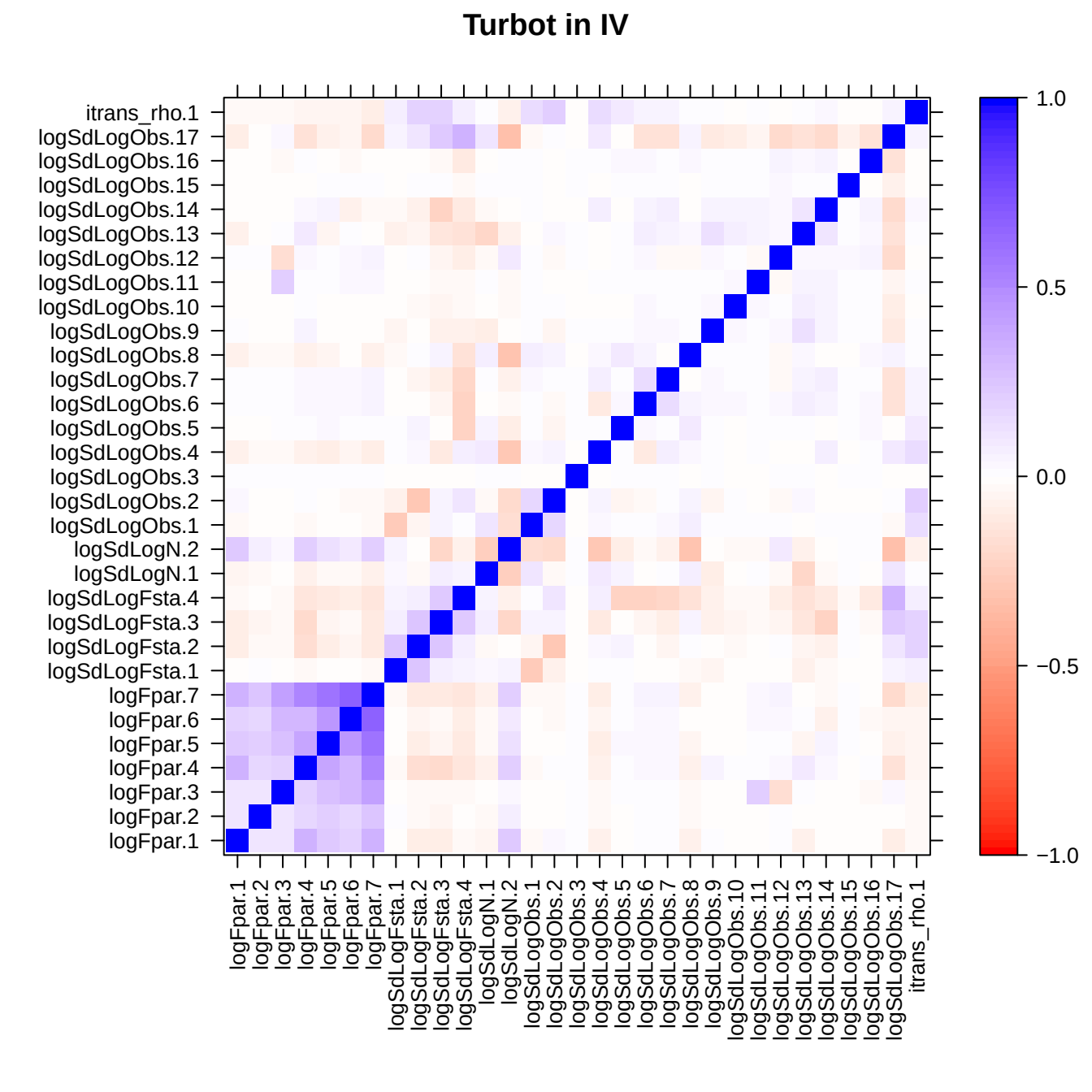
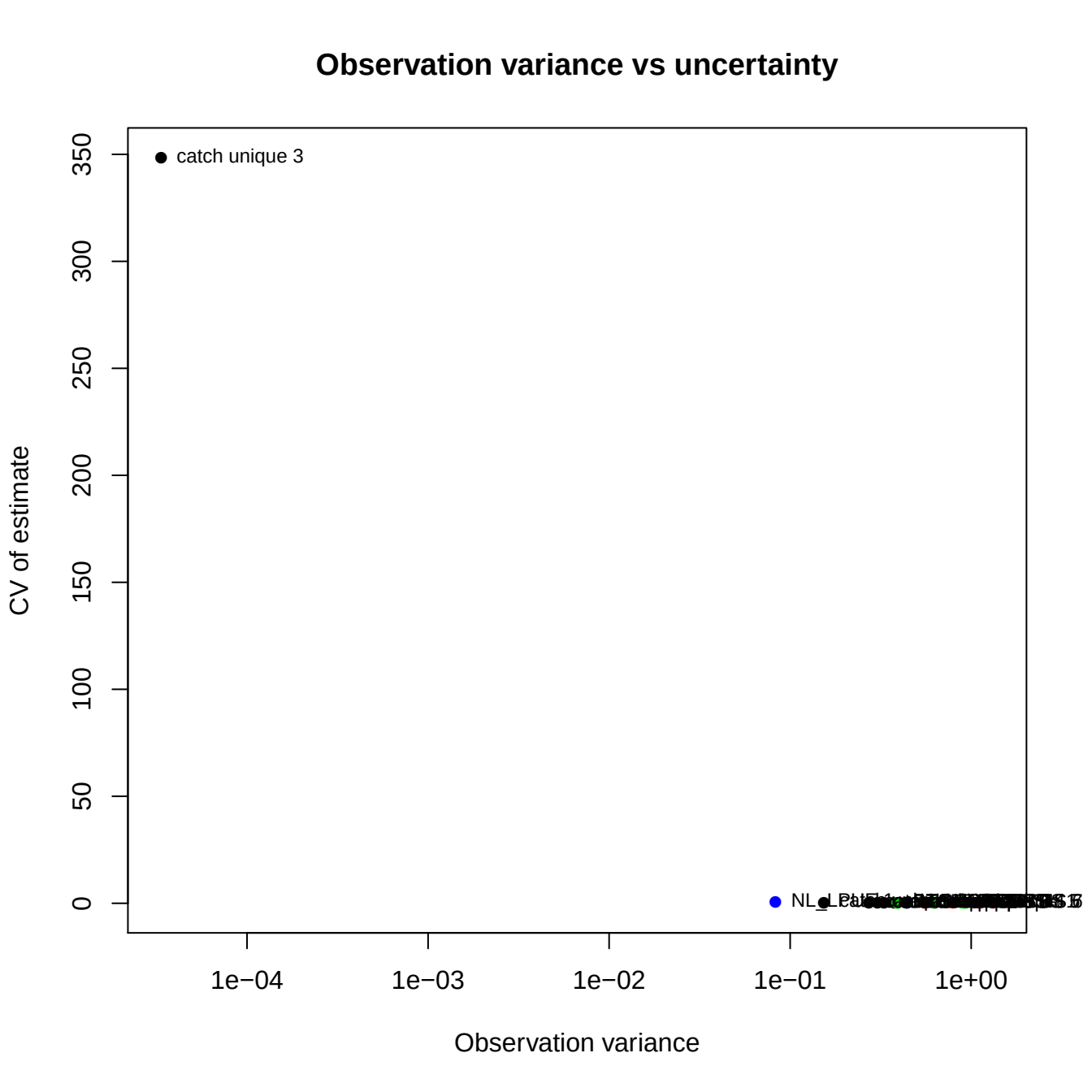
