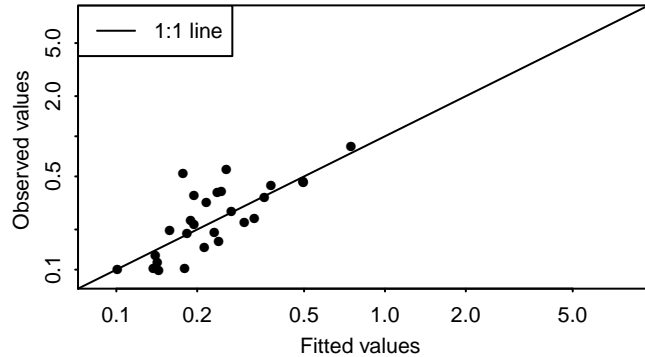


Turbot in IV pgSurvey 4 Diagnostics – BTS–ISIS, age 3

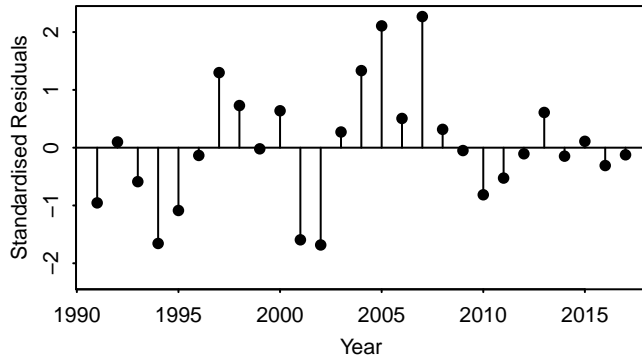
a) Observed and fitted values time series



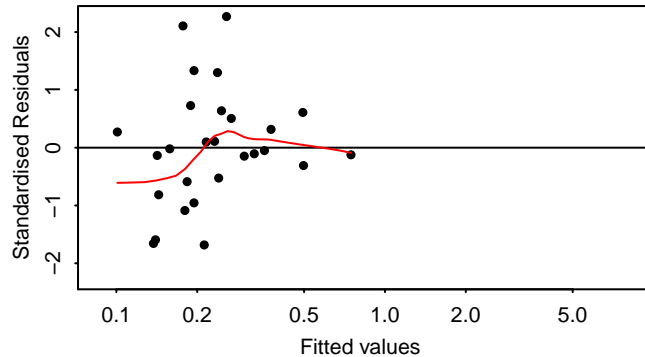
b) Observed vs fitted values



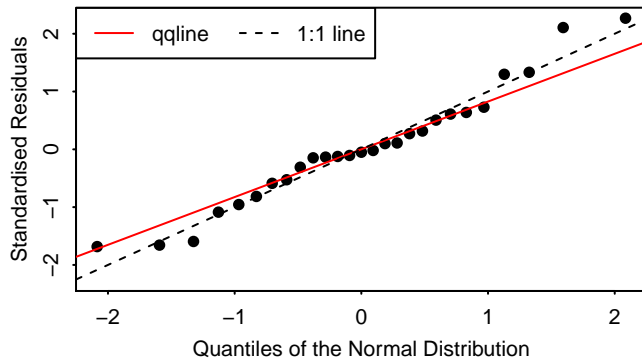
c) Standardised residuals over time



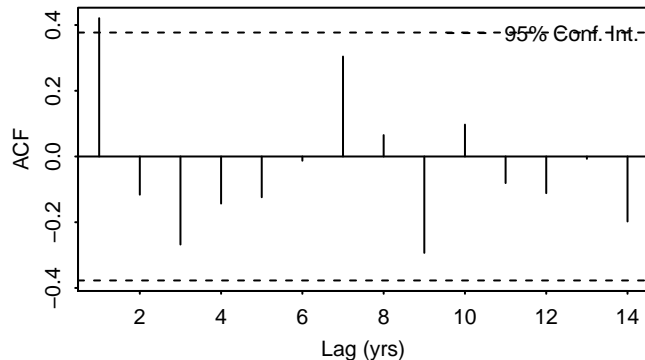
d) Tukey–Anscombe plot



e) Normal Q–Q plot

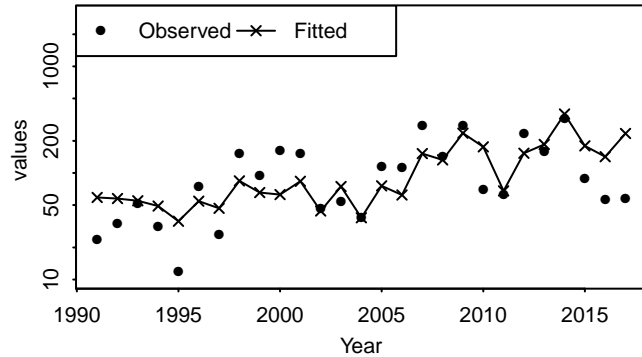


f) Autocorrelation of Residuals

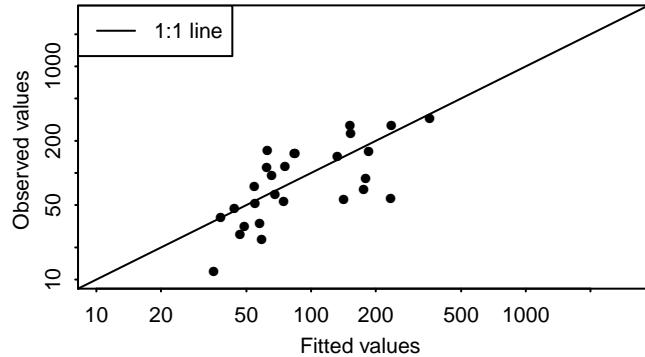


Turbot in IV pgSurvey 4 Diagnostics – BTS–ISIS, age 4

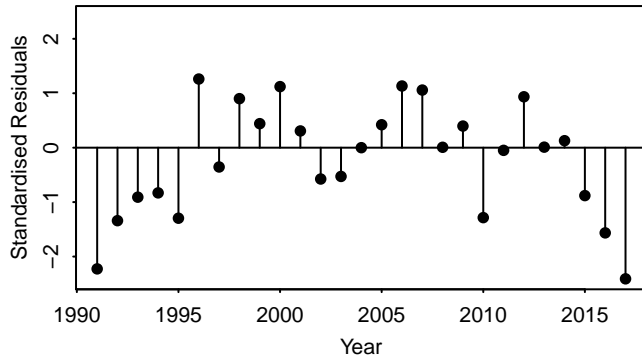
a) Observed and fitted values time series



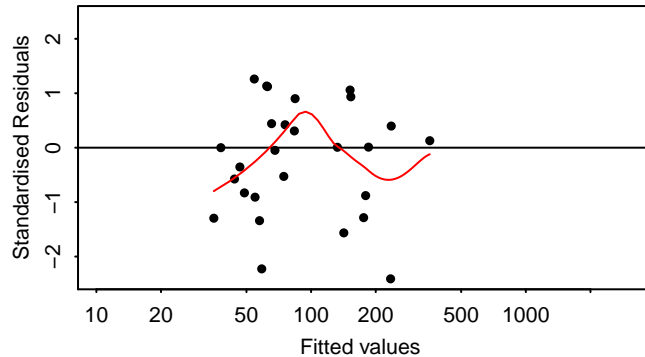
b) Observed vs fitted values



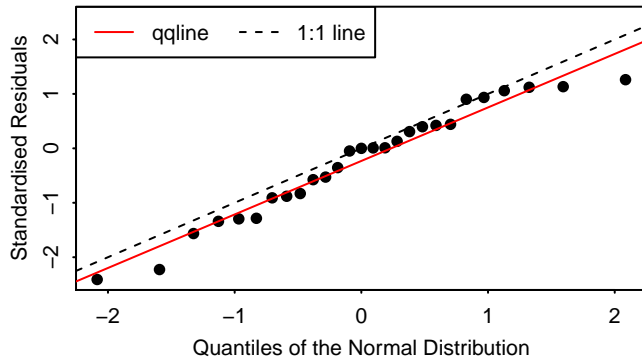
c) Standardised residuals over time



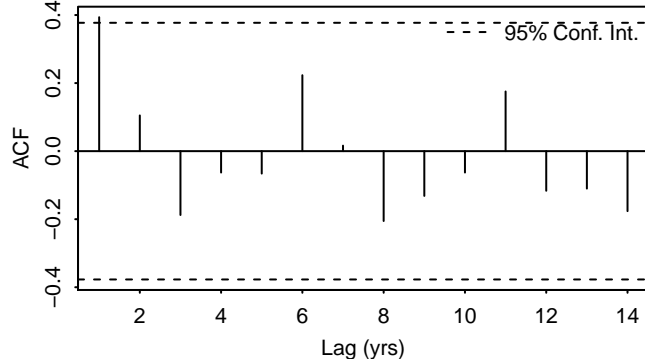
d) Tukey–Anscombe plot



e) Normal Q–Q plot

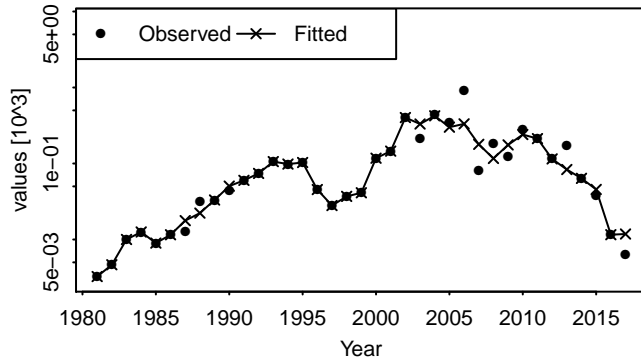


f) Autocorrelation of Residuals

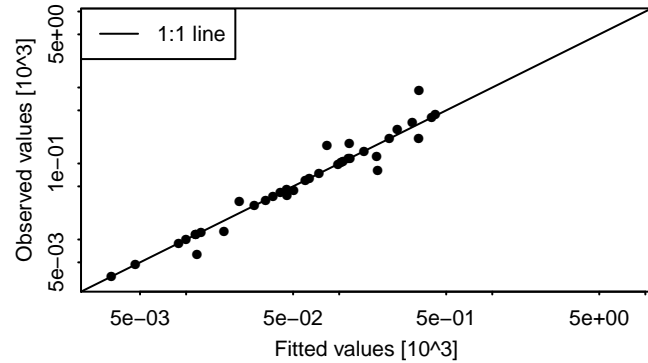


Turbot in IV pgSurvey 4 Diagnostics – catch unique, age 1

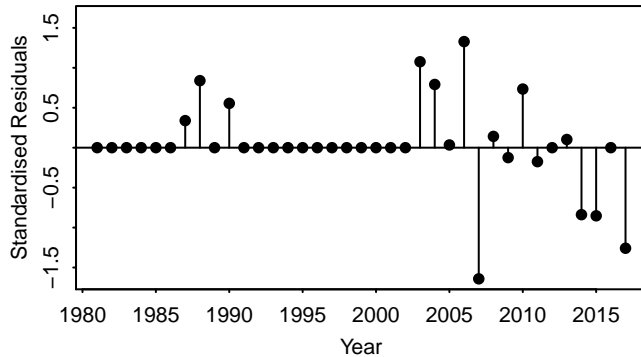
a) Observed and fitted values time series



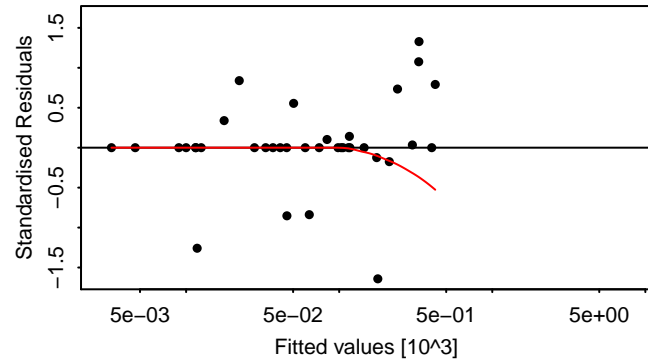
b) Observed vs fitted values



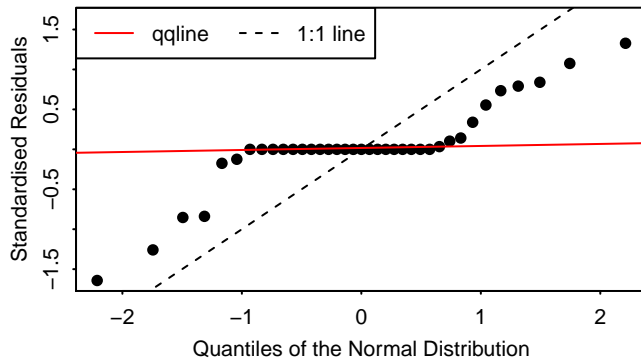
c) Standardised residuals over time



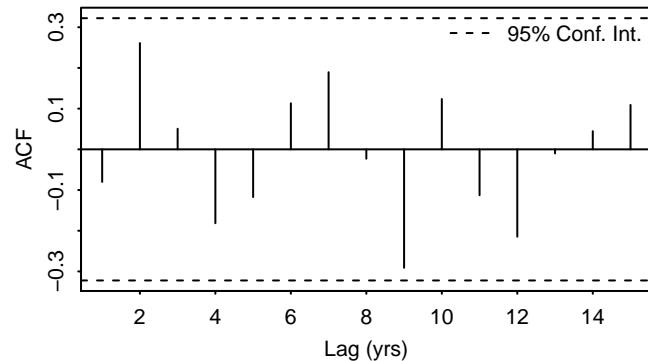
d) Tukey–Anscombe plot



e) Normal Q–Q plot

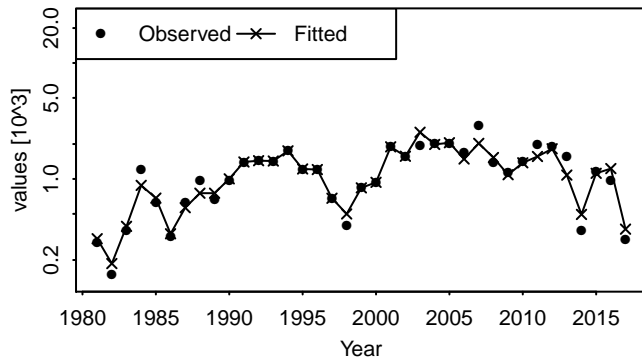


f) Autocorrelation of Residuals

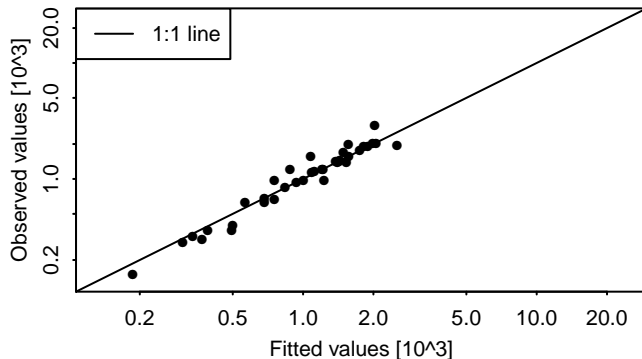


Turbot in IV pgSurvey 4 Diagnostics – catch unique, age 2

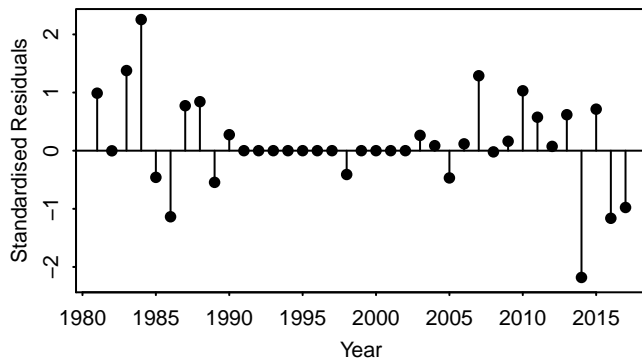
a) Observed and fitted values time series



