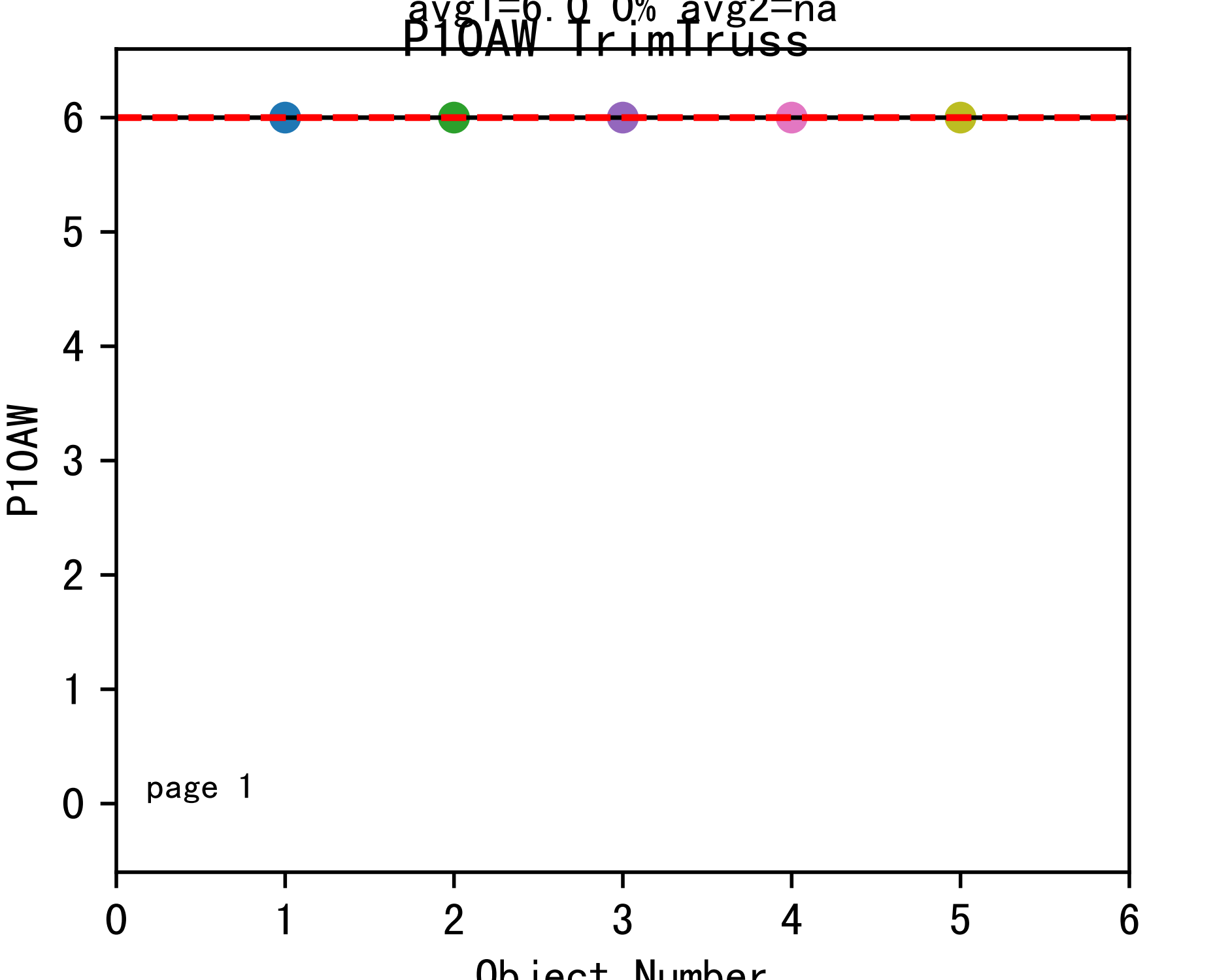
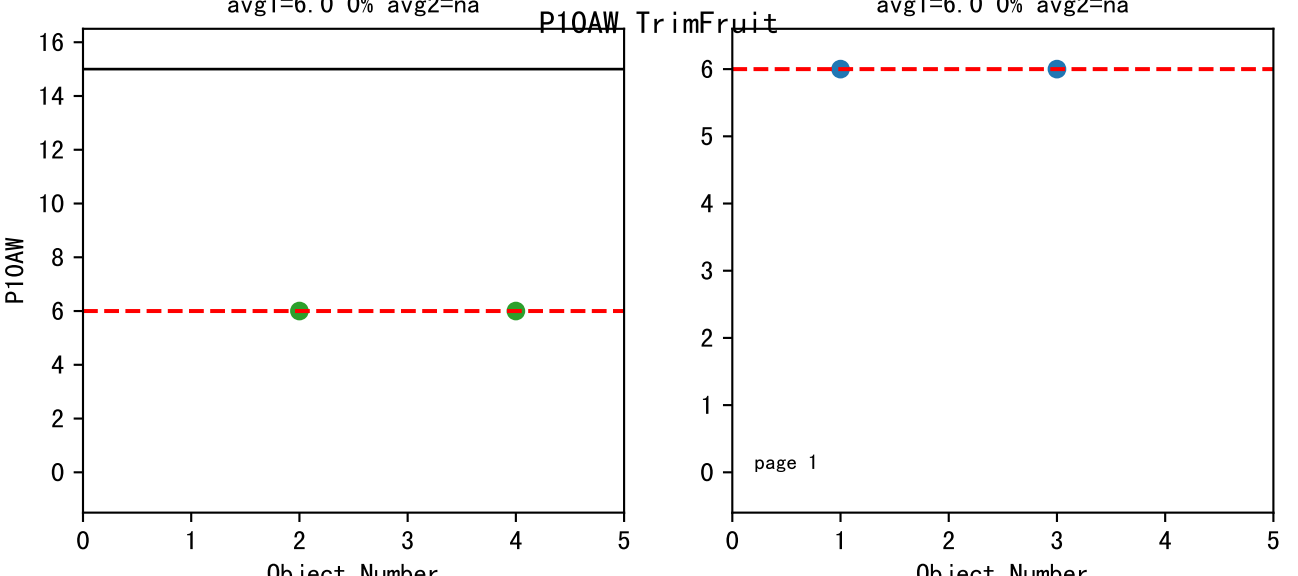
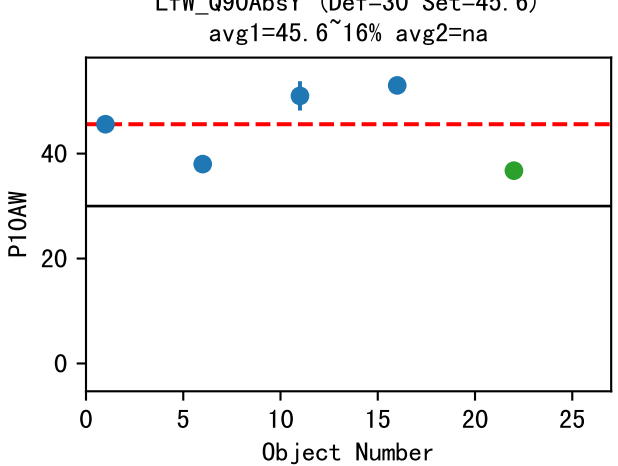
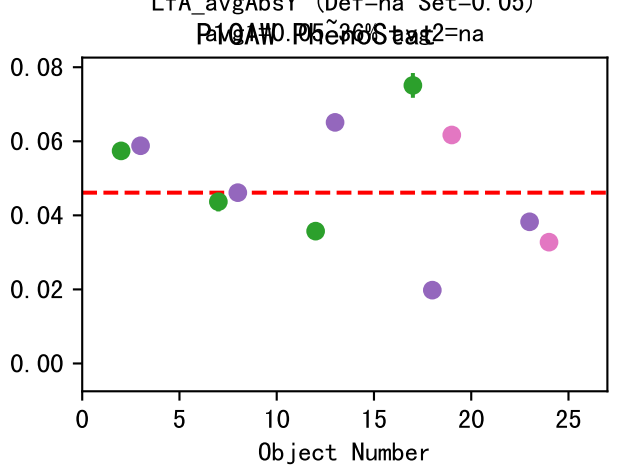
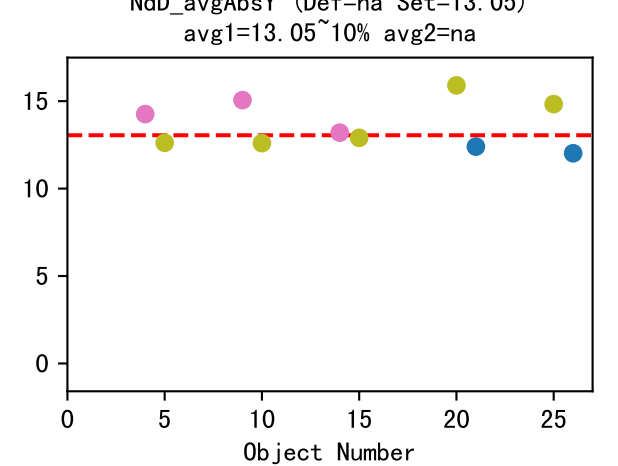
Phenotype Data Analysis Plots
PhenoData day range = 18 - 66
Analysis cutoff day = 66
NC11 P10
2025-12-24 (Day 67)