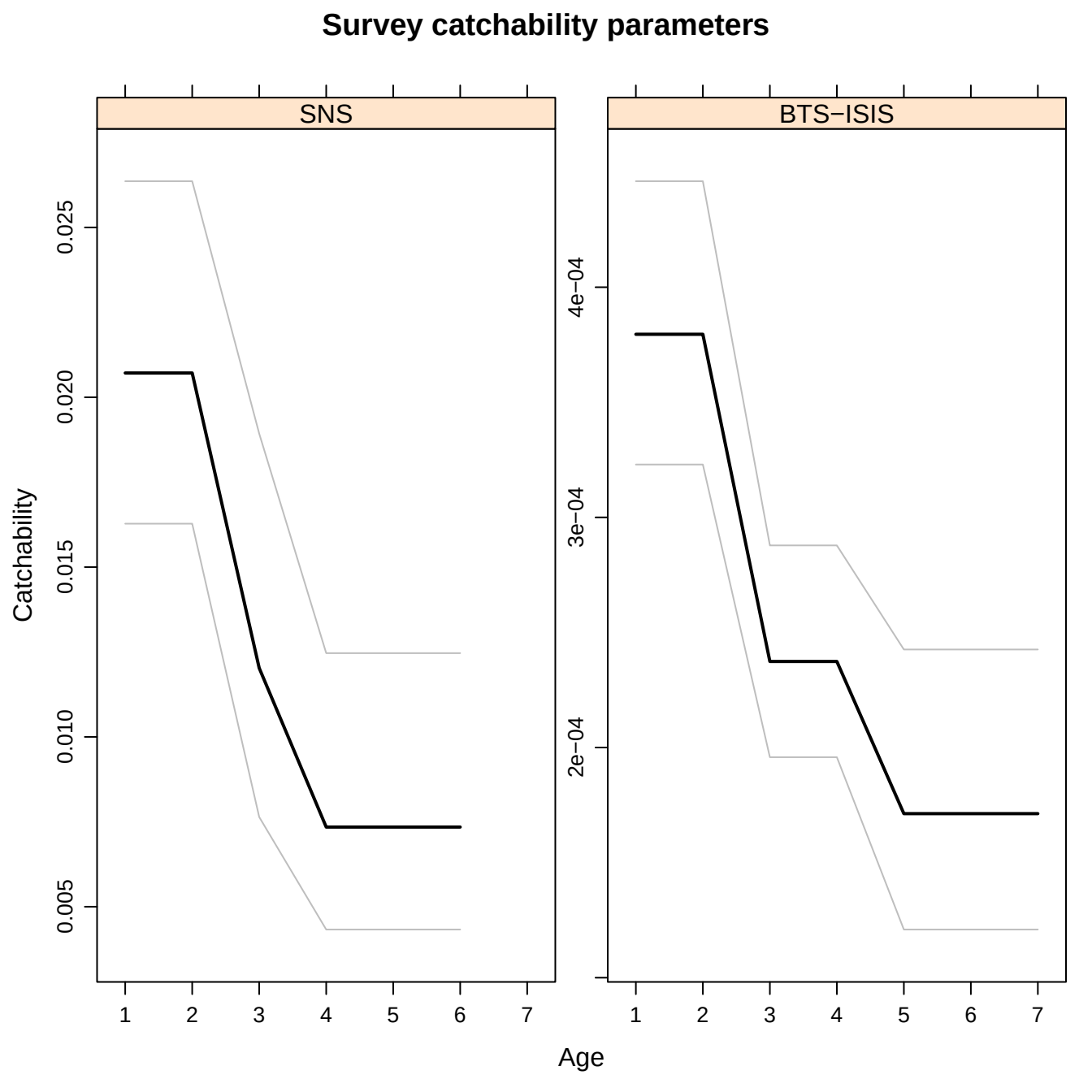
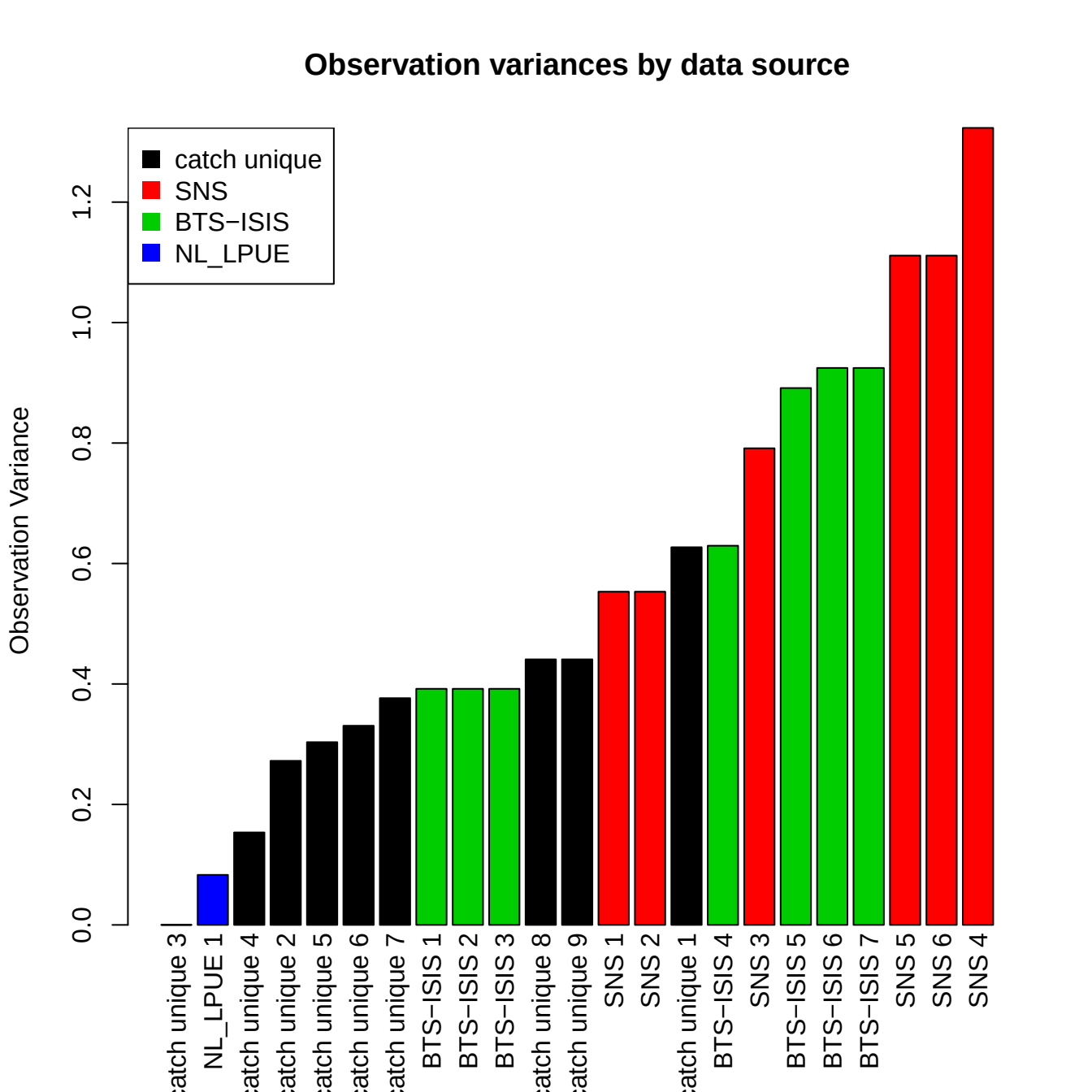