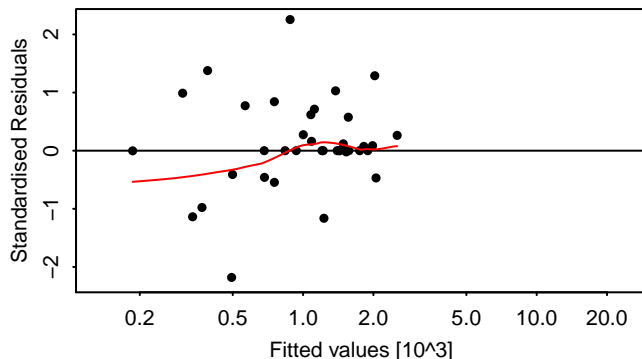
b) Observed vs fitted values



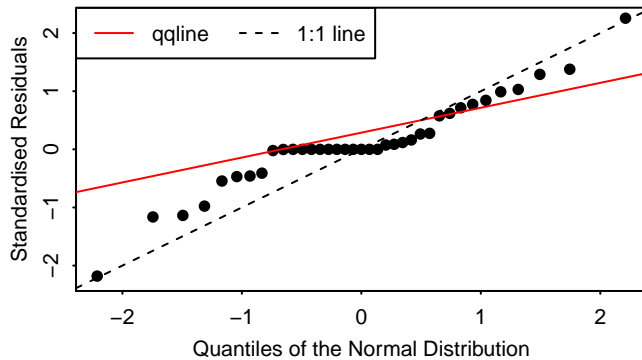
c) Standardised residuals over time



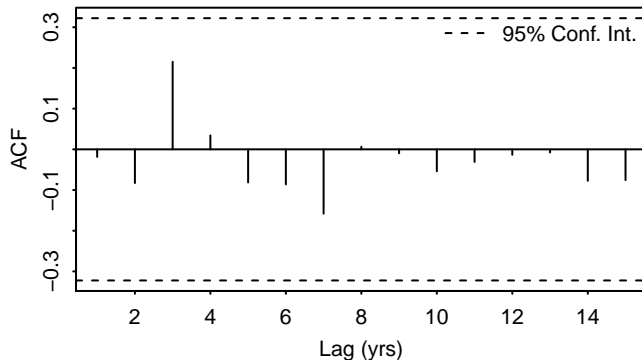
d) Tukey–Anscombe plot



e) Normal Q–Q plot

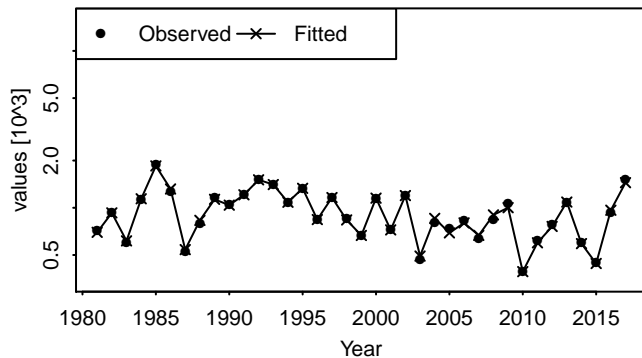


f) Autocorrelation of Residuals

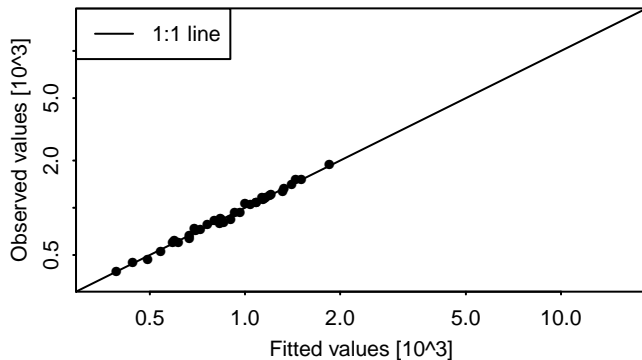


Turbot in IV pgSurvey 4 Diagnostics – catch unique, age 3

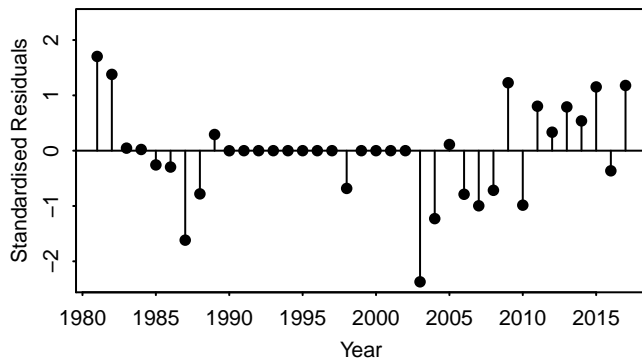
a) Observed and fitted values time series



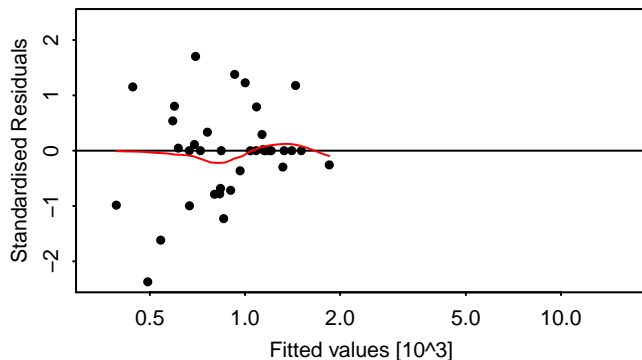
b) Observed vs fitted values



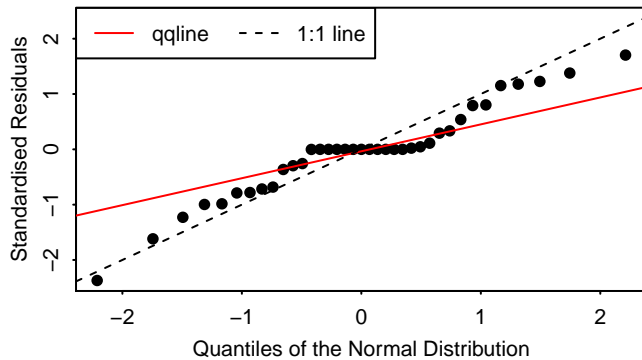
c) Standardised residuals over time



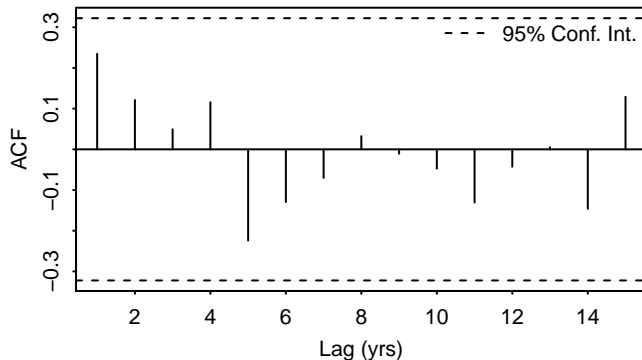
d) Tukey–Anscombe plot



e) Normal Q–Q plot

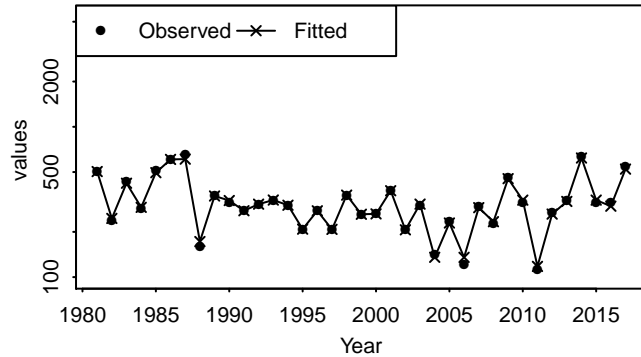


f) Autocorrelation of Residuals

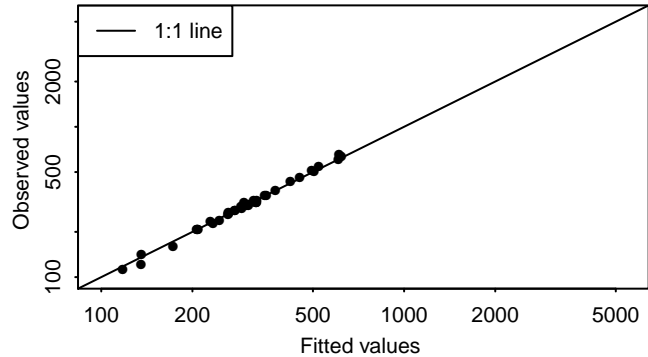


Turbot in IV pgSurvey 4 Diagnostics – catch unique, age 4

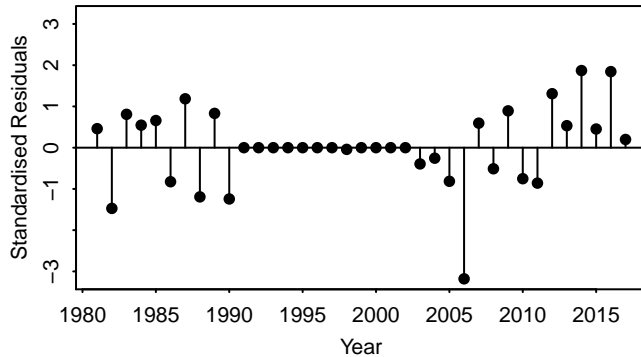
a) Observed and fitted values time series



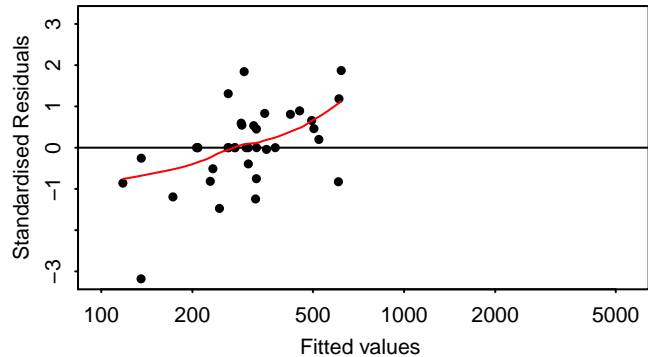
b) Observed vs fitted values



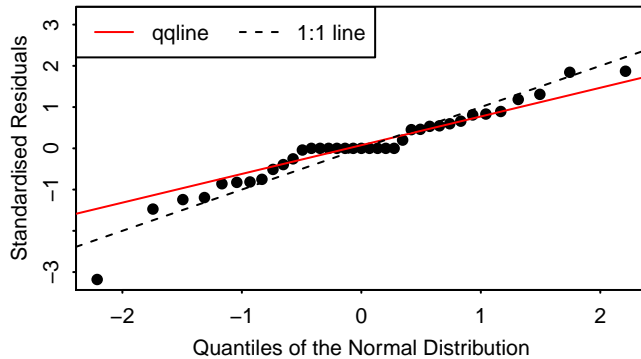
c) Standardised residuals over time



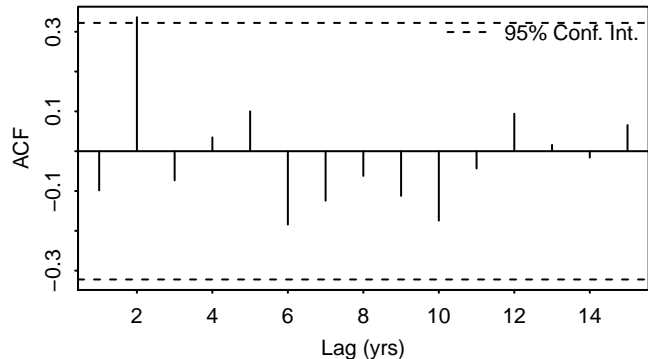
d) Tukey–Anscombe plot



e) Normal Q–Q plot

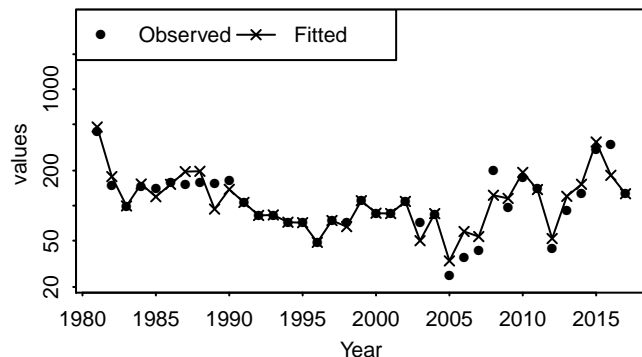


f) Autocorrelation of Residuals

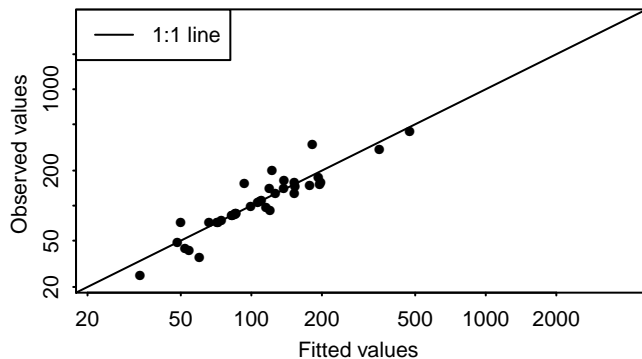


Turbot in IV pgSurvey 4 Diagnostics – catch unique, age 5

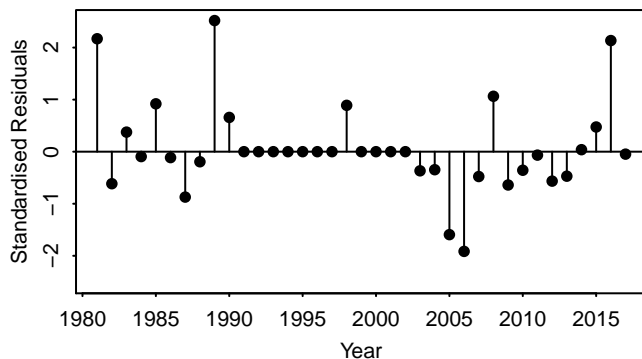
a) Observed and fitted values time series