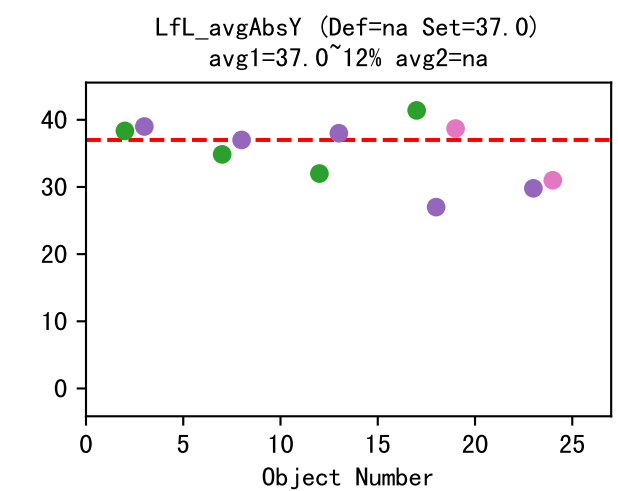

avg1=6.0 0% avg2=na
P10AW TrimTruss
P10AW
Object Number
page 1
0
1
2
3
4
5
6

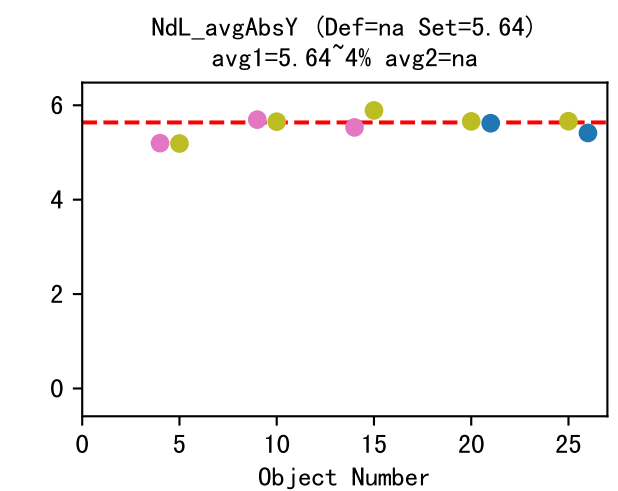

avg1=6.0 0% avg2=na
P10AW TrimFruit
avg1=6.0 0% avg2=na
P10AW
Object Number
Object Number
page 1