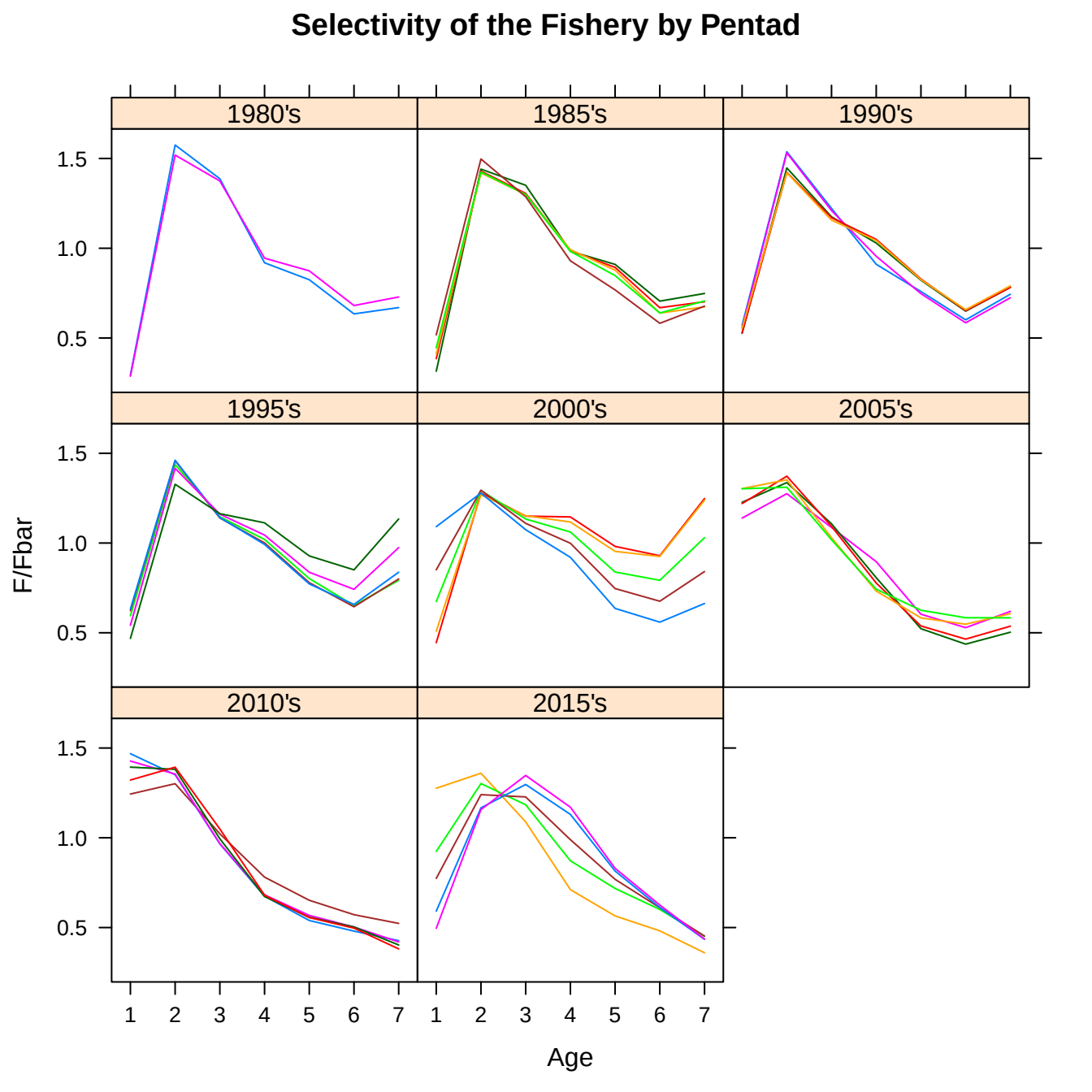
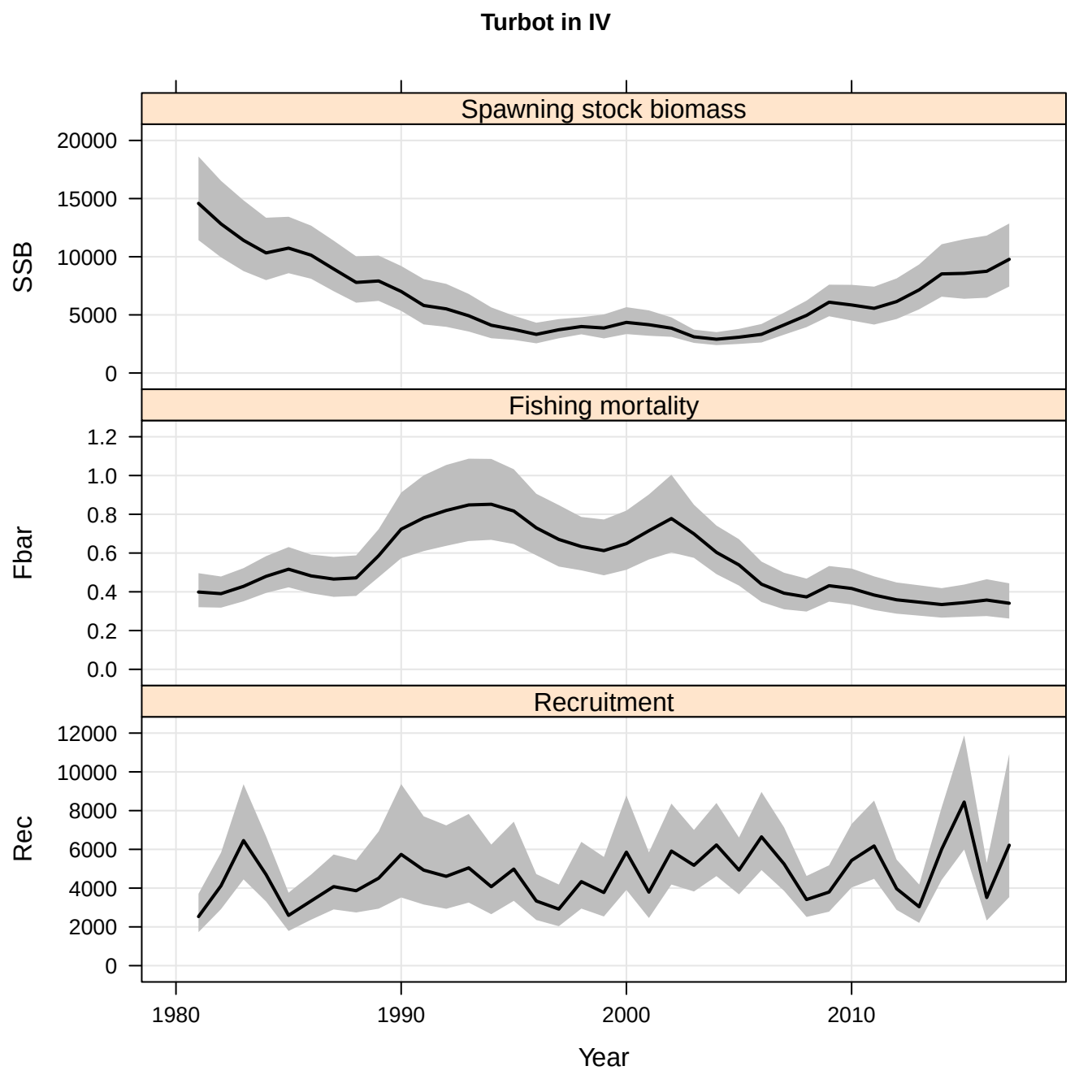