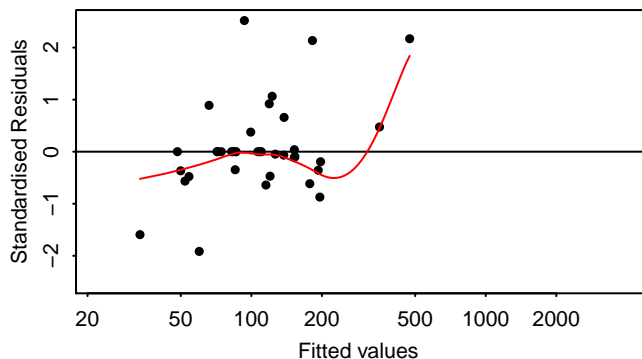
b) Observed vs fitted values



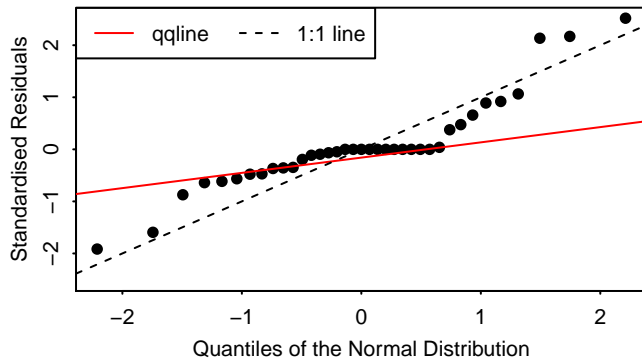
c) Standardised residuals over time



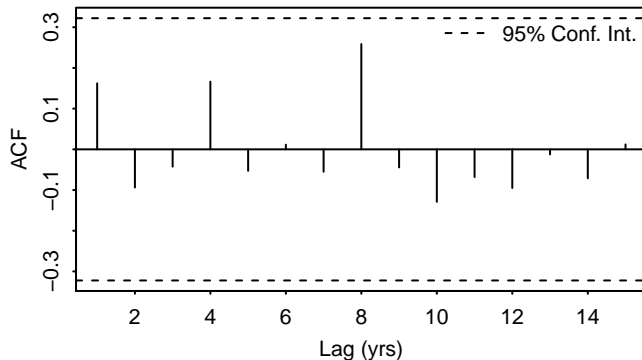
d) Tukey–Anscombe plot



e) Normal Q–Q plot

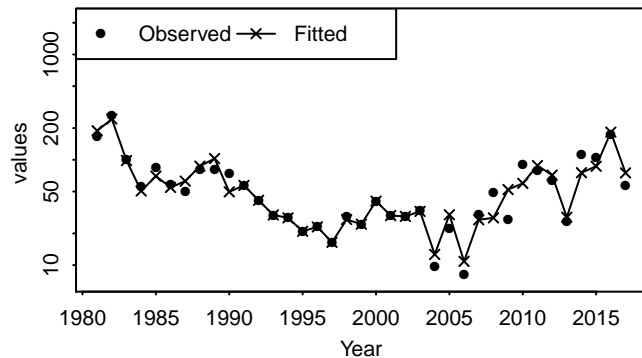


f) Autocorrelation of Residuals

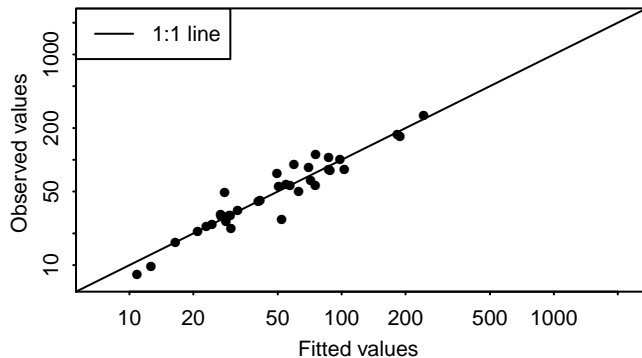


Turbot in IV pgSurvey 4 Diagnostics – catch unique, age 6

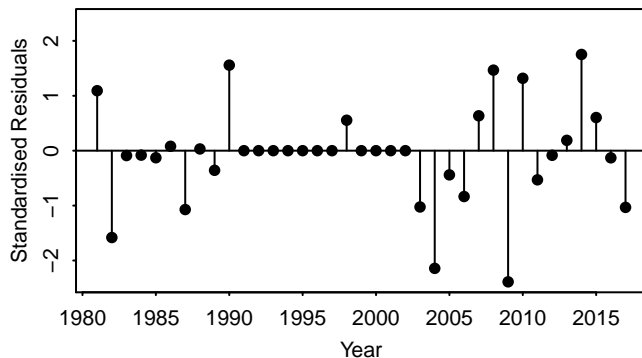
a) Observed and fitted values time series



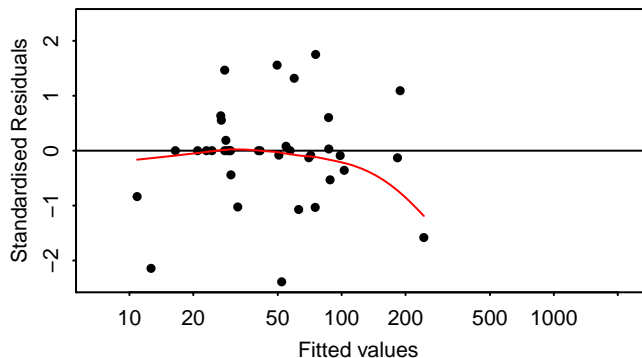
b) Observed vs fitted values



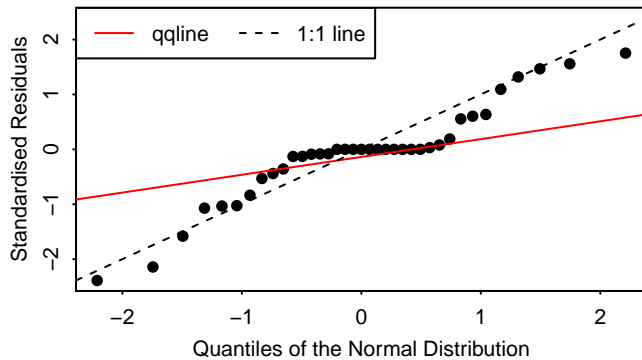
c) Standardised residuals over time



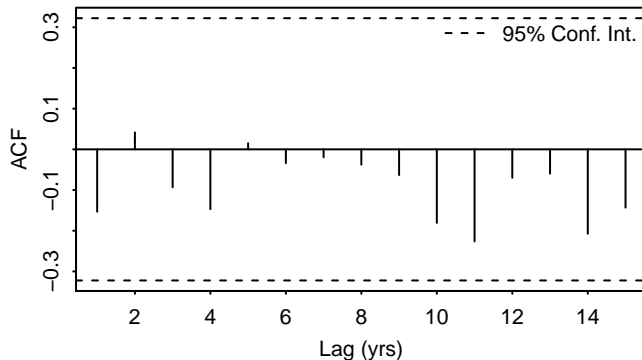
d) Tukey–Anscombe plot



e) Normal Q–Q plot

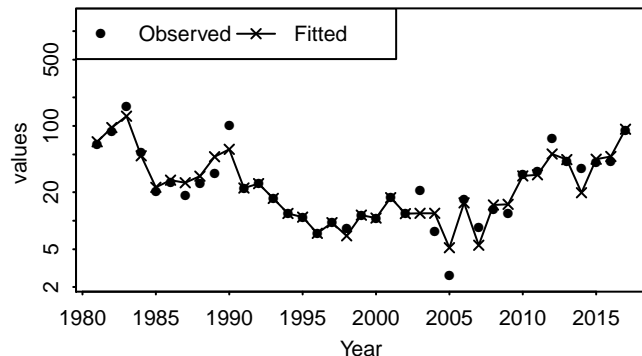


f) Autocorrelation of Residuals

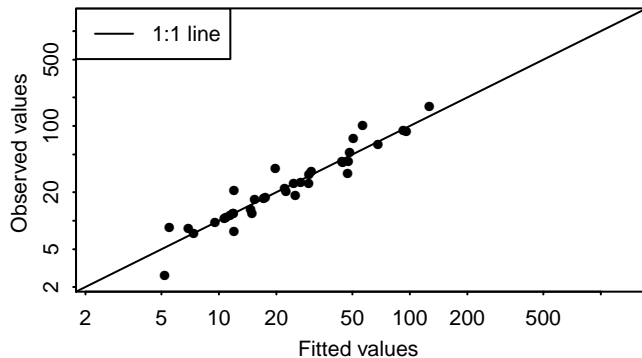


Turbot in IV pgSurvey 4 Diagnostics – catch unique, age 7

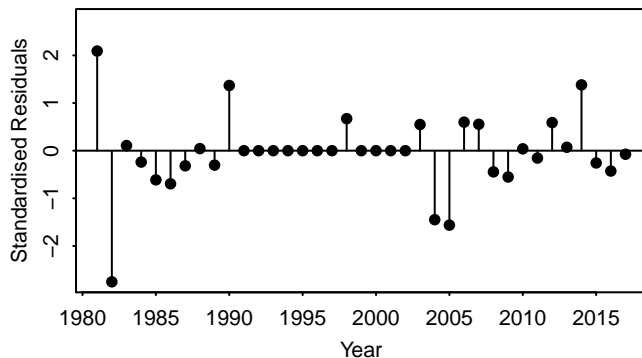
a) Observed and fitted values time series



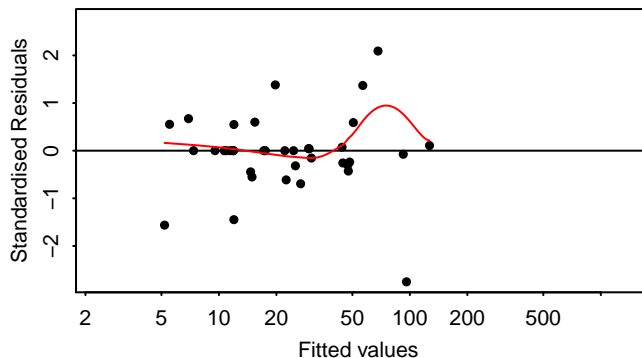
b) Observed vs fitted values



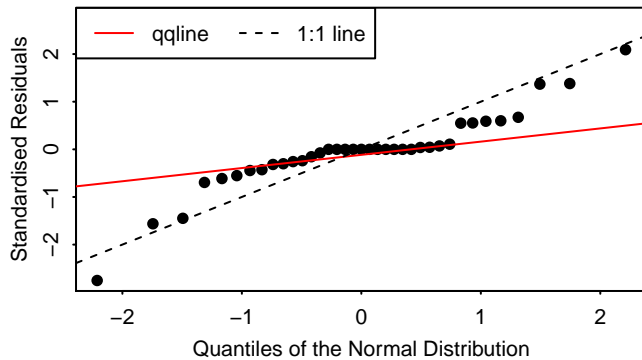
c) Standardised residuals over time



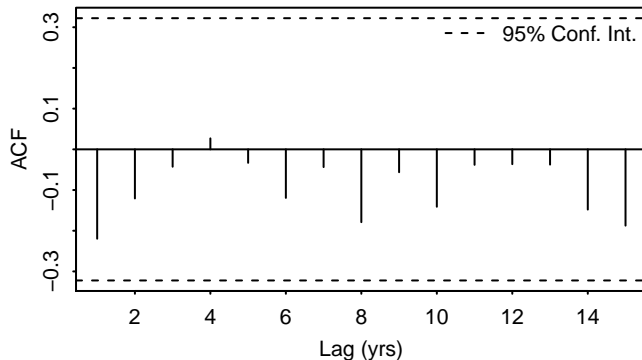
d) Tukey–Anscombe plot



e) Normal Q–Q plot

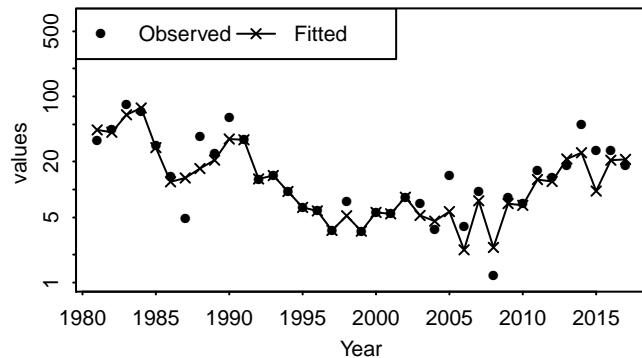


f) Autocorrelation of Residuals

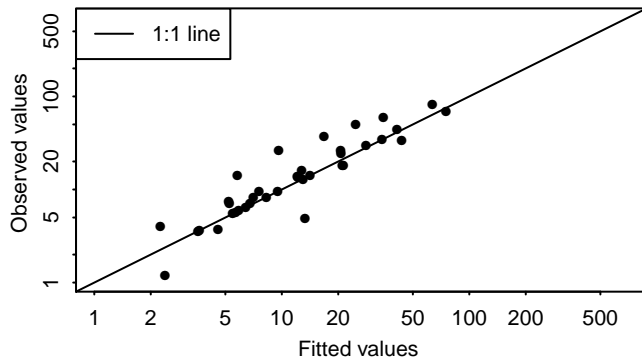


Turbot in IV pgSurvey 4 Diagnostics – catch unique, age 8

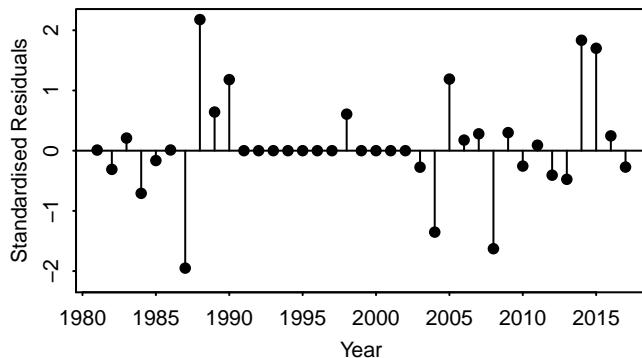
a) Observed and fitted values time series



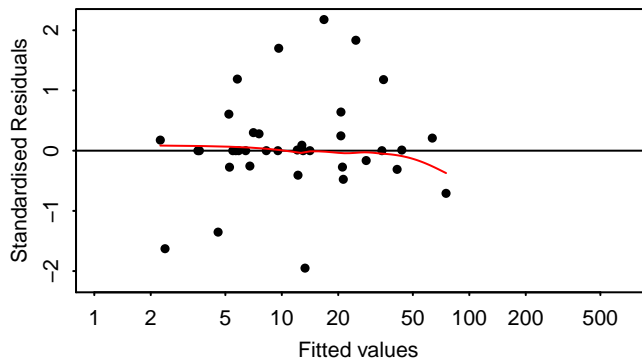
b) Observed vs fitted values



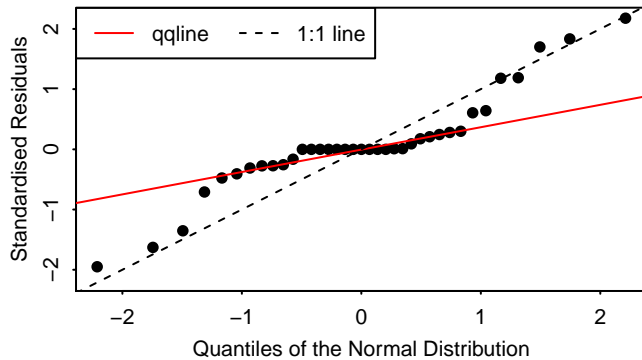
c) Standardised residuals over time



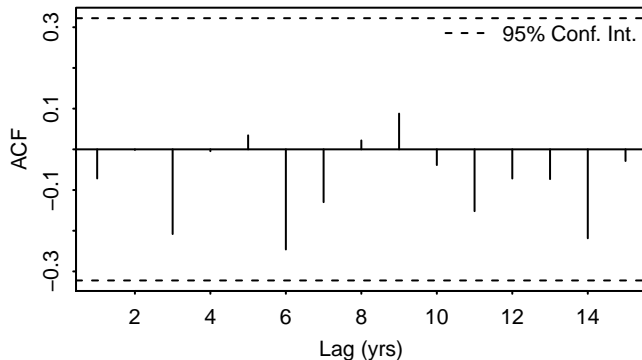
d) Tukey–Anscombe plot



e) Normal Q–Q plot

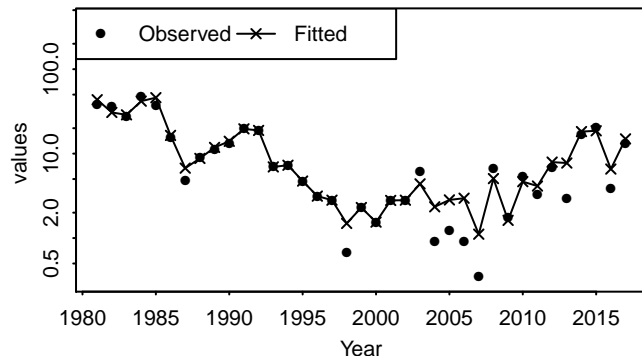


f) Autocorrelation of Residuals

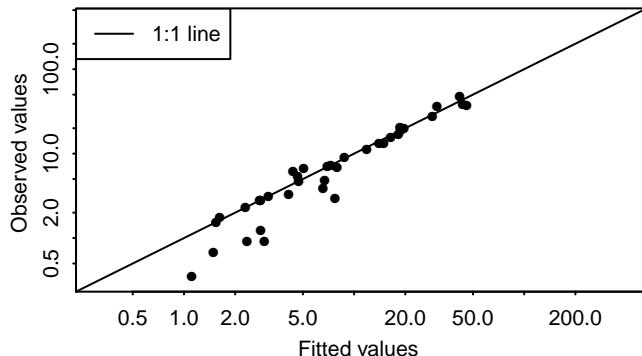


Turbot in IV pgSurvey 4 Diagnostics – catch unique, age 9

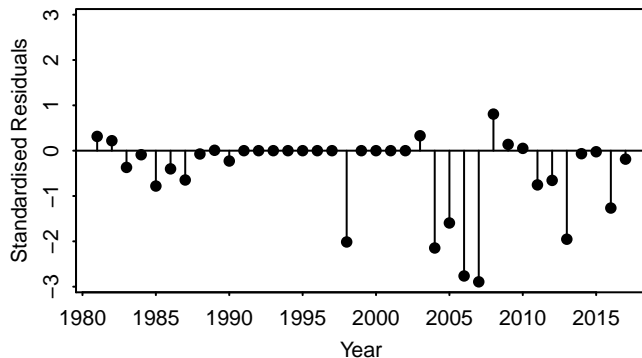
a) Observed and fitted values time series