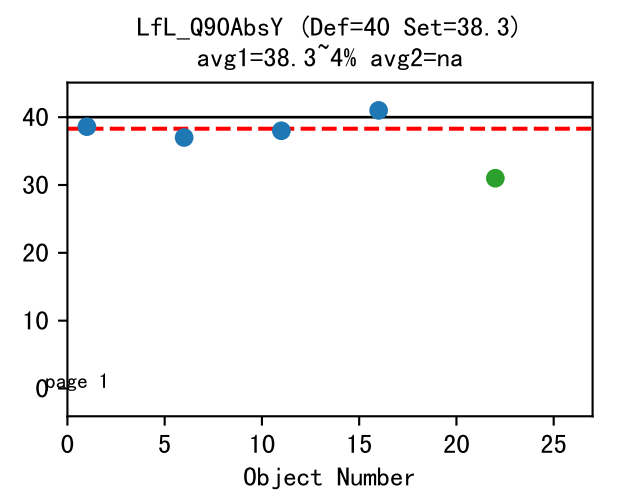

LfW_Q90AbsY (Def=30 Set=45.6)
avg1=45.6~16% avg2=na
P10AW
Object Number

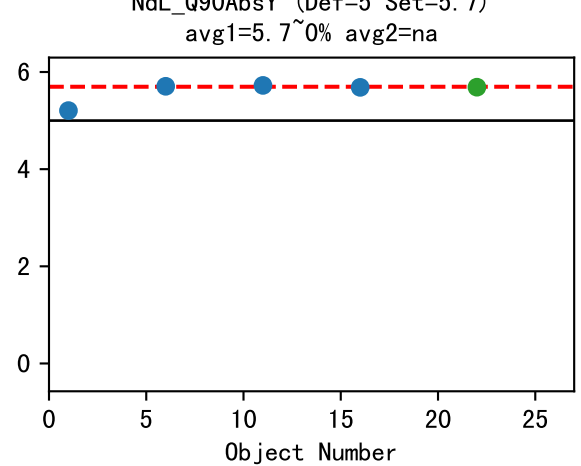

LfA_avgAbsY (Def=na Set=0.05)
avg1=0.05~36% avg2=na
Object Number

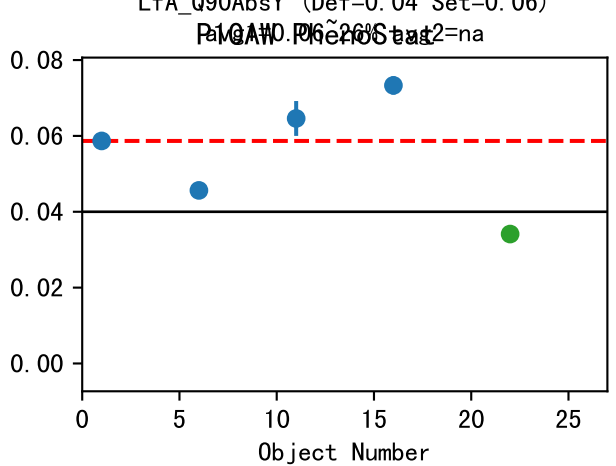

NdD_avgAbsY (Def=na Set=13.05)
avg1=13.05~10% avg2=na
Object Number

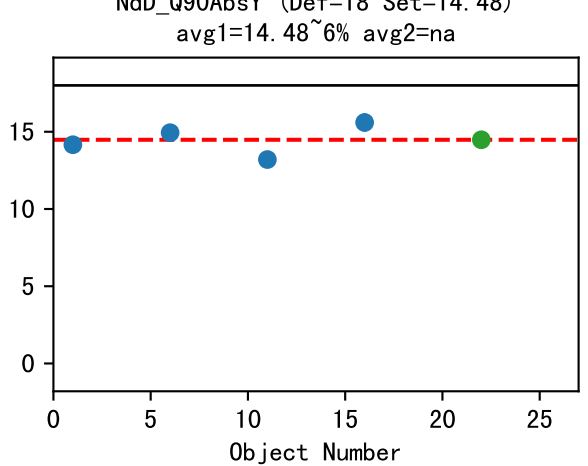

LfL_avgAbsY (Def=na Set=37.0)
avg1=37.0~12% avg2=na
Object Number

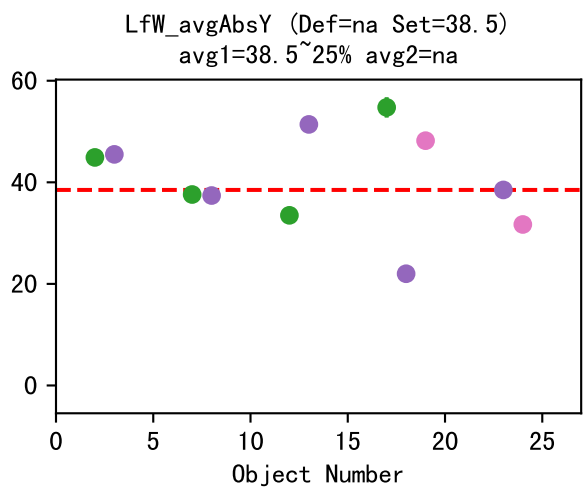

NdL_avgAbsY (Def=na Set=5.64)
avg1=5.64~4% avg2=na
Object Number

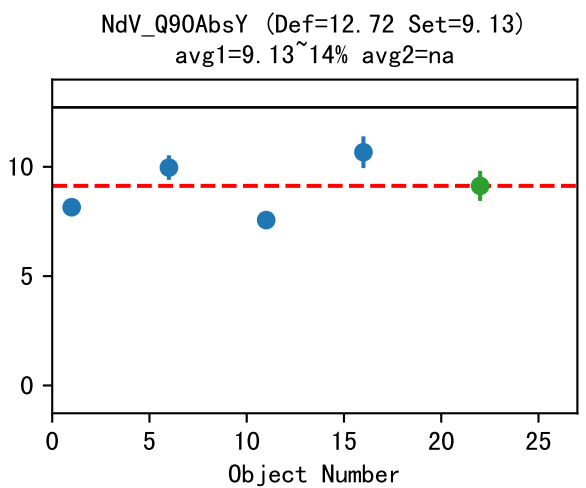

LfL_Q90AbsY (Def=40 Set=38.3)
avg1=38.3~4% avg2=na
Object Number
page 1

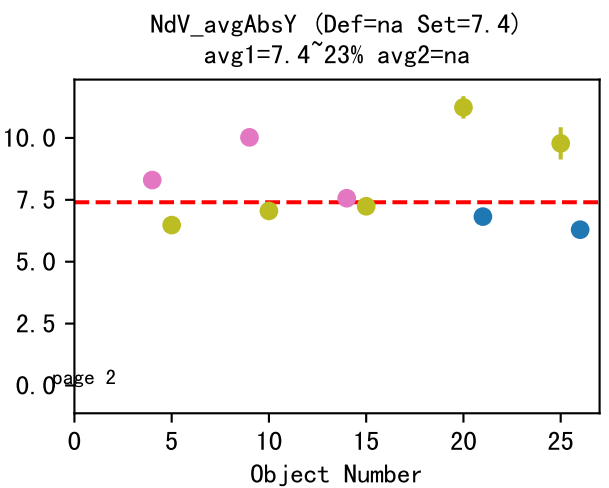

NdL_Q90AbsY (Def=5 Set=5.7)
avg1=5.7~0% avg2=na