Turbot in IV
itrans_rho.1
logSdLogObs.17
logSdLogObs.16
logSdLogObs.15
logSdLogObs.14
logSdLogObs.13
logSdLogObs.12
logSdLogObs.11
logSdLogObs.10
logSdLogObs.9
logSdLogObs.8
logSdLogObs.7
logSdLogObs.6
logSdLogObs.5
logSdLogObs.4
logSdLogObs.3
logSdLogObs.2
logSdLogObs.1
logSdLogN.2
logSdLogN.1
logSdLogFsta.4
logSdLogFsta.3
logSdLogFsta.2
logSdLogFsta.1
logFpar.7
logFpar.6
logFpar.5
logFpar.4
logFpar.3
logFpar.2
logFpar.1
logFpar.1
logFpar.2
logFpar.3
logFpar.4
logFpar.5
logFpar.6
logFpar.7
logSdLogFsta.1
logSdLogFsta.2
logSdLogFsta.3
logSdLogFsta.4
logSdLogN.1
logSdLogN.2
logSdLogObs.1
logSdLogObs.2
logSdLogObs.3
logSdLogObs.4
logSdLogObs.5
logSdLogObs.6
logSdLogObs.7
logSdLogObs.8
logSdLogObs.9
logSdLogObs.10
logSdLogObs.11
logSdLogObs.12
logSdLogObs.13
logSdLogObs.14
logSdLogObs.15
logSdLogObs.16
logSdLogObs.17
itrans_rho.1
1.0
0.5
0.0
−0.5
−1.0