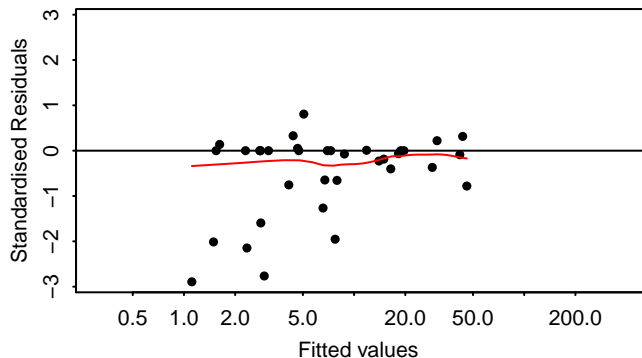
b) Observed vs fitted values



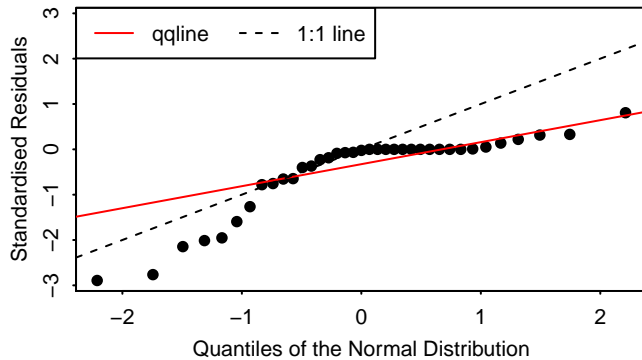
c) Standardised residuals over time



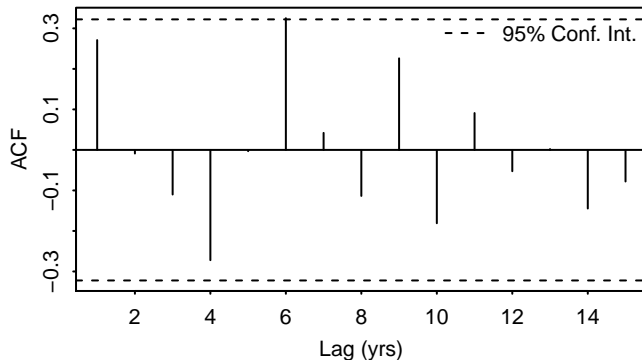
d) Tukey–Anscombe plot



e) Normal Q–Q plot

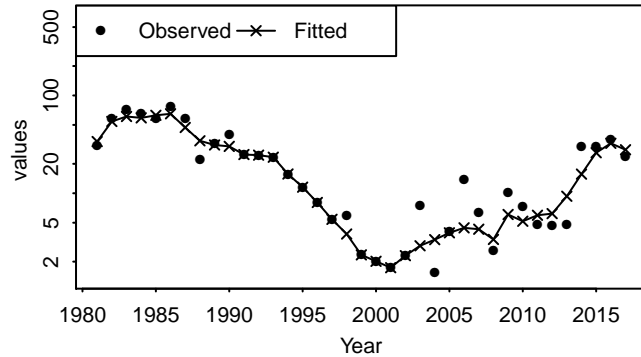


f) Autocorrelation of Residuals

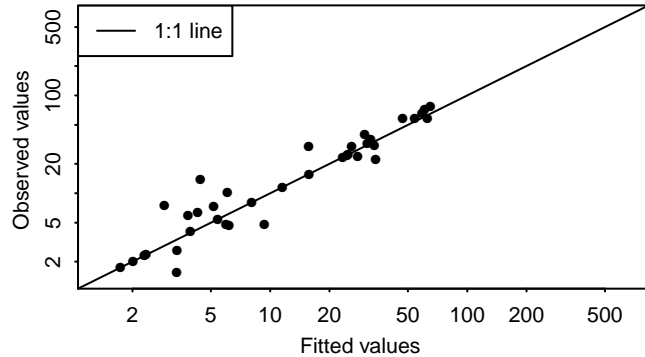


Turbot in IV pgSurvey 4 Diagnostics – catch unique, age 10

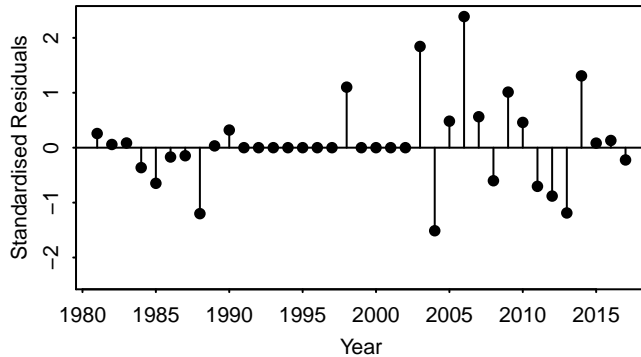
a) Observed and fitted values time series



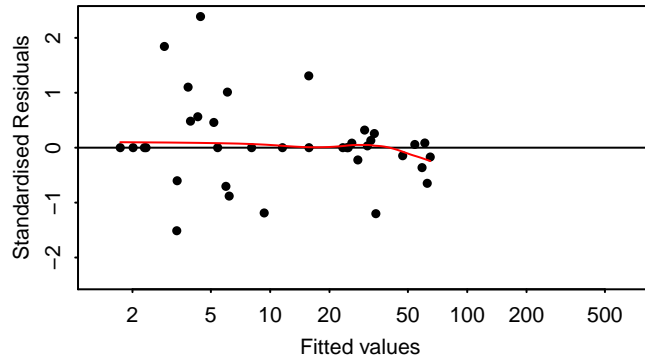
b) Observed vs fitted values



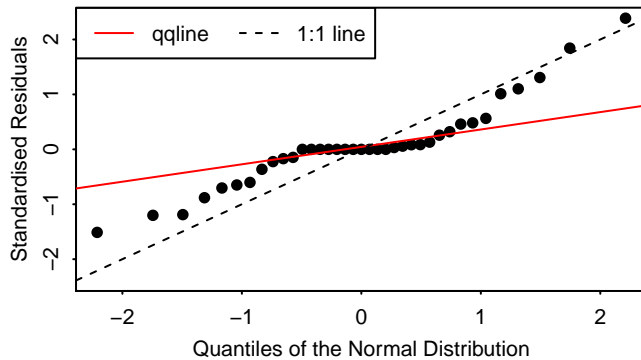
c) Standardised residuals over time



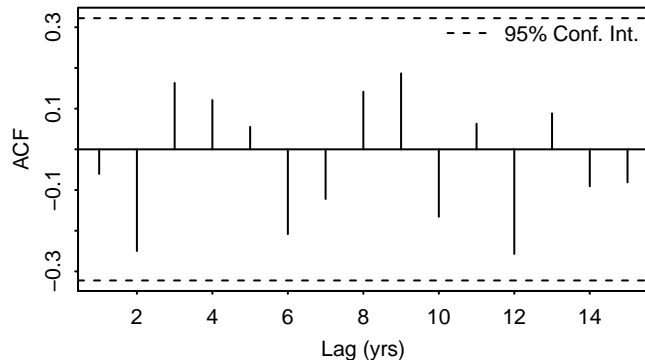
d) Tukey–Anscombe plot



e) Normal Q–Q plot

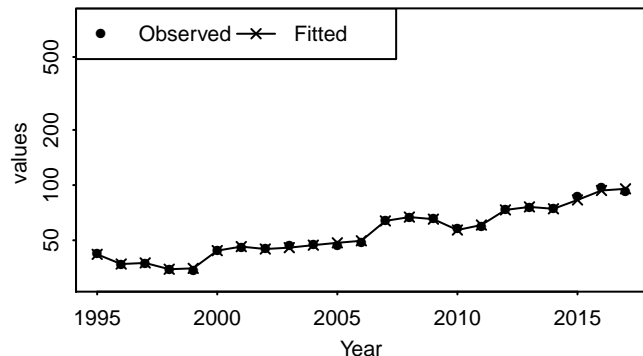


f) Autocorrelation of Residuals

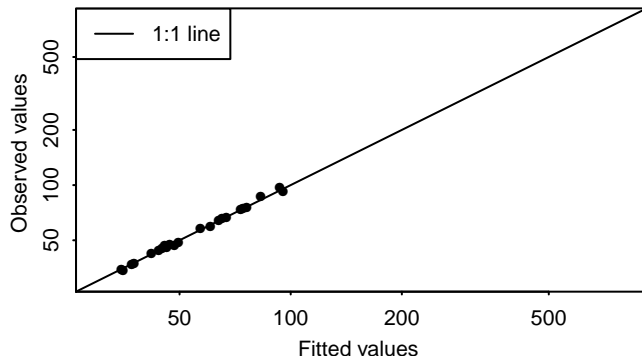


Turbot in IV pgSurvey 4 Diagnostics – NL_LPUE, age –1

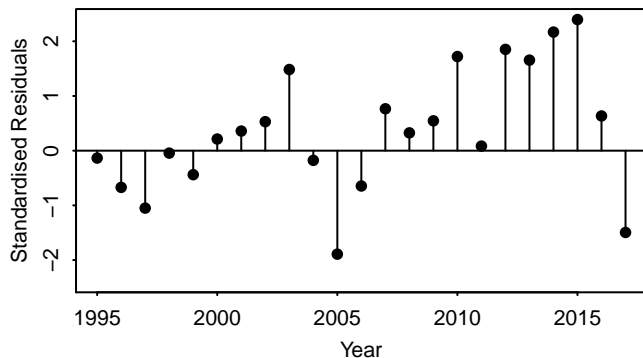
a) Observed and fitted values time series



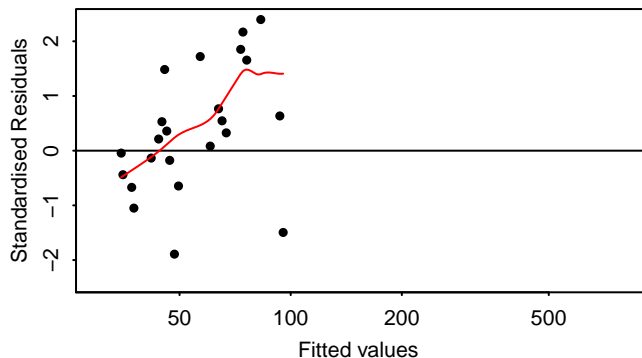
b) Observed vs fitted values



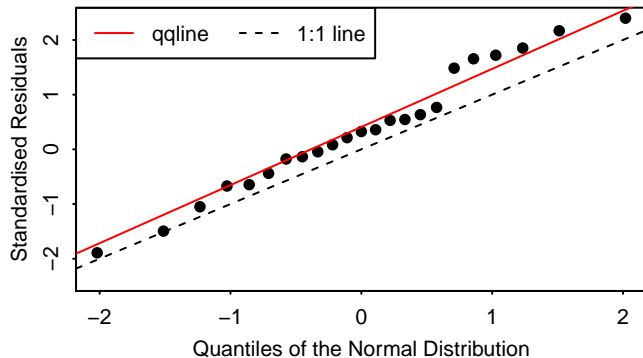
c) Standardised residuals over time



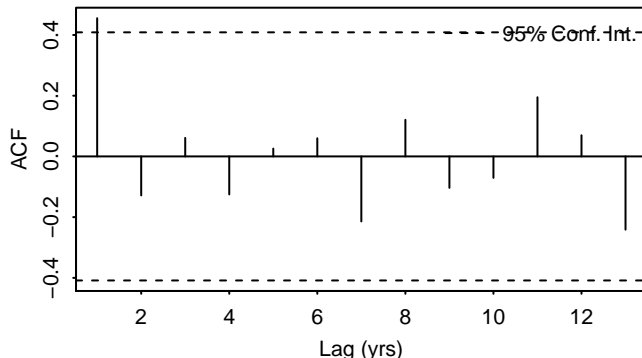
d) Tukey–Anscombe plot



e) Normal Q–Q plot

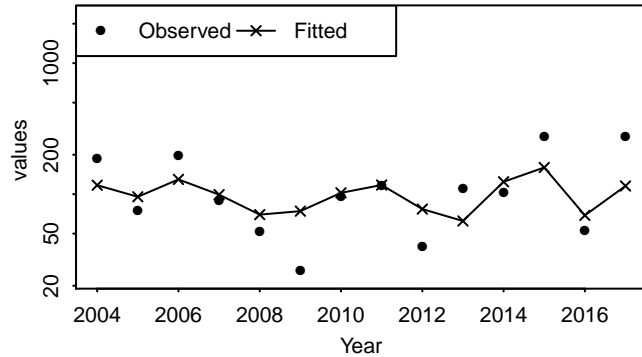


f) Autocorrelation of Residuals

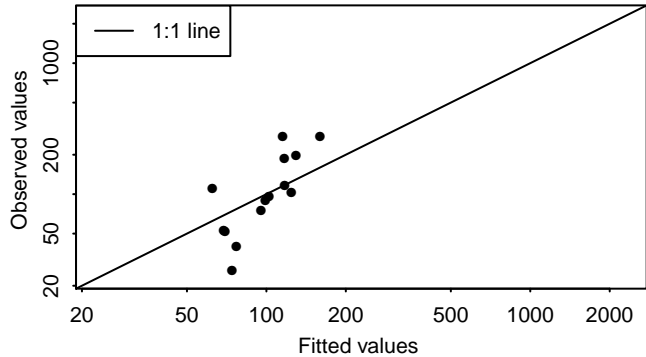


Turbot in IV pgSurvey 4 Diagnostics – SNS, age 1

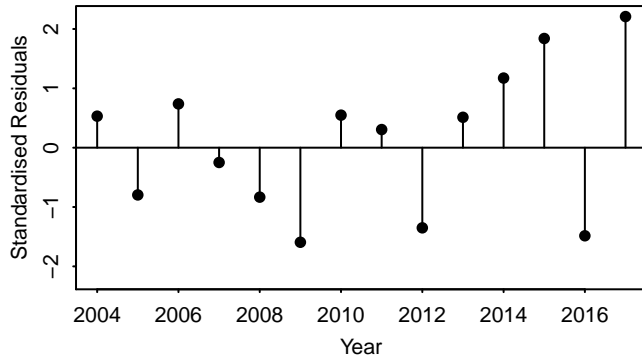
a) Observed and fitted values time series