Object Number

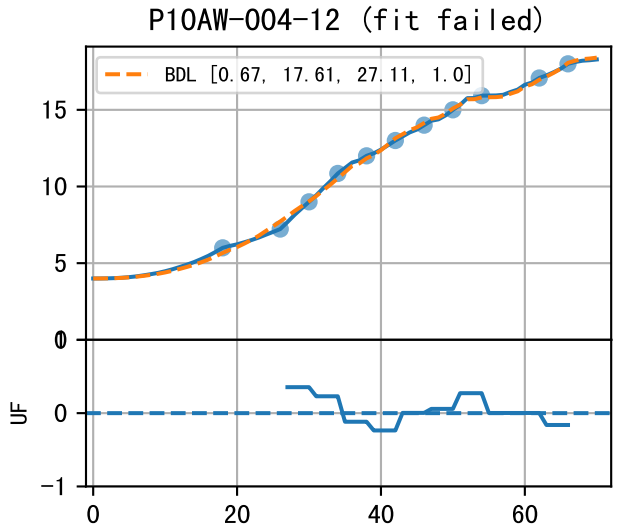

LfA_Q90AbsY (Def=0.04 Set=0.06)
avg1=0.06~26% avg2=na
Object Number

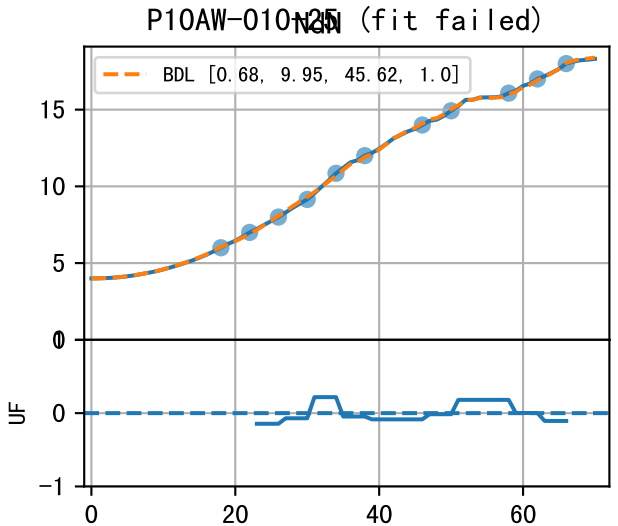

NdD_Q90AbsY (Def=18 Set=14.48)
avg1=14.48~6% avg2=na
Object Number

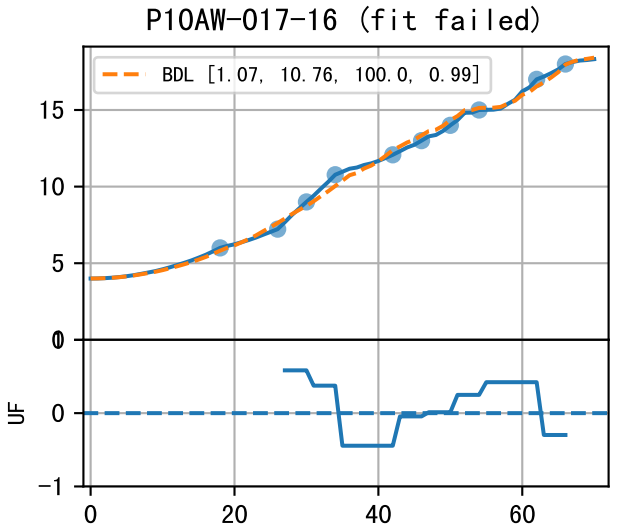

LfW_avgAbsY (Def=na Set=38.5)
avg1=38.5~25% avg2=na
Object Number

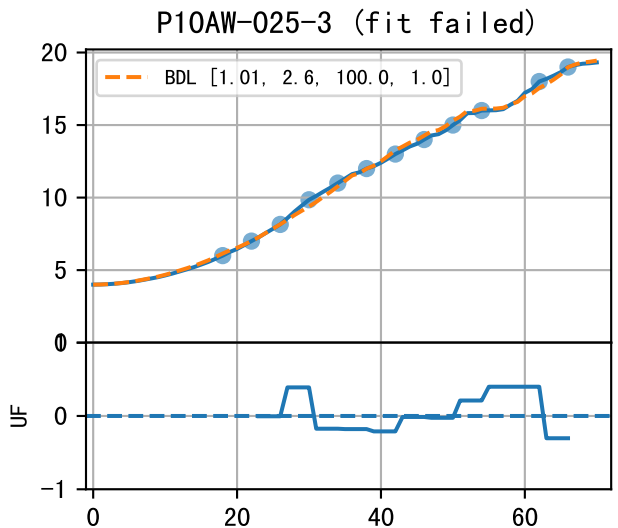

NdV_Q90AbsY (Def=12.72 Set=9.13)
avg1=9.13~14% avg2=na
Object Number

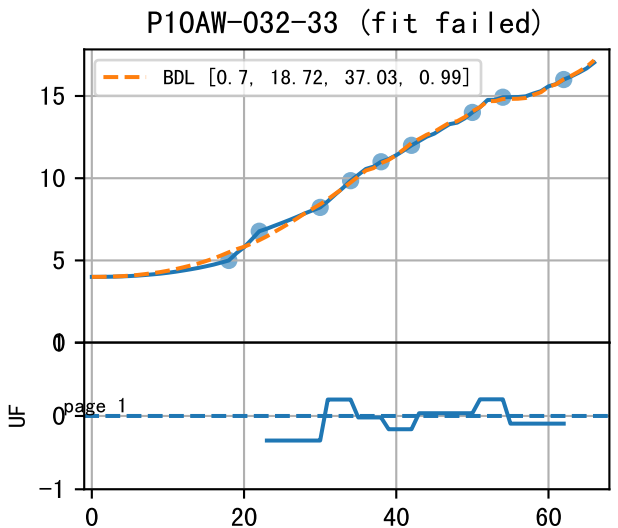

NdV_avgAbsY (Def=na Set=7.4)
avg1=7.4~23% avg2=na
page 2
Object Number

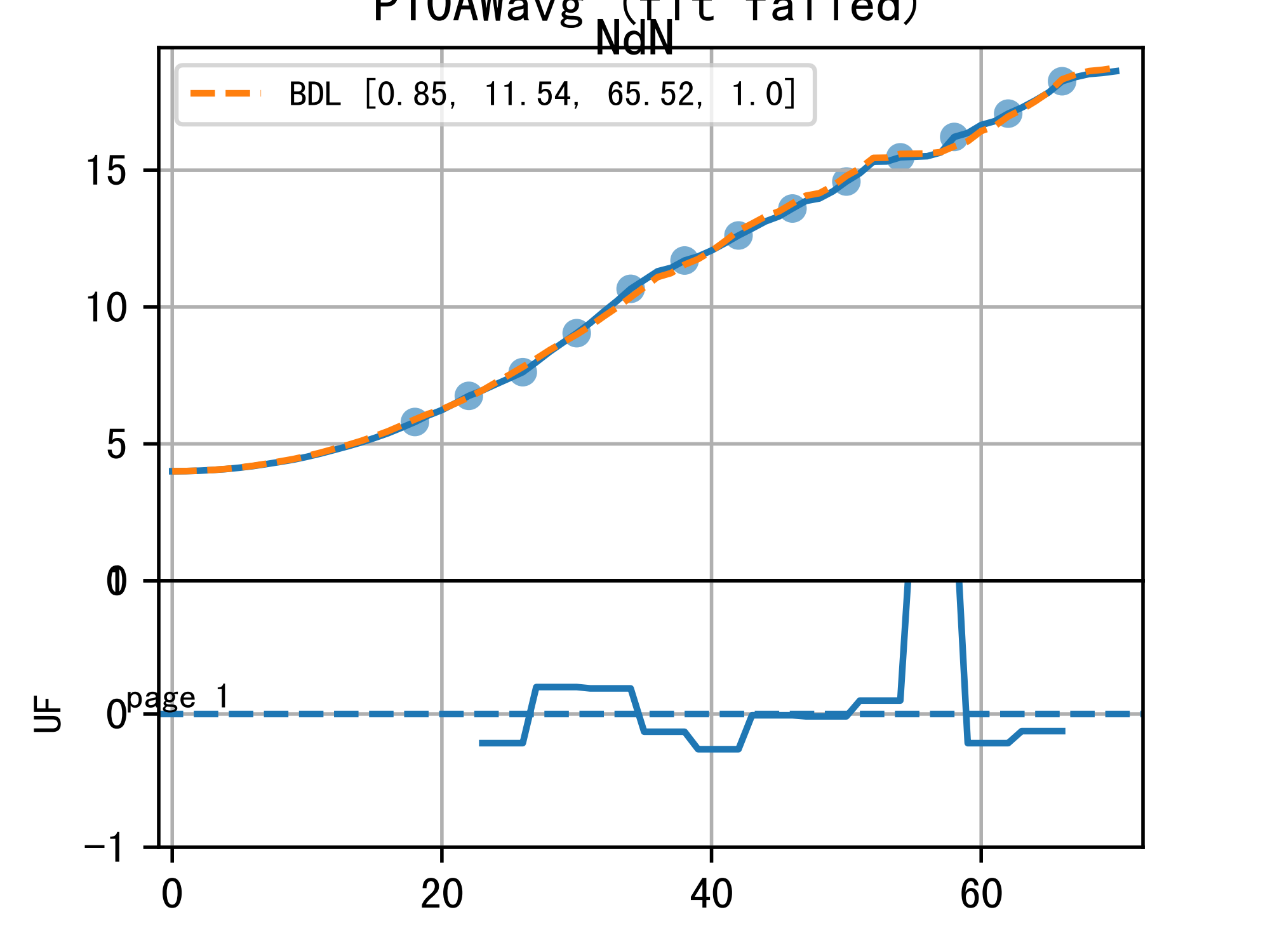

P10AW-004-12 (fit failed)
BDL [0.67, 17.61, 27.11, 1.0]
UF

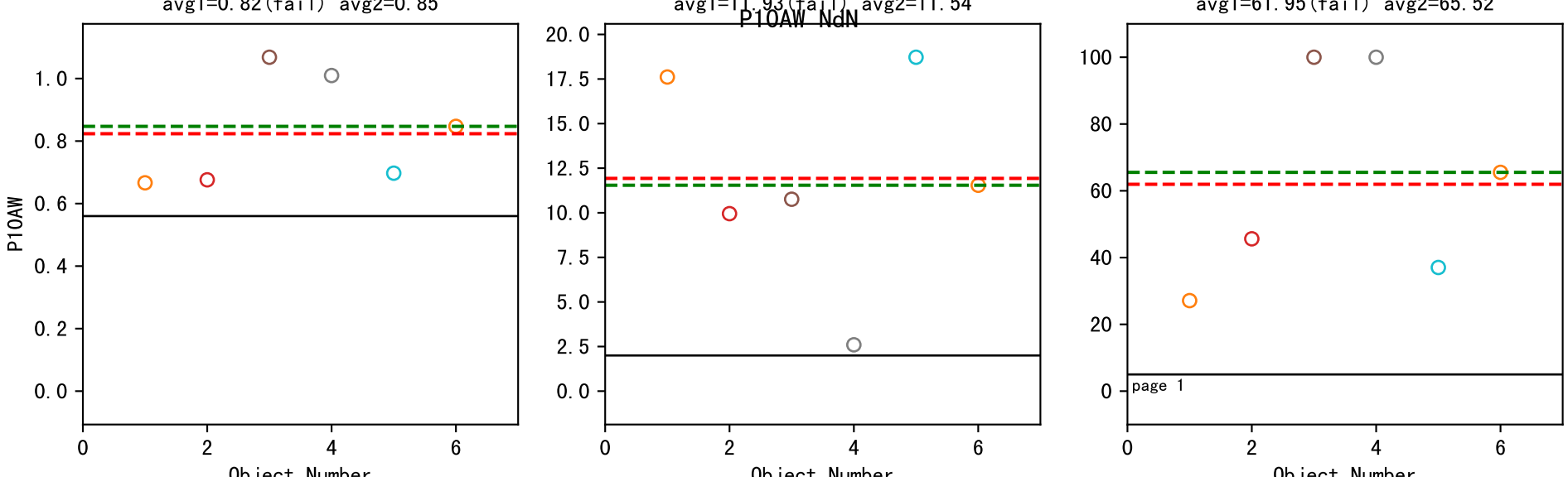

P10AW-010-25 (fit failed)