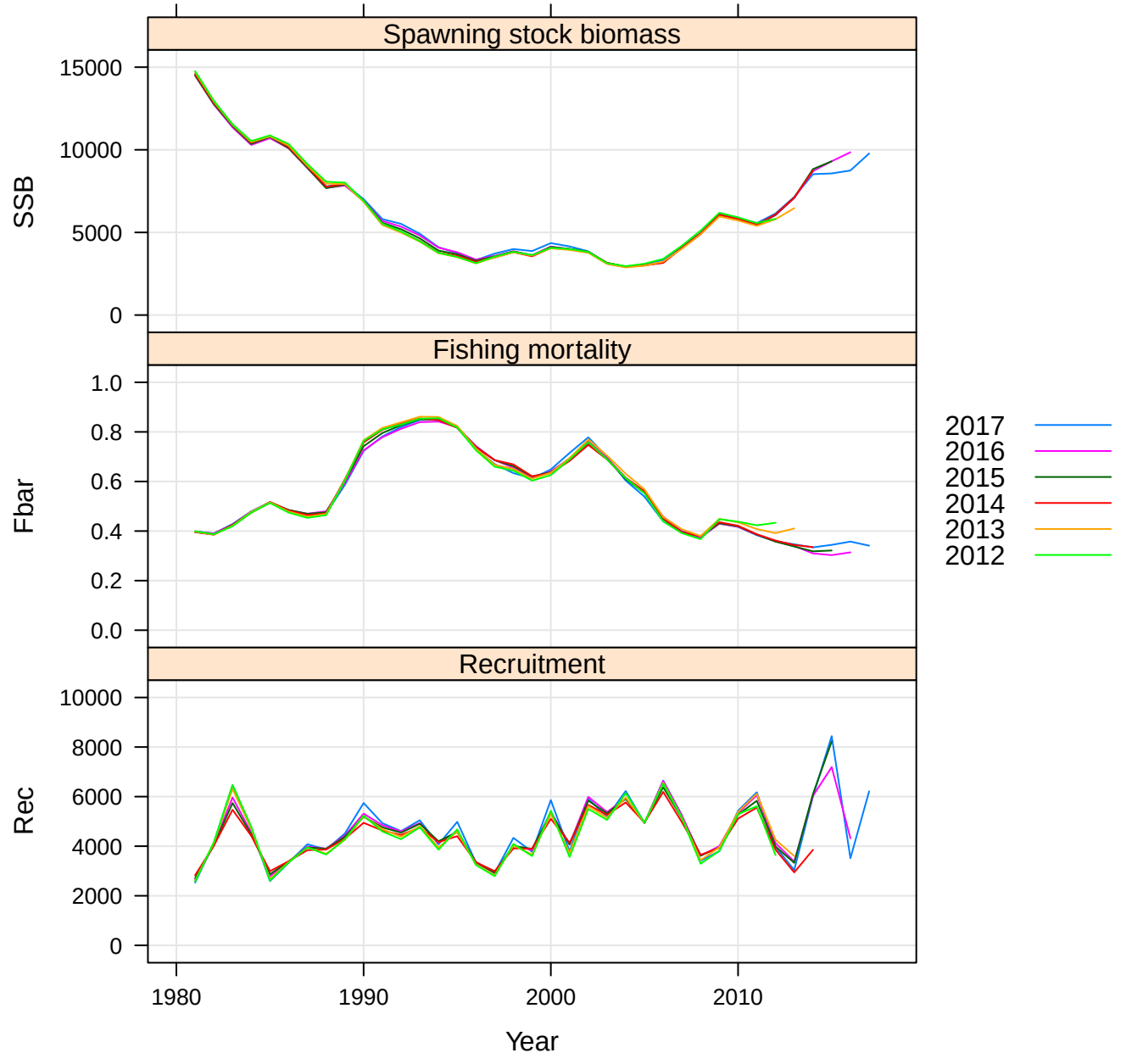

Observation variance vs uncertainty
catch unique 3
CV of estimate
0
50
100
150
200
250
300
350
1e−04
1e−03
1e−02
1e−01
1e+00
Observation variance