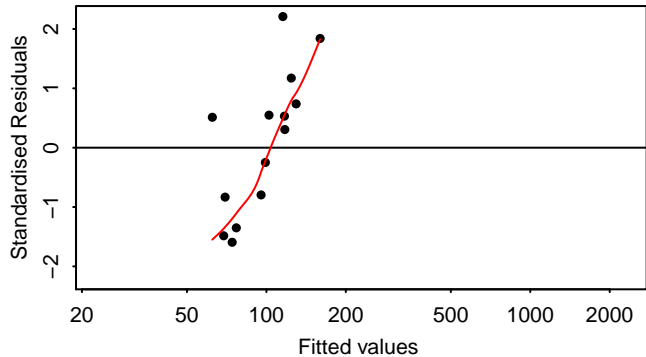
b) Observed vs fitted values



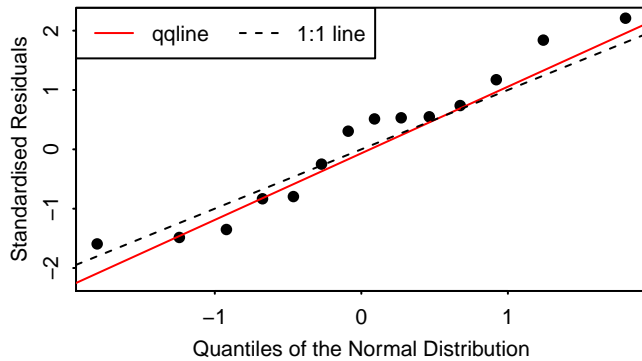
c) Standardised residuals over time



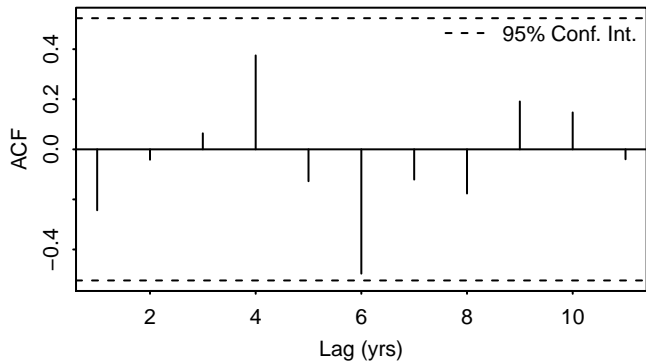
d) Tukey–Anscombe plot



e) Normal Q–Q plot

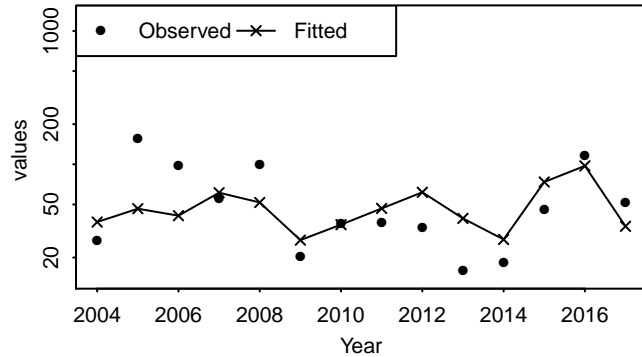


f) Autocorrelation of Residuals

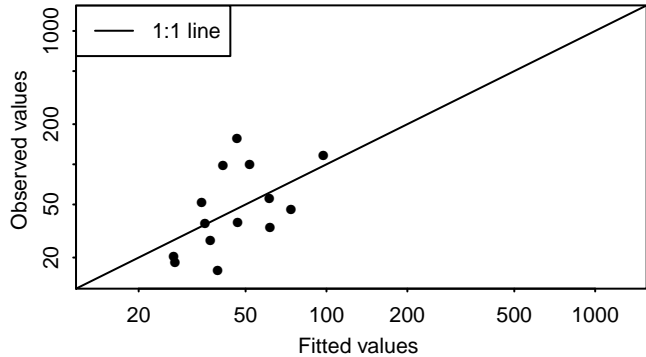


Turbot in IV pgSurvey 4 Diagnostics – SNS, age 2

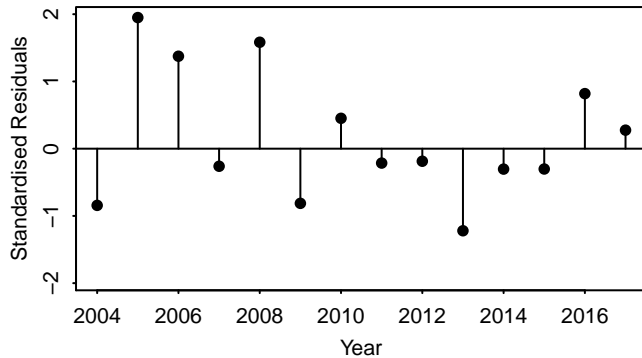
a) Observed and fitted values time series



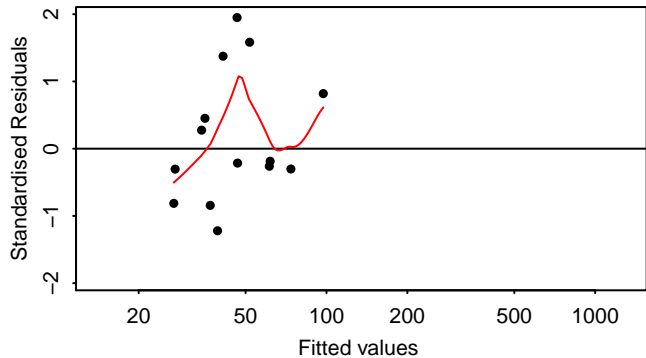
b) Observed vs fitted values



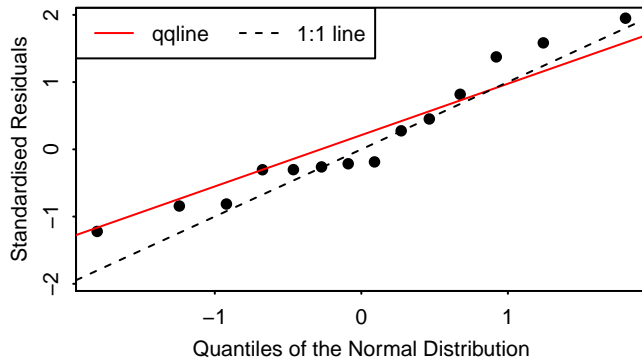
c) Standardised residuals over time



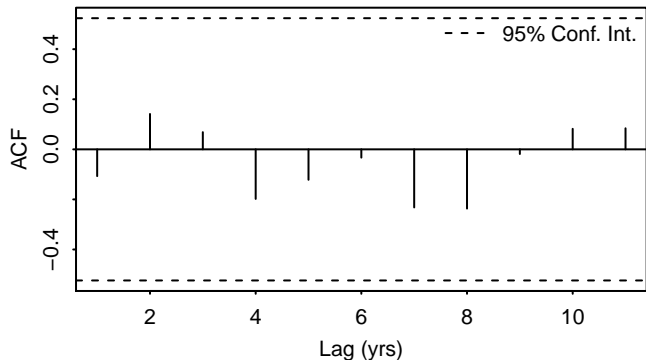
d) Tukey–Anscombe plot



e) Normal Q–Q plot

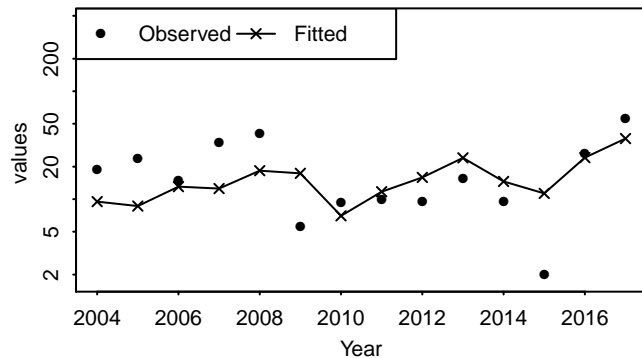


f) Autocorrelation of Residuals

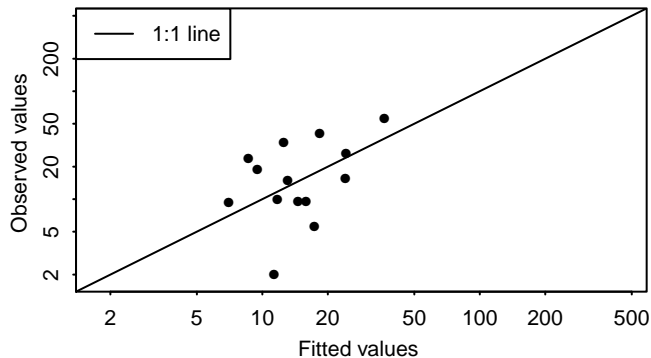


Turbot in IV pgSurvey 4 Diagnostics – SNS, age 3

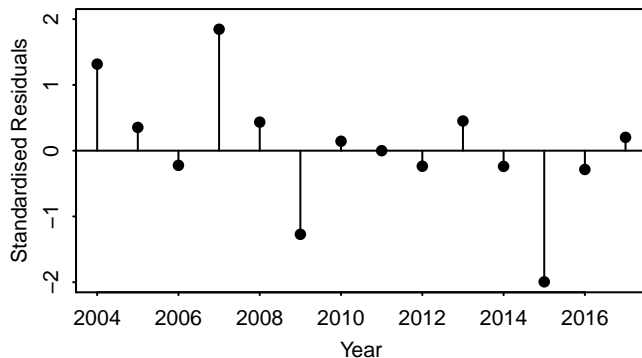
a) Observed and fitted values time series



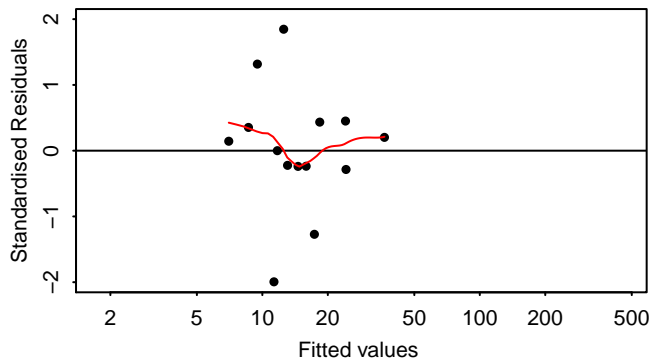
b) Observed vs fitted values



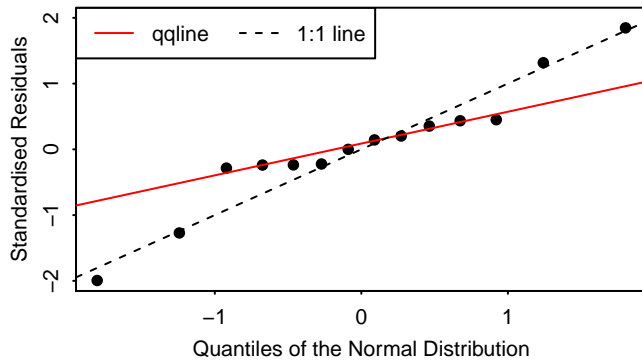
c) Standardised residuals over time



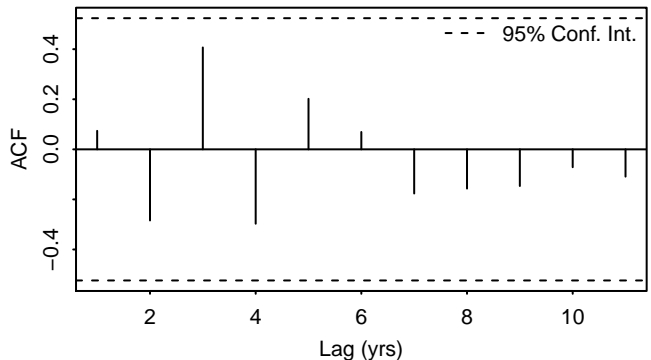
d) Tukey–Anscombe plot



e) Normal Q–Q plot

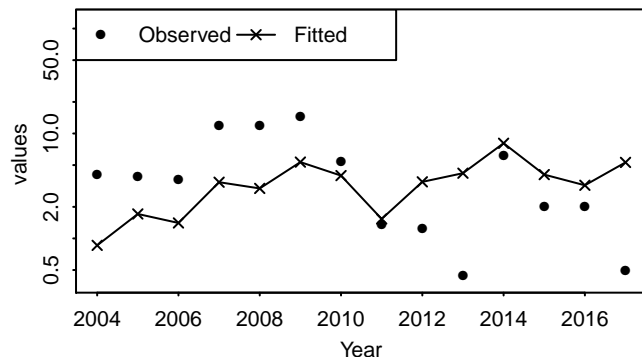


f) Autocorrelation of Residuals

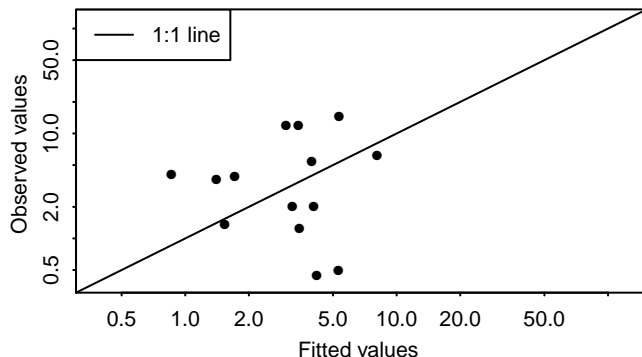


Turbot in IV pgSurvey 4 Diagnostics – SNS, age 4

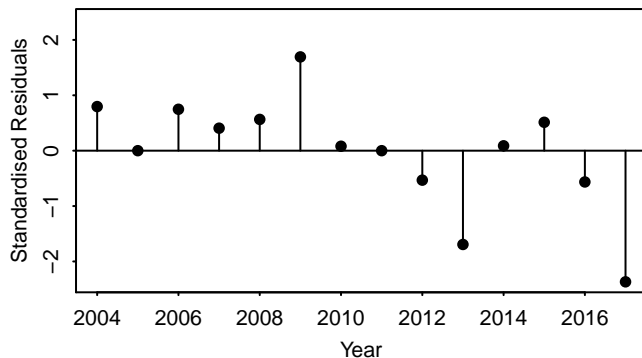
a) Observed and fitted values time series