BDL [0.68, 9.95, 45.62, 1.0]
UF

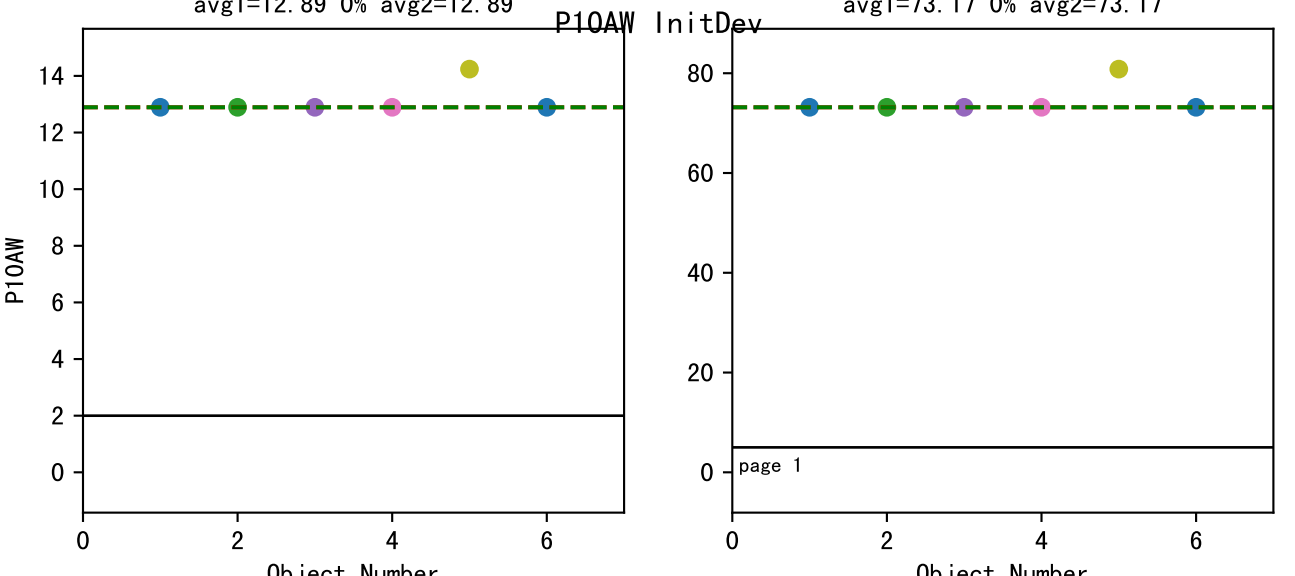

P10AW-017-16 (fit failed)
BDL [1.07, 10.76, 100.0, 0.99]
UF

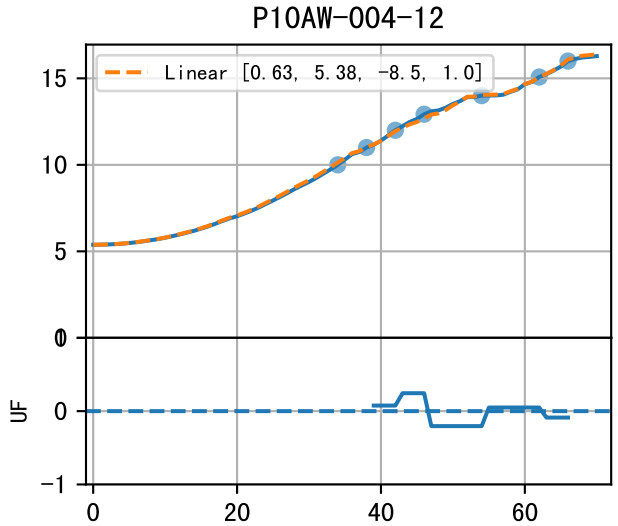

P10AW-025-3 (fit failed)
BDL [1.01, 2.6, 100.0, 1.0]
UF

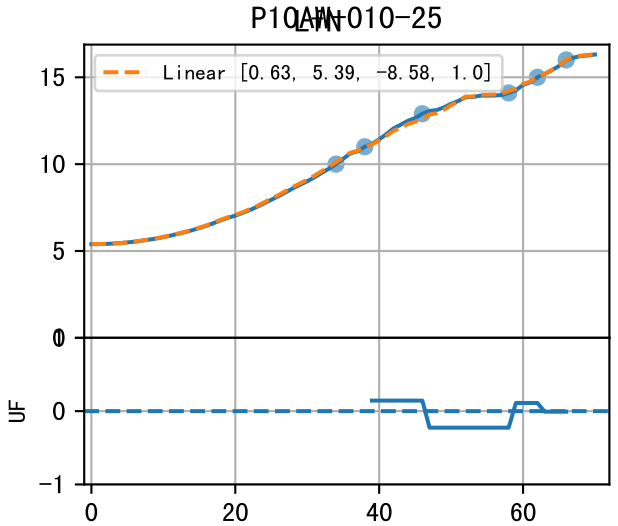

P10AW-032-33 (fit failed)
BDL [0.7, 18.72, 37.03, 0.99]
UF

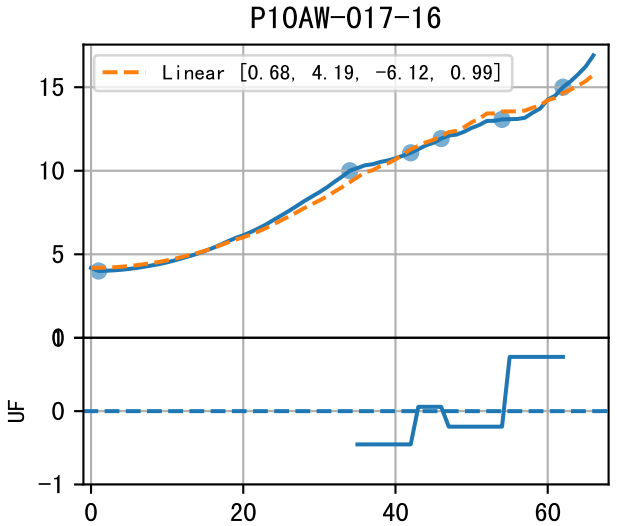

PTOAWavg (fit failed)
NdN
BDL [0.85, 11.54, 65.52, 1.0]
15
10
5
0
0
0
−1
UF
page 1
0
20
40
60

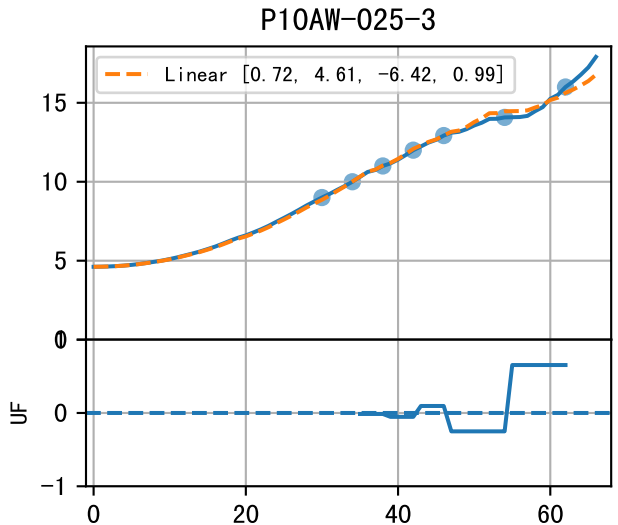

avg1=0.82(fail) avg2=0.85
avg1=11.93(fail) avg2=11.54
avg1=61.95(fail) avg2=65.52
P10AW NdN
P10AW
Object Number
page 1

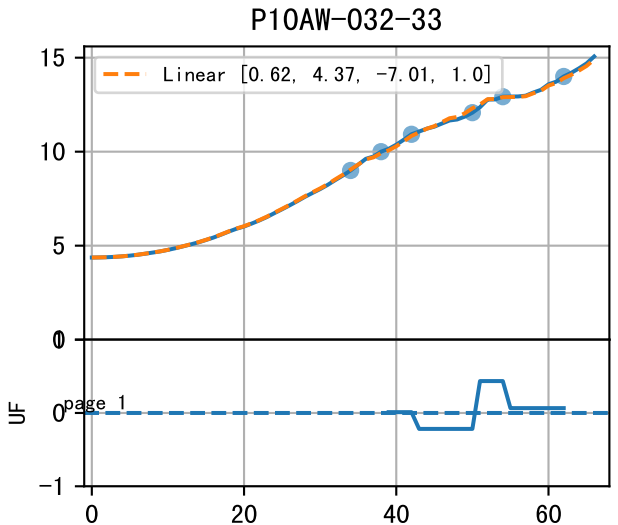

P10AW InitDev
avg1=12.89 0% avg2=12.89
avg1=73.17 0% avg2=73.17
P10AW
Object Number
page 1