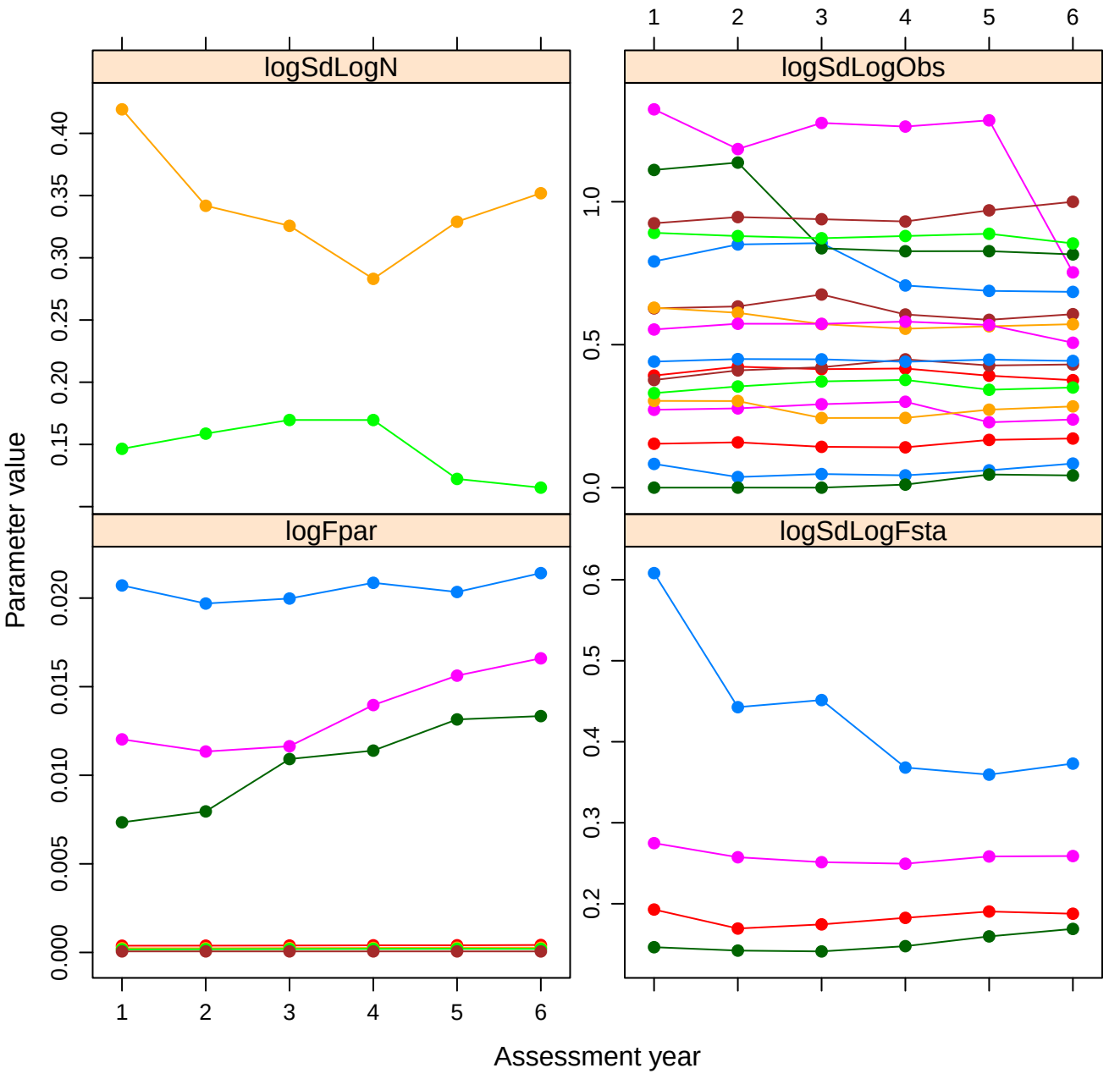

Survey catchability parameters
SNS
BTS−ISIS
Catchability
0.005
0.010
0.015
0.020
0.025
2e−04
3e−04
4e−04
1
2
3
4
5
6
7
Age