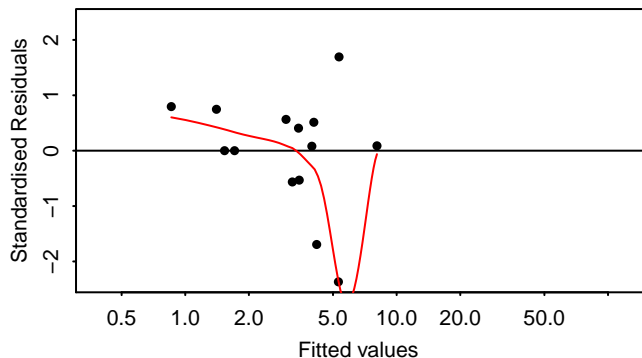
b) Observed vs fitted values



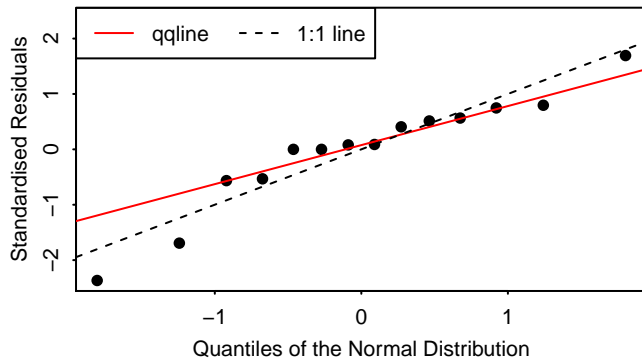
c) Standardised residuals over time



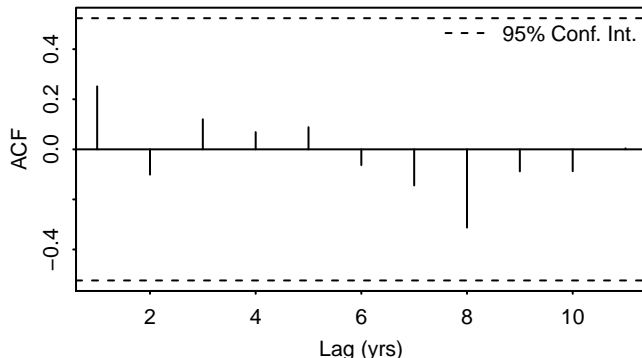
d) Tukey–Anscombe plot



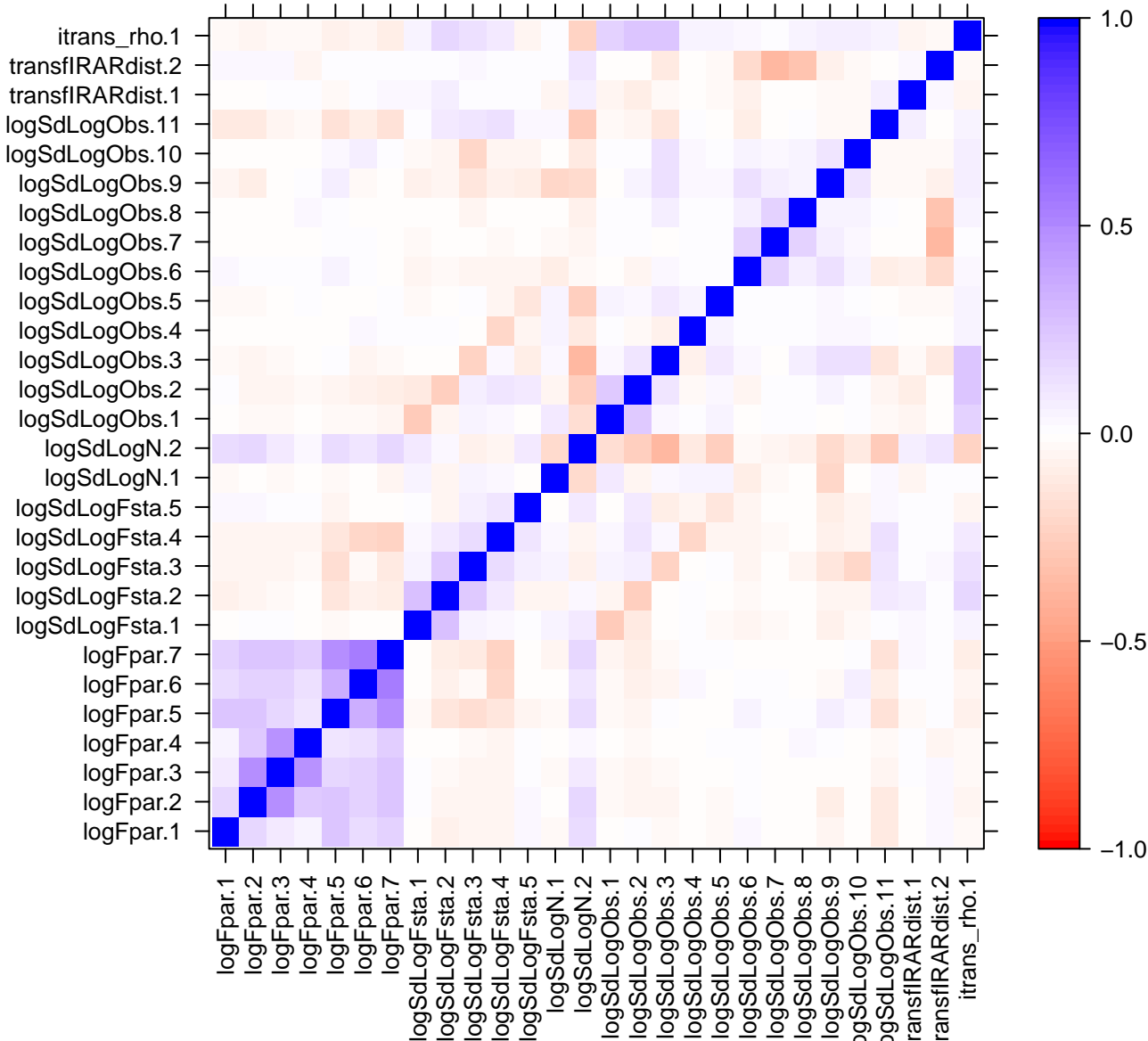
e) Normal Q–Q plot



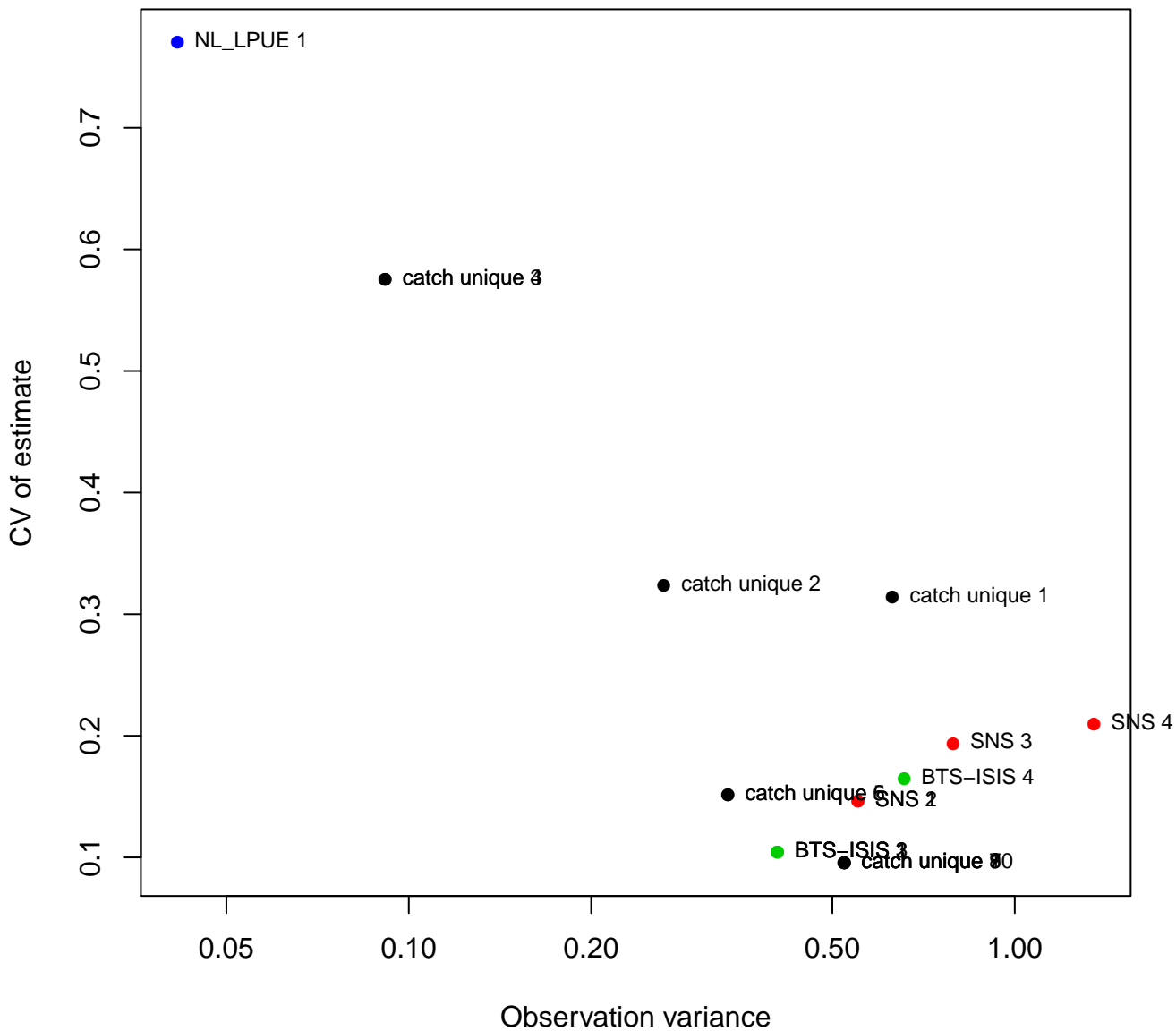
f) Autocorrelation of Residuals



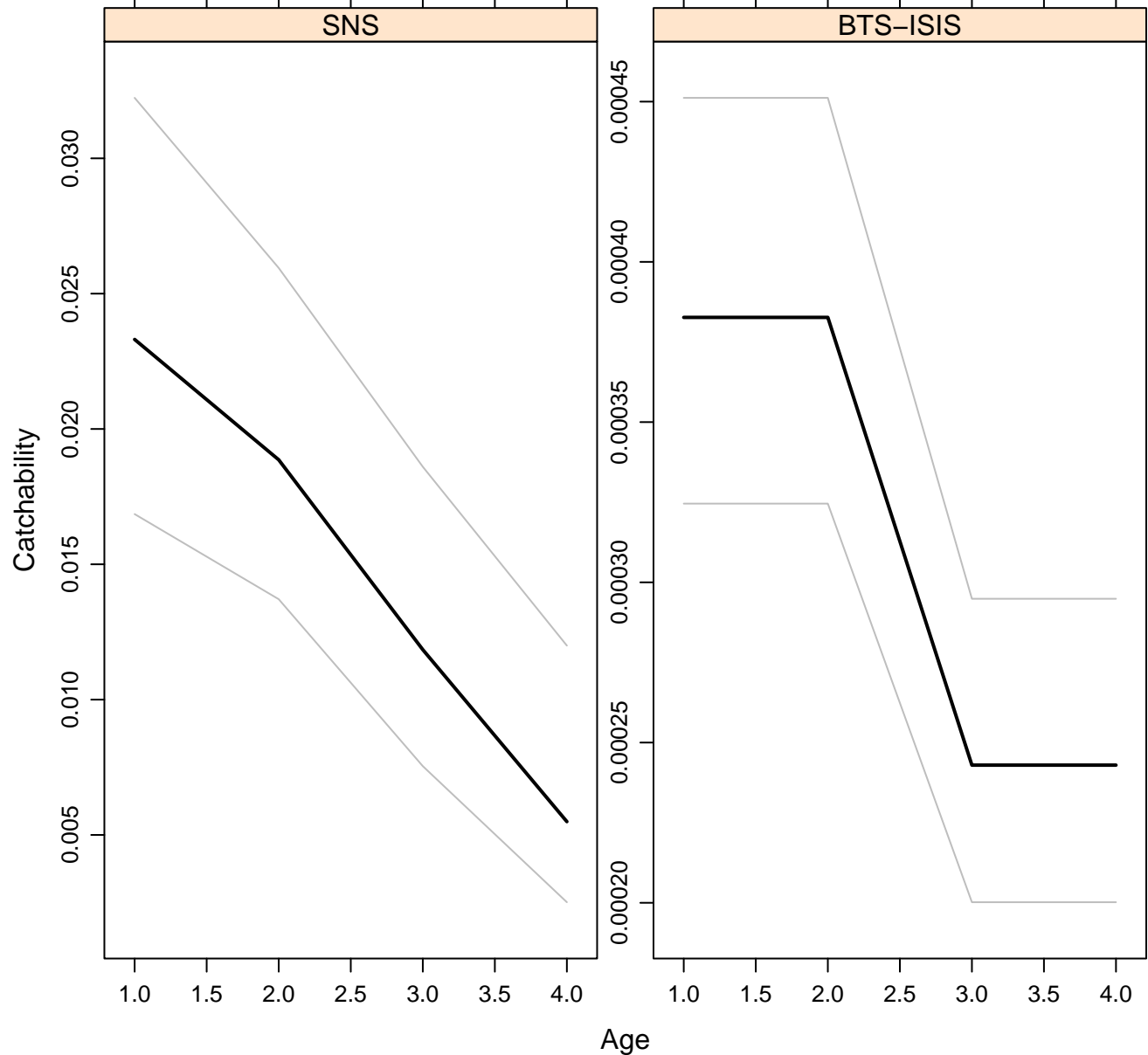
Turbot in IV pgSurvey 4