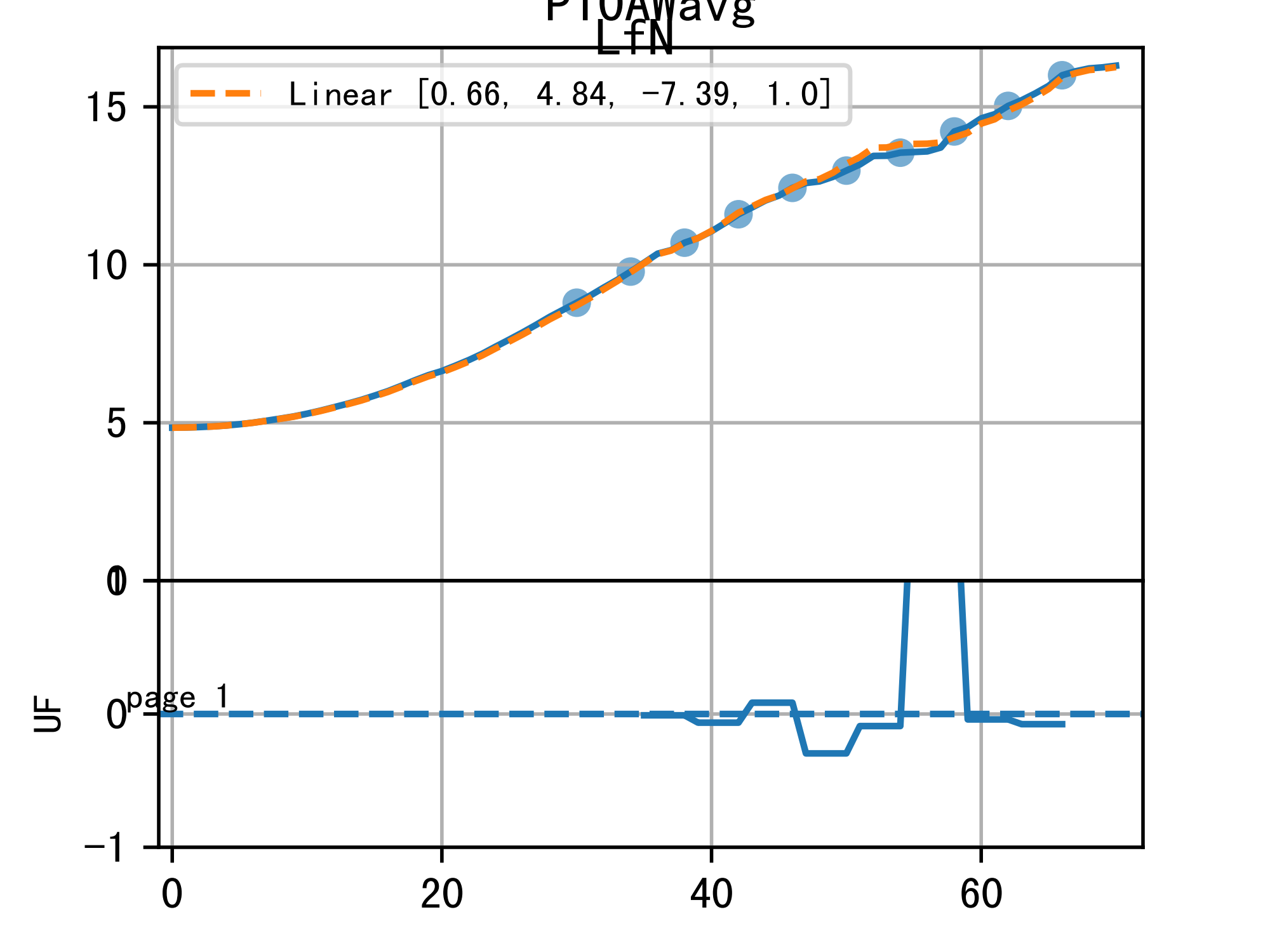

P10AW-004-12
Linear [0.63, 5.38, -8.5, 1.0]
UF

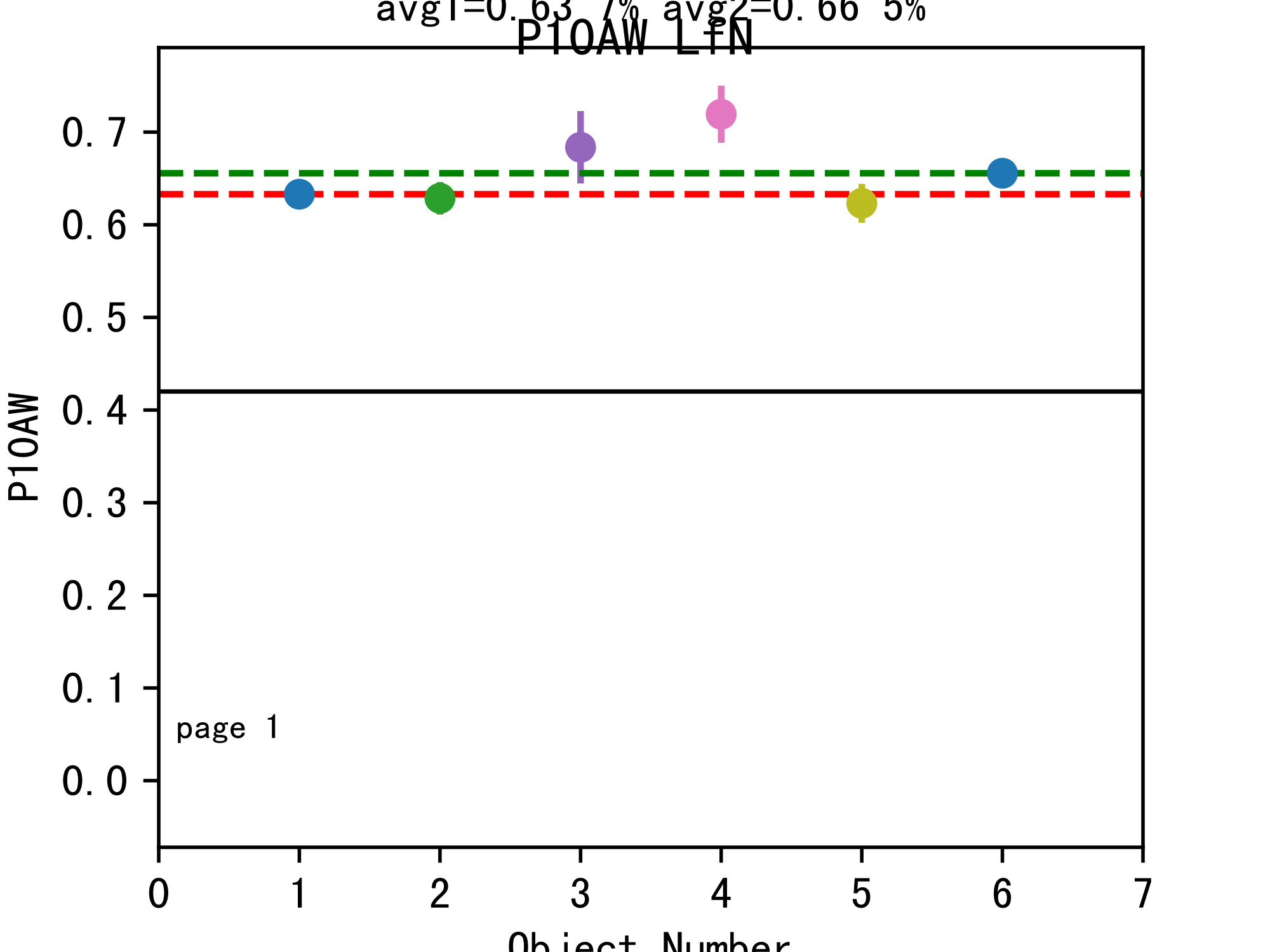

P10AW-010-25
Linear [0.63, 5.39, -8.58, 1.0]
UF


P10AW-017-16
Linear [0.68, 4.19, -6.12, 0.99]
UF

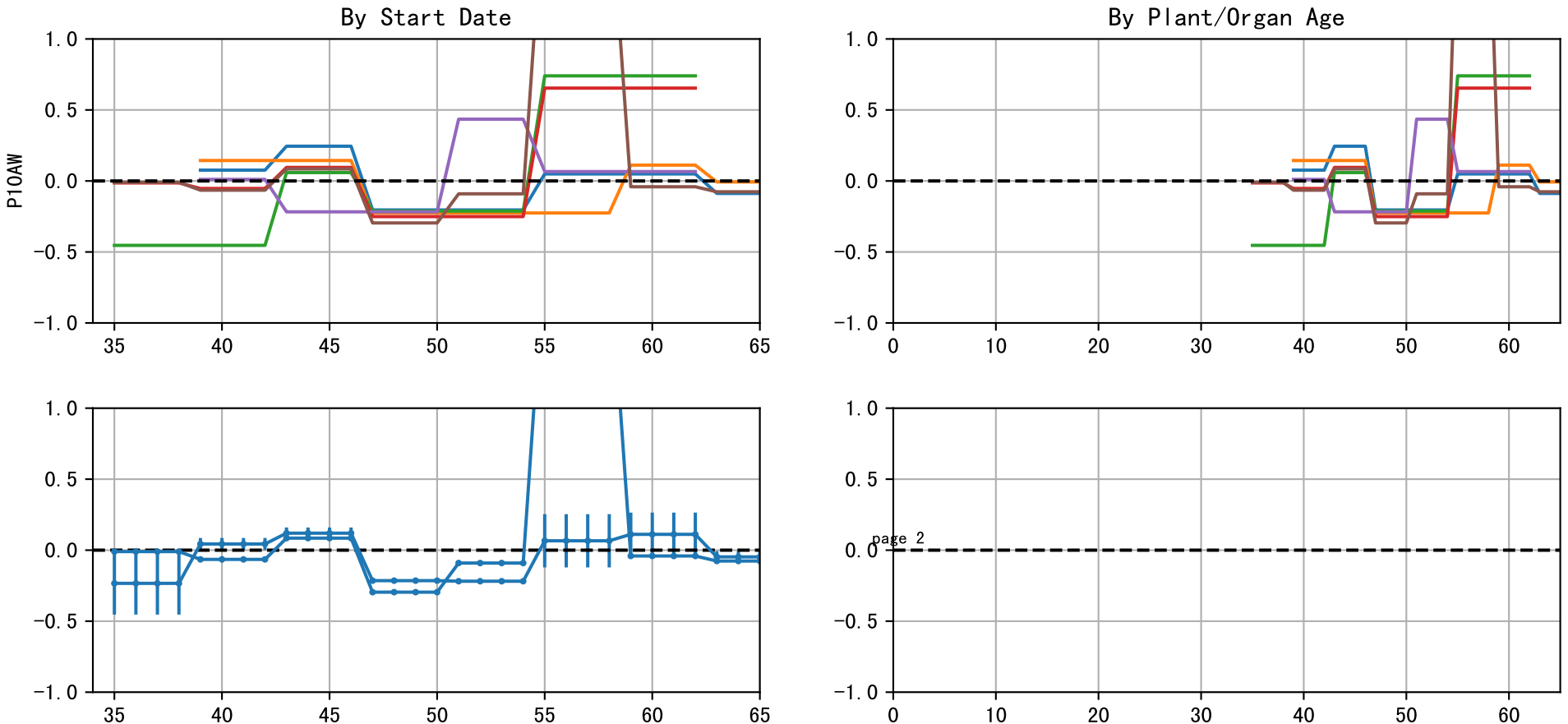

P10AW-025-3
Linear [0.72, 4.61, -6.42, 0.99]
UF

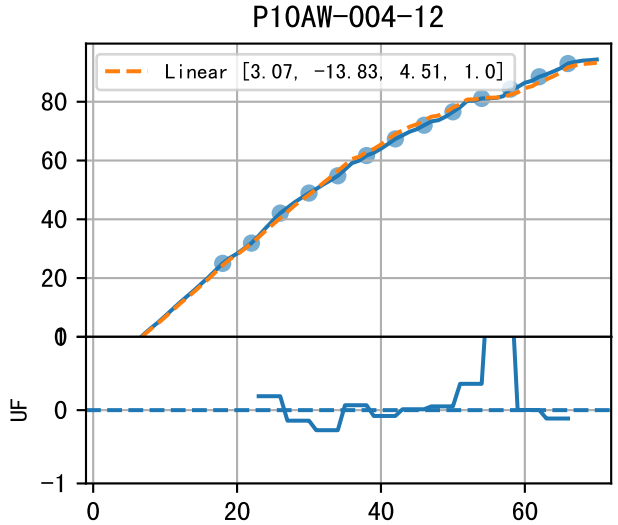

P10AW-032-33
Linear [0.62, 4.37, -7.01, 1.0]
UF

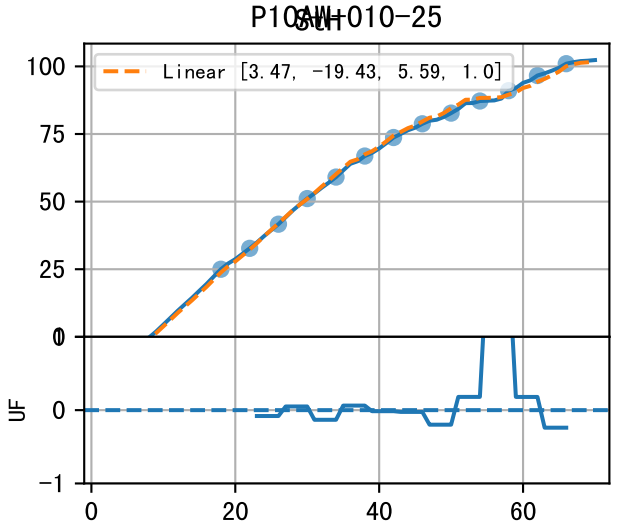