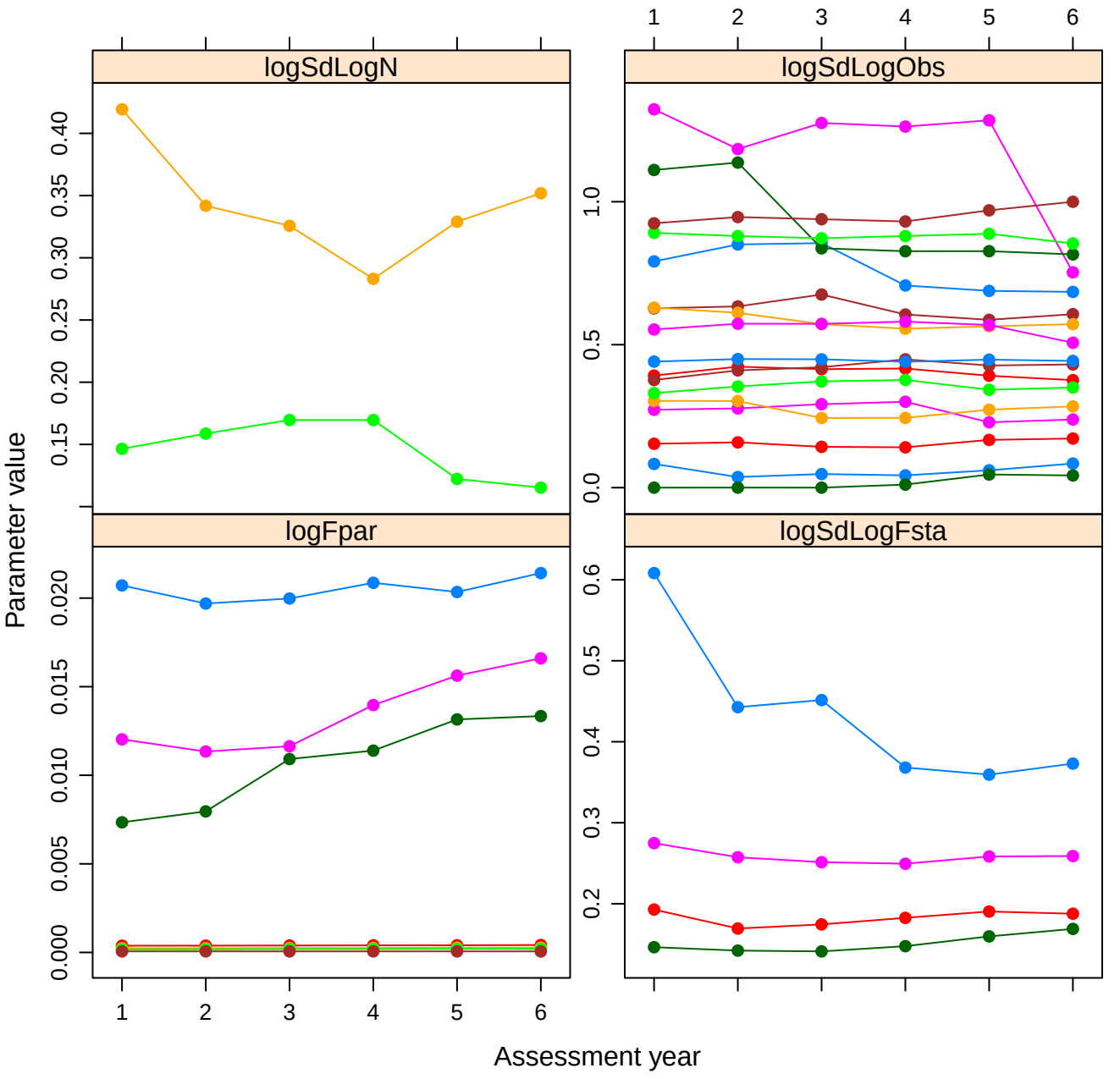

Observation variances by data source
Observation Variance
0.0
0.2
0.4
0.6
0.8
1.0
1.2
catch unique
SNS
BTS−ISIS
NL_LPUE
catch unique 3
NL_LPUE 1
catch unique 4
catch unique 2
catch unique 5
catch unique 6
catch unique 7
BTS−ISIS 1
BTS−ISIS 2
BTS−ISIS 3
catch unique 8
catch unique 9
SNS 1
SNS 2
catch unique 1
BTS−ISIS 4
SNS 3
BTS−ISIS 5
BTS−ISIS 6
BTS−ISIS 7
SNS 5
SNS 6
SNS 4

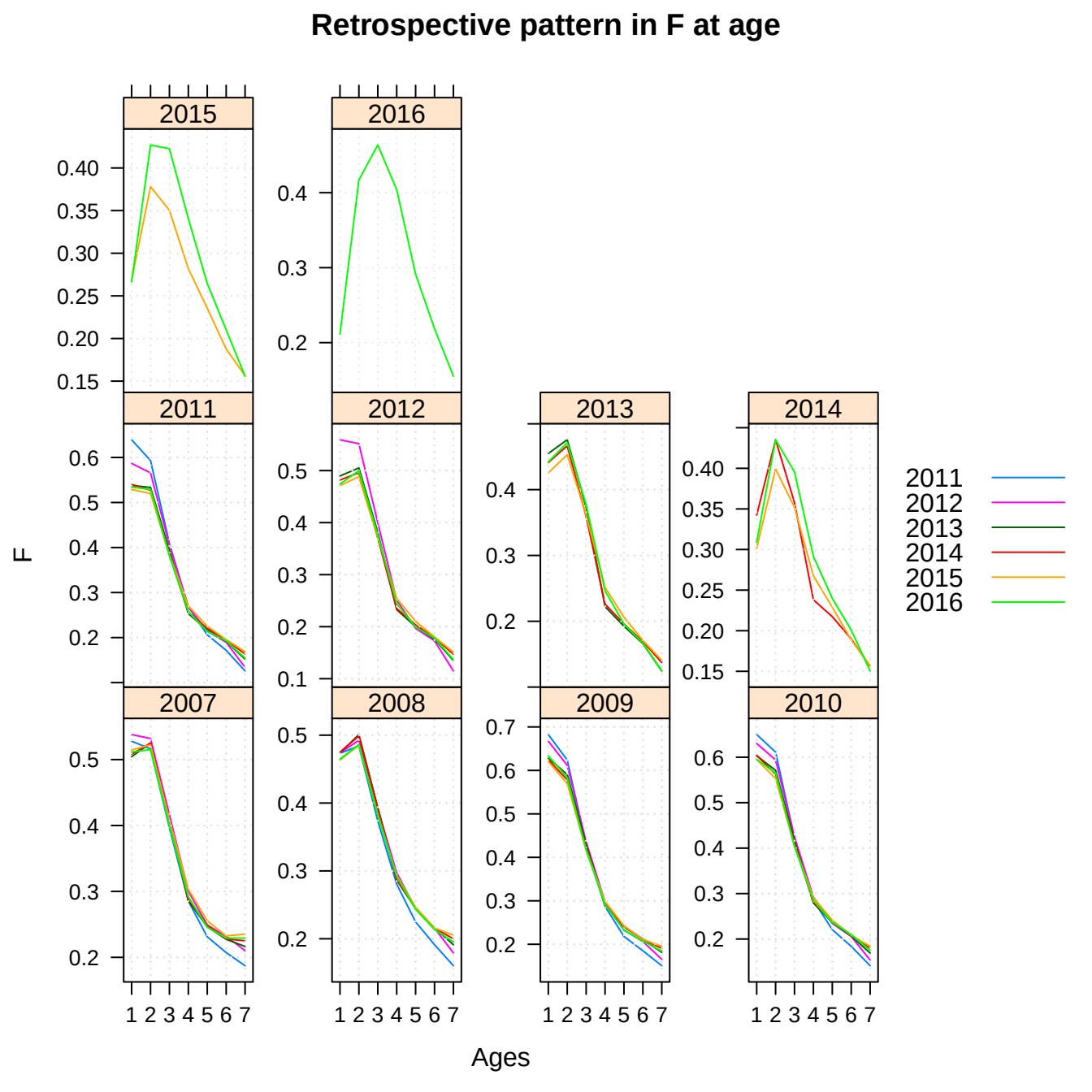

Selectivity of the Fishery by Pentad
1980's
1985's
1990's
1995's
2000's
2005's
2010's
2015's
F/Fbar
Age
0.5
1.0
1.5
1
2
3
4
5
6
7