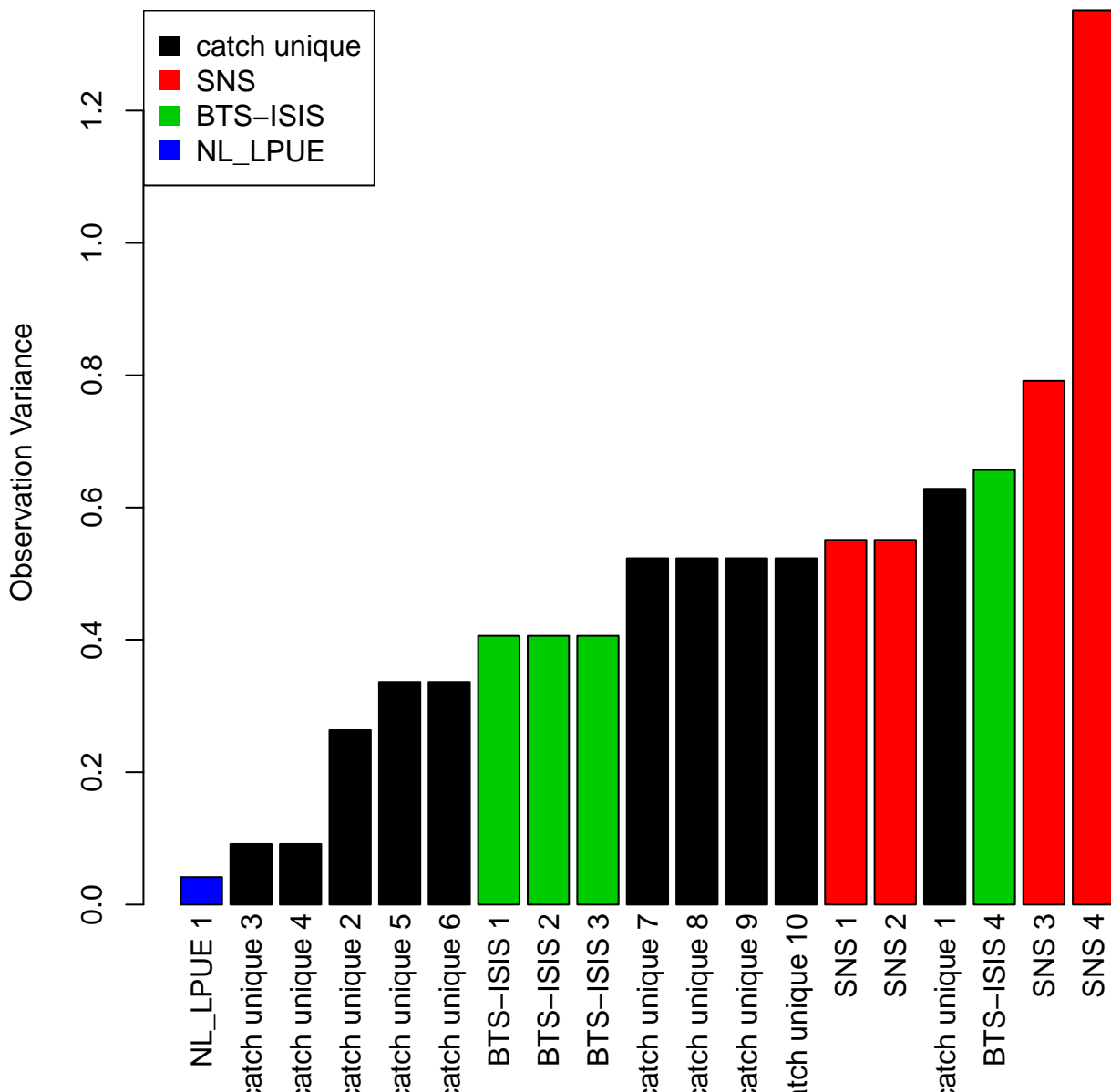
Observation variance vs uncertainty



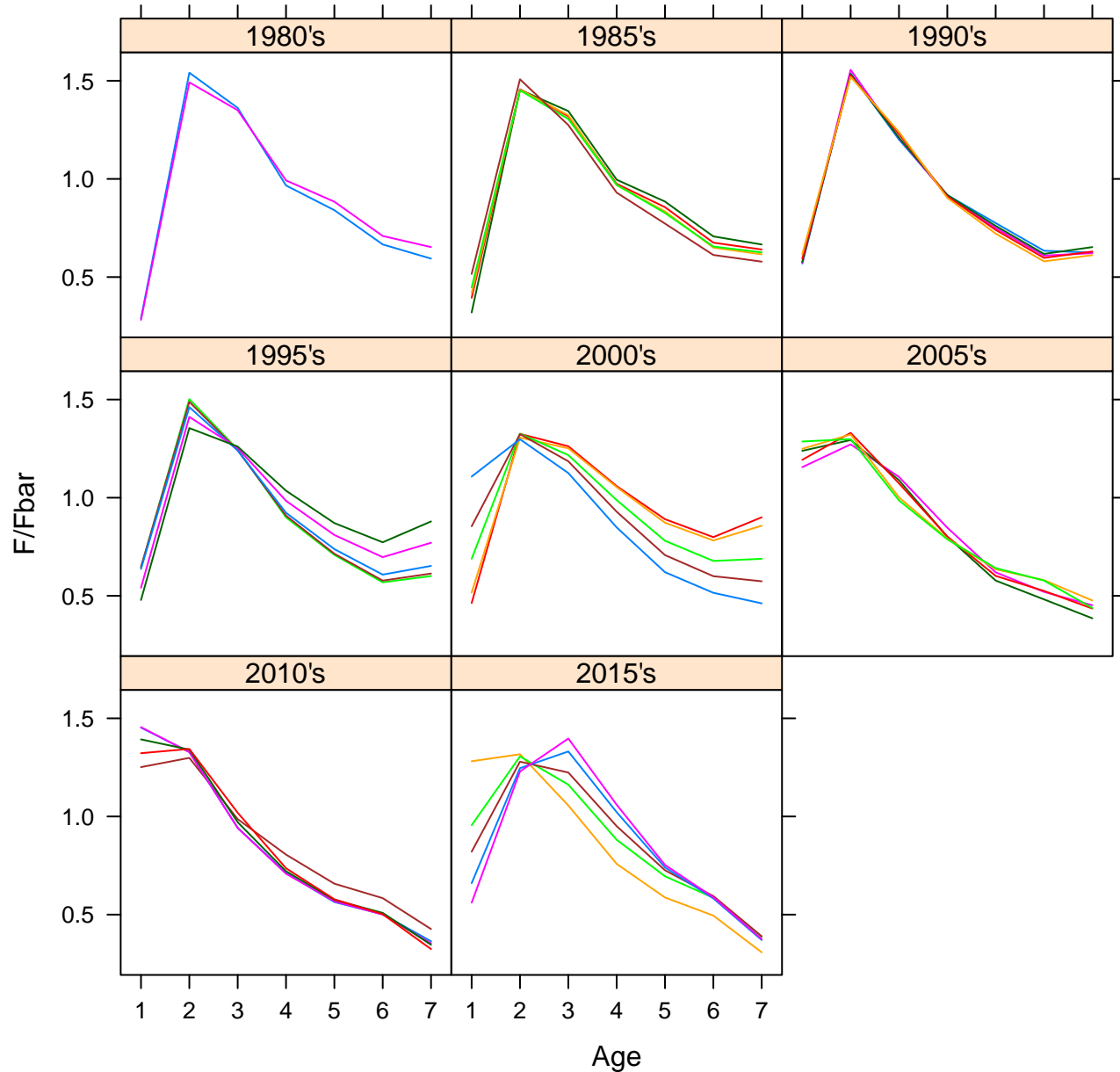
Survey catchability parameters



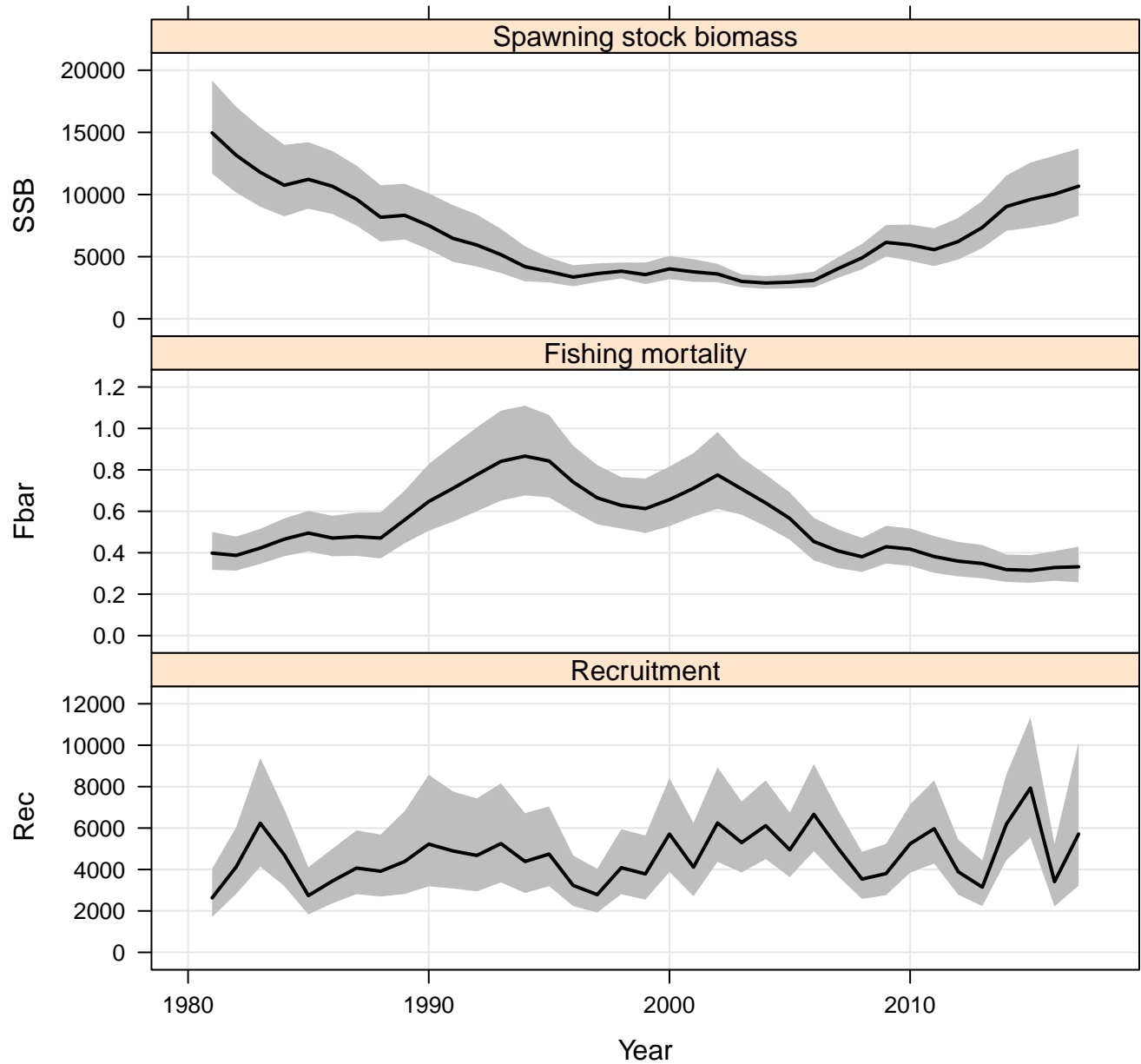
Observation variances by data source



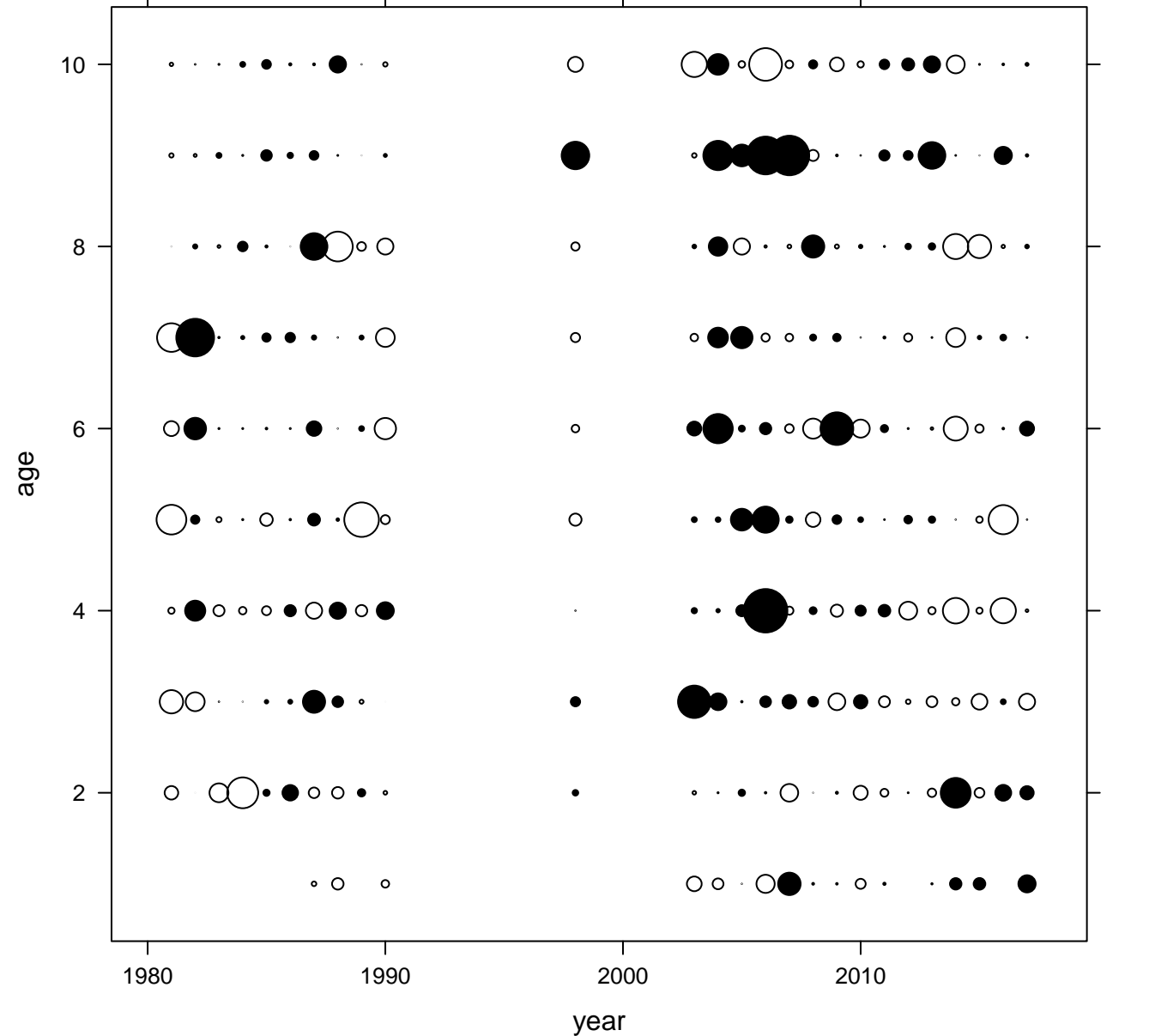
Selectivity of the Fishery by Pentad



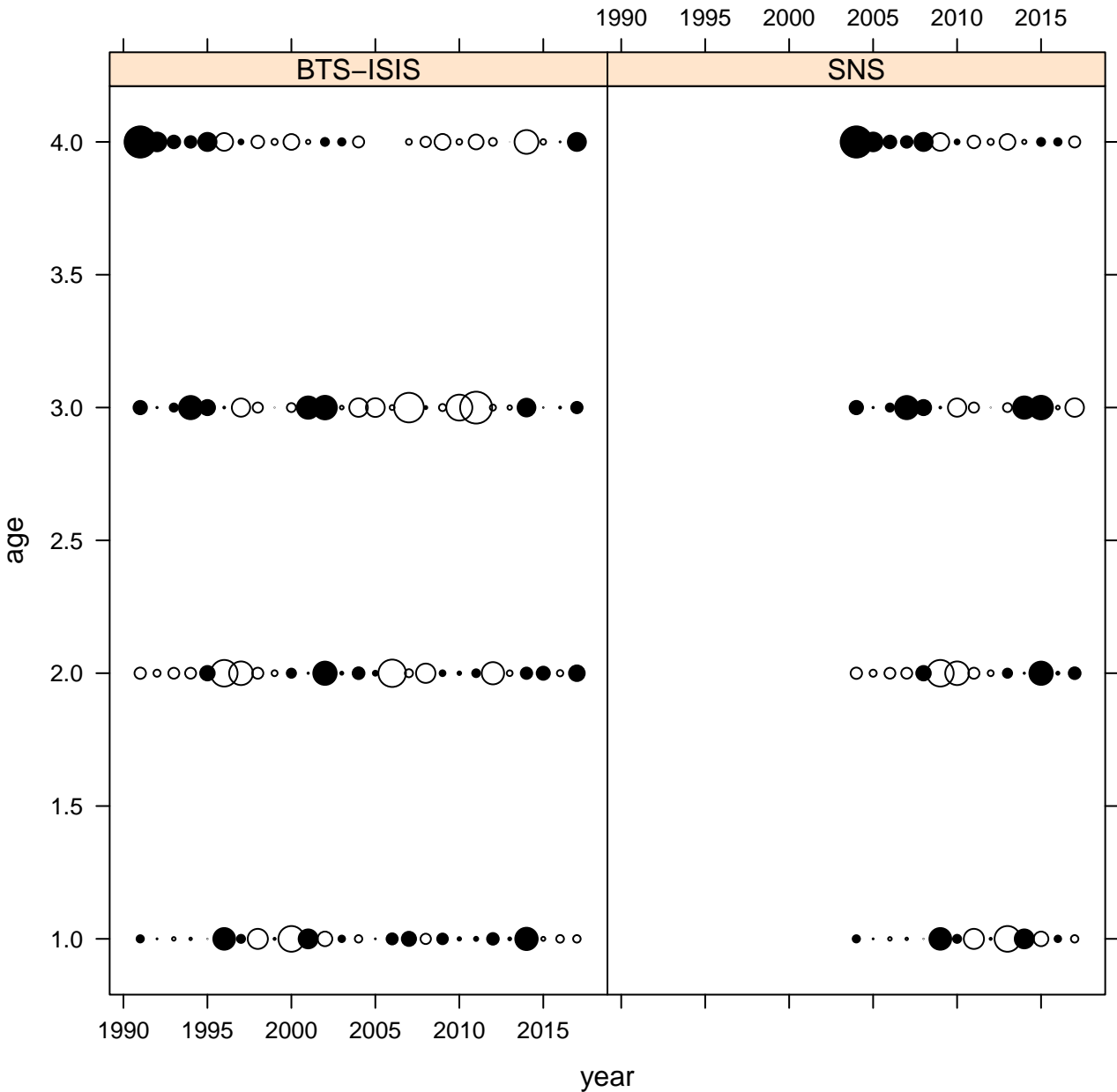
Turbot in IV pgSurvey 4

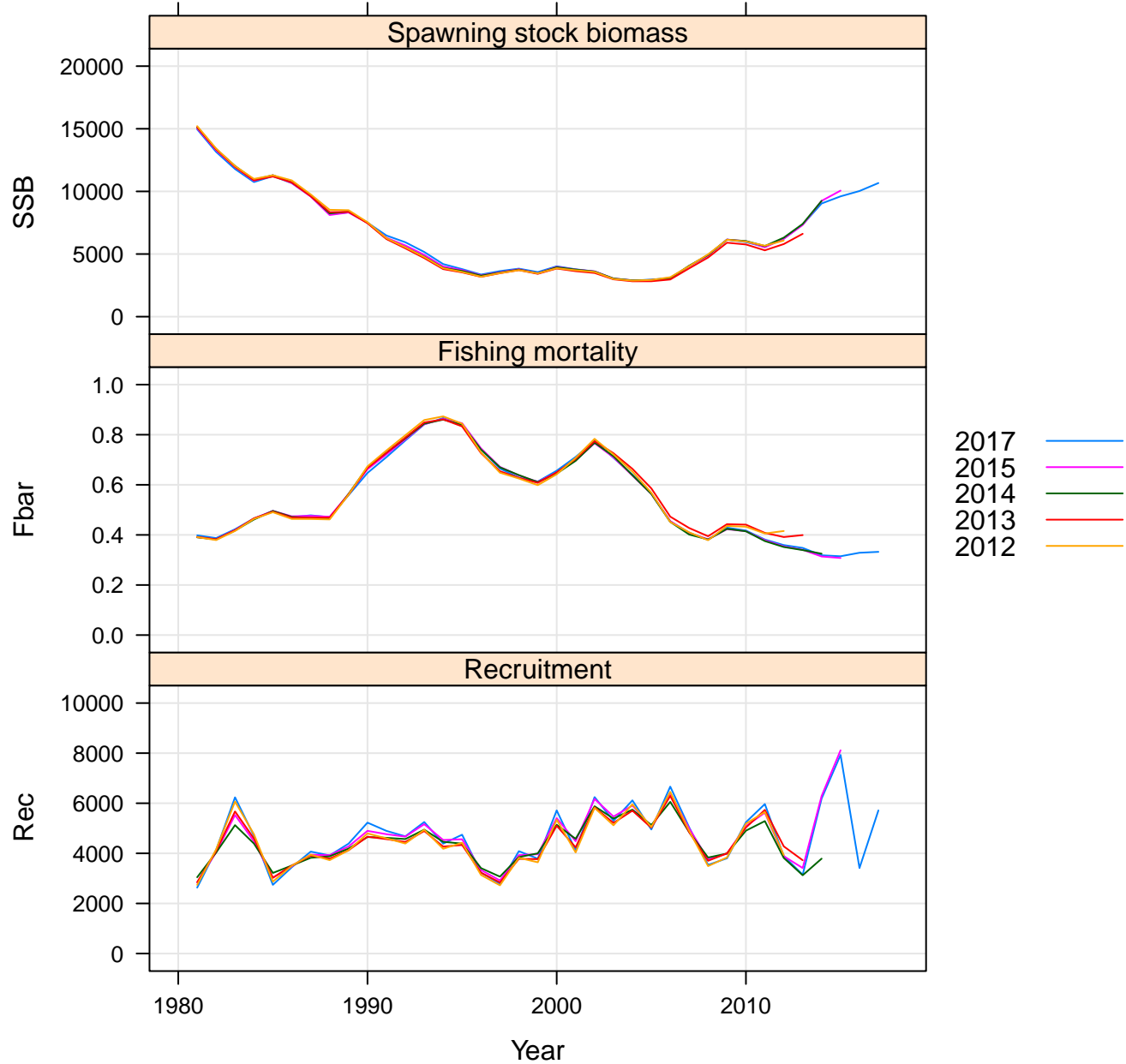