PTOAWavg
LfN
Linear [0.66, 4.84, -7.39, 1.0]
15
10
5
0
0
0
−1
UF
page 1
0
20
40
60

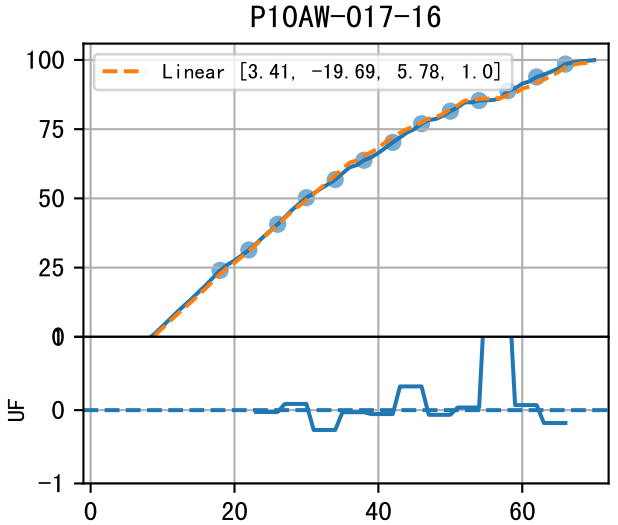

avg1=0.63 7% avg2=0.66 5%
P10AW LfN
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
P10AW
page 1
0
1
2
3
4
5
6
7
Object Number

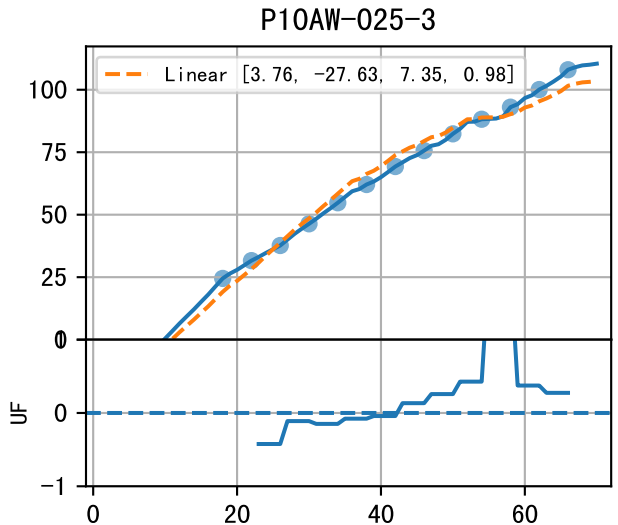
LfN

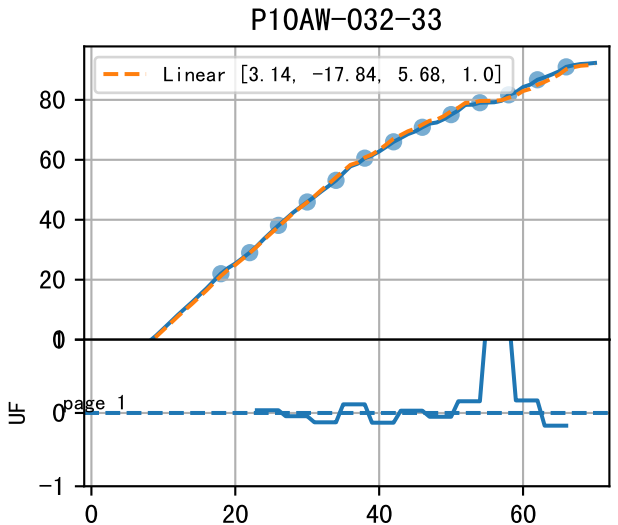

By Start Date
By Plant/Organ Age
P1OAW
1.0
0.5
0.0
−0.5
−1.0
35
40
45
50
55
60
65
0
10
20
30
40
50
60
page 2