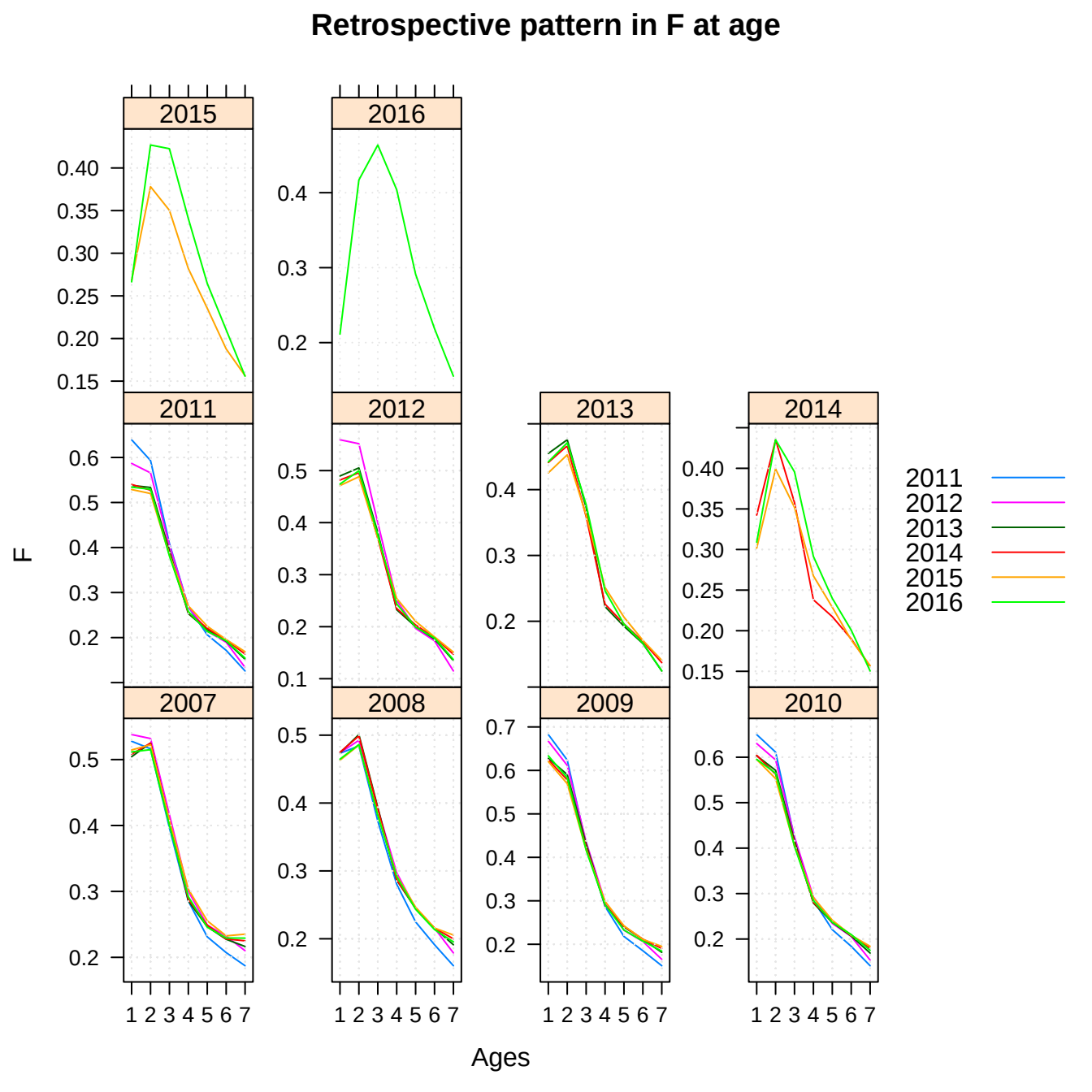

Turbot in IV
Spawning stock biomass
SSB
20000
15000
10000
5000
0
Fishing mortality
Fbar
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Recruitment
Rec
12000
10000
8000
6000
4000
2000
0
1980
1990
2000
2010
Year


Spawning stock biomass
SSB
15000
10000
5000
0
Fishing mortality
Fbar
1.0
0.8
0.6
0.4
0.2
0.0
Recruitment
Rec
10000
8000
6000
4000
2000
0
1980
1990
2000
2010
Year
2017
2016
2015
2014
2013
2012


logSdLogN
logSdLogObs
logFpar
logSdLogFsta
Parameter value
Assessment year
0.15
0.20
0.25
0.30
0.35
0.40
0.0
0.5
1.0
0.000
0.005
0.010
0.015
0.020
0.2
0.3
0.4
0.5
0.6
1
2
3
4
5
6


logSdLogN
logSdLogObs
logFpar
logSdLogFsta
Parameter value
Assessment year
0.15
0.20
0.25
0.30
0.35
0.40
0.0
0.5
1.0
0.000
0.005
0.010
0.015
0.020
0.2
0.3
0.4
0.5
0.6
1
2
3
4
5
6


Retrospective pattern in F at age
2015
2016
2011
2012
2013
2014
2007
2008
2009
2010
F
Ages
2011
2012
2013
2014
2015
2016


Retrospective pattern in F at age
2015
2016
2011
2012
2013
2014
2007
2008
2009
2010
F
Ages
2011
2012
2013
2014
2015
2016