Residuals by year Catch

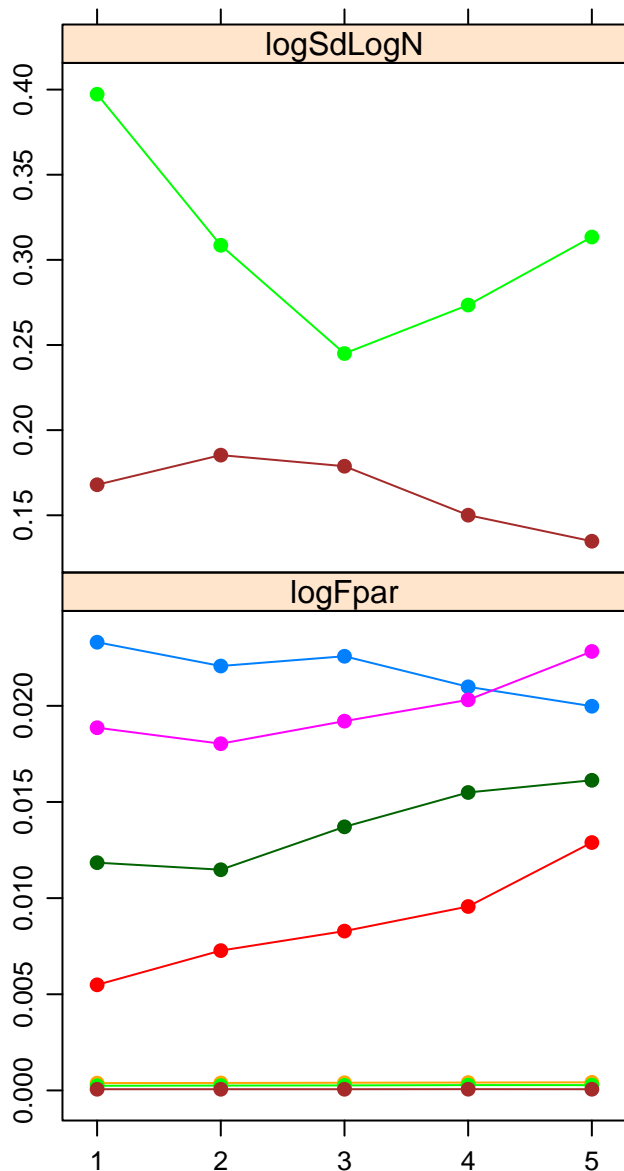


Residuals by survey

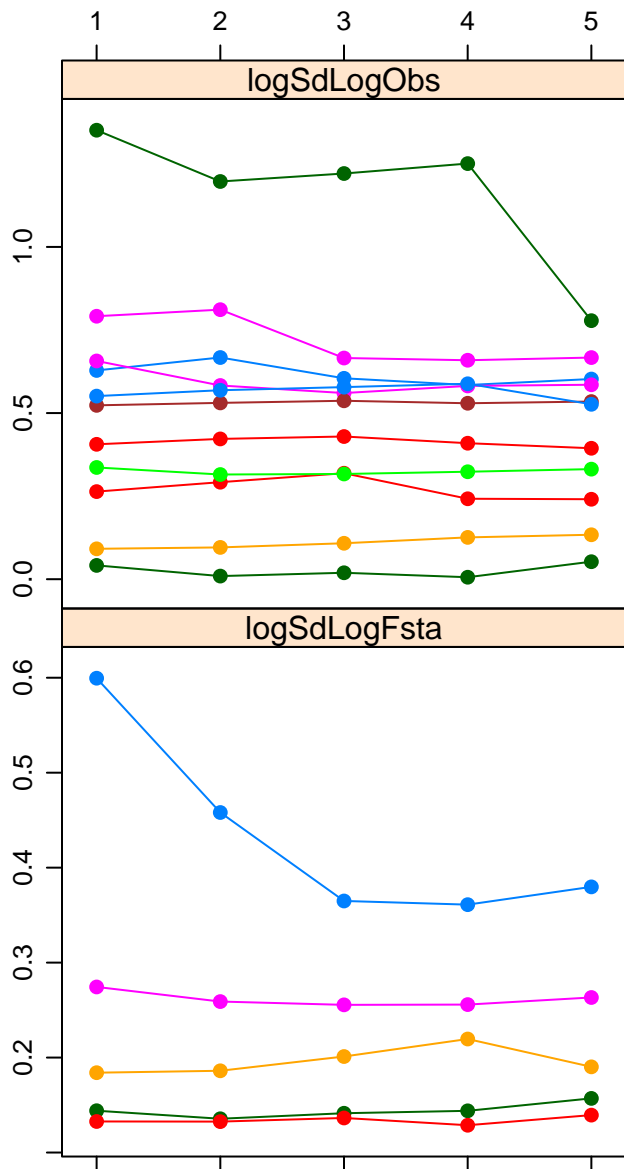




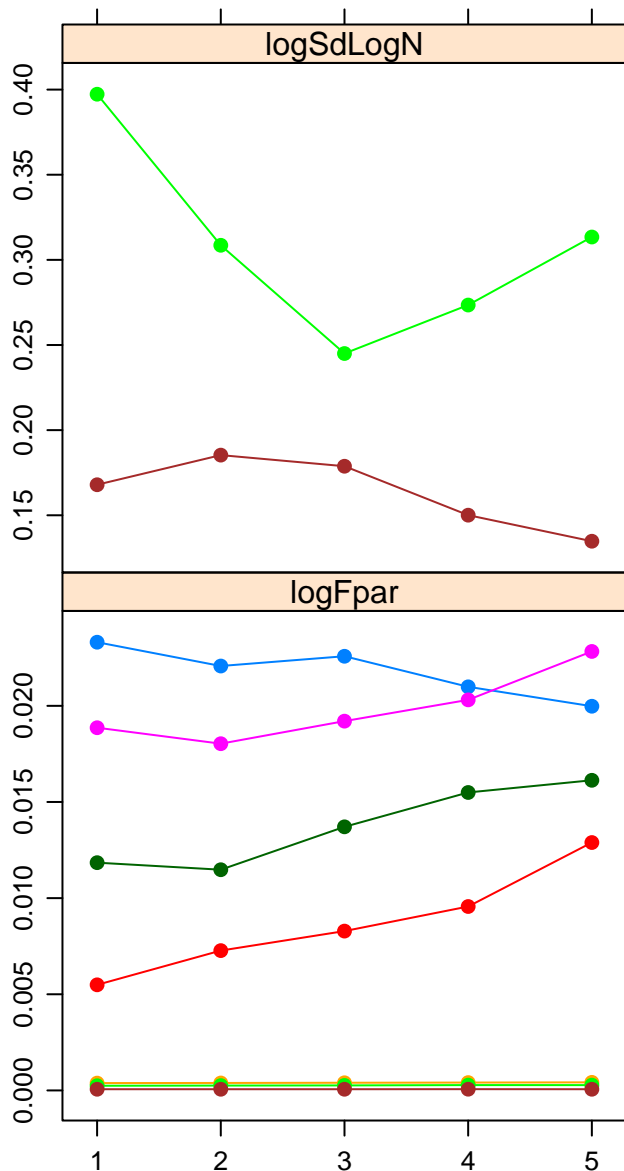
Parameter value



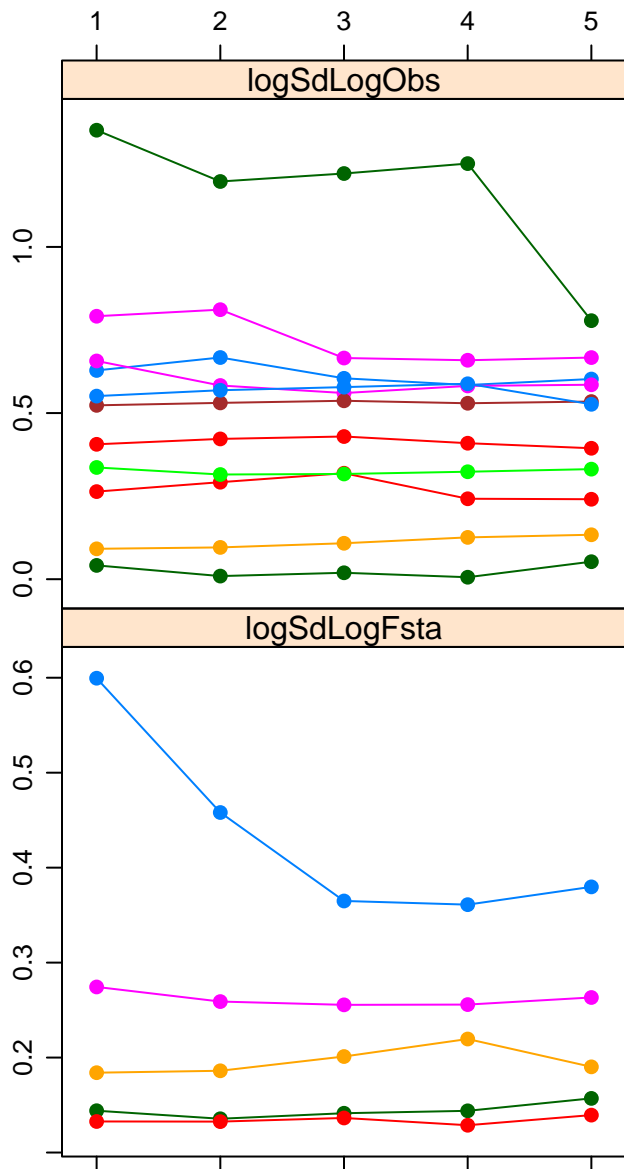
Assessment year



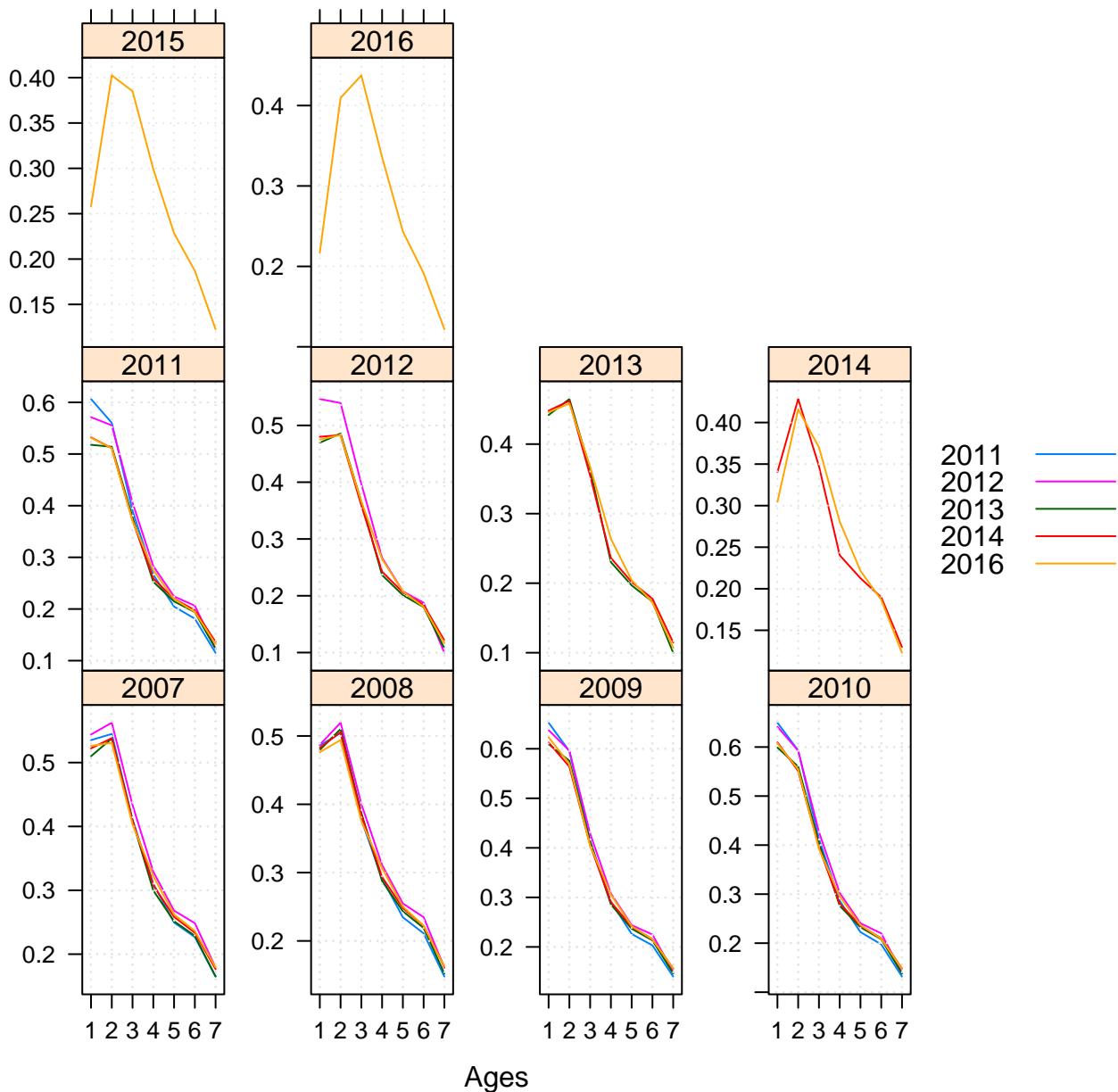
Parameter value



Assessment year



Retrospective pattern in F at age



Retrospective pattern in F at age