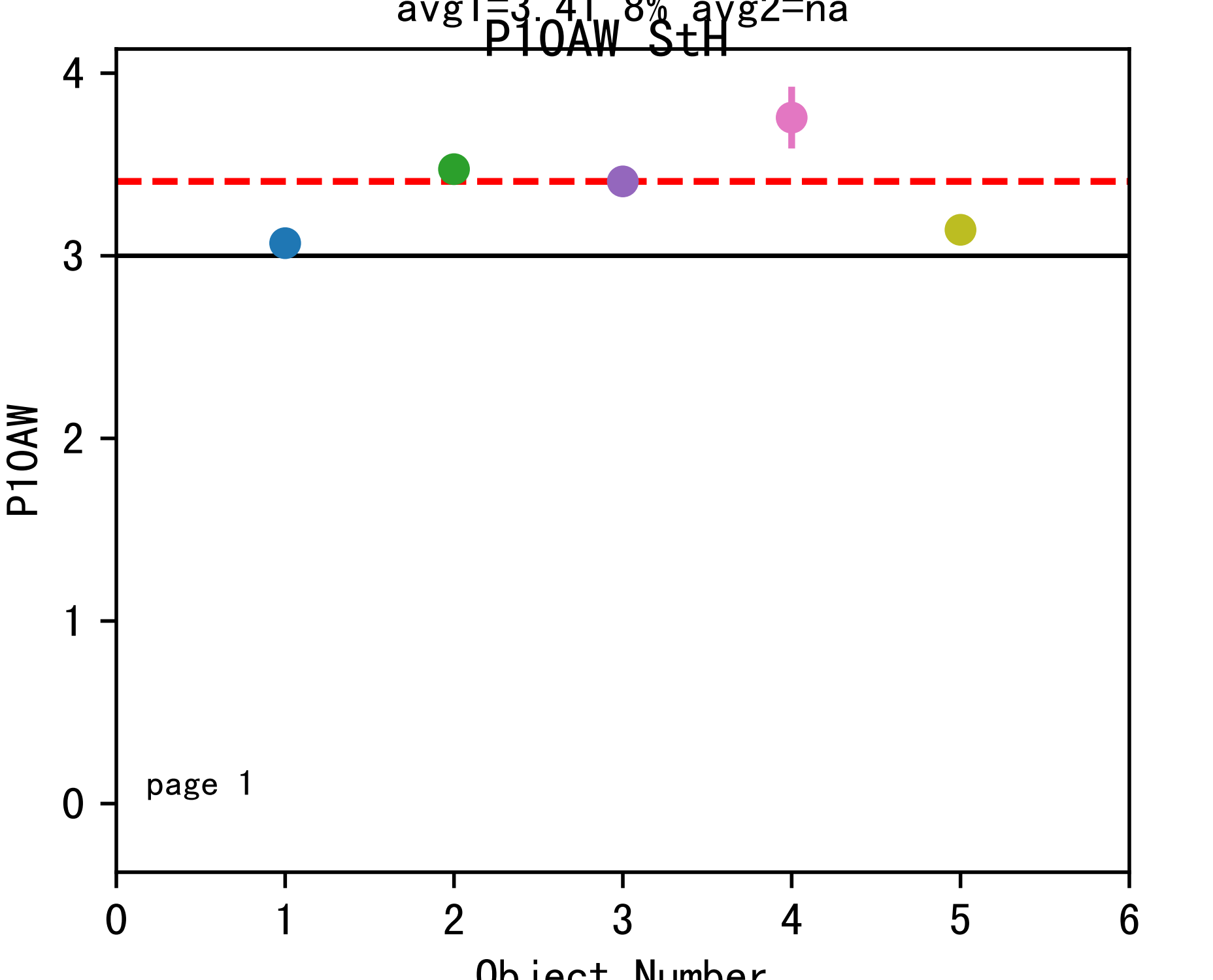

P10AW-004-12
Linear [3.07, -13.83, 4.51, 1.0]
UF


P10AW-010-25
Linear [3.47, -19.43, 5.59, 1.0]
UF

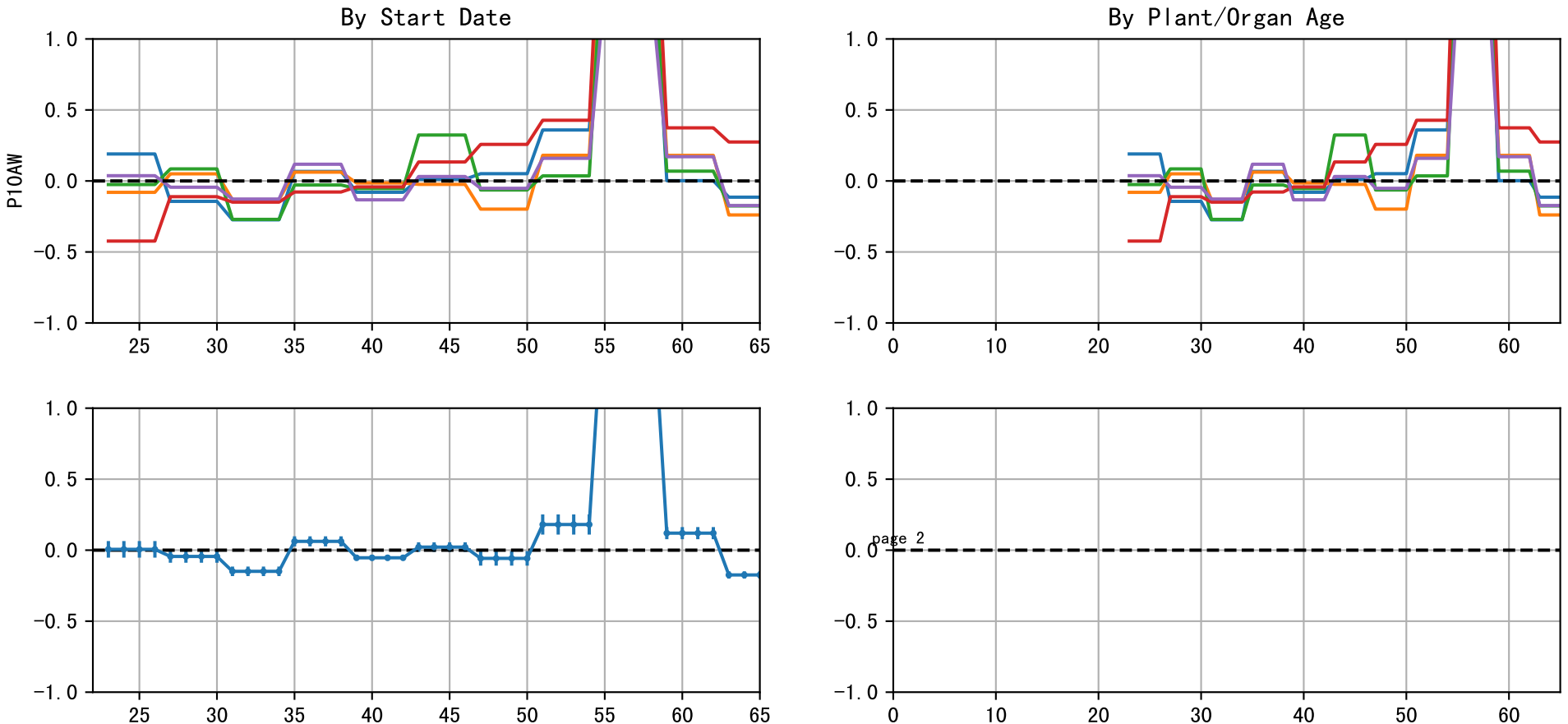

P10AW-017-16
Linear [3.41, -19.69, 5.78, 1.0]
UF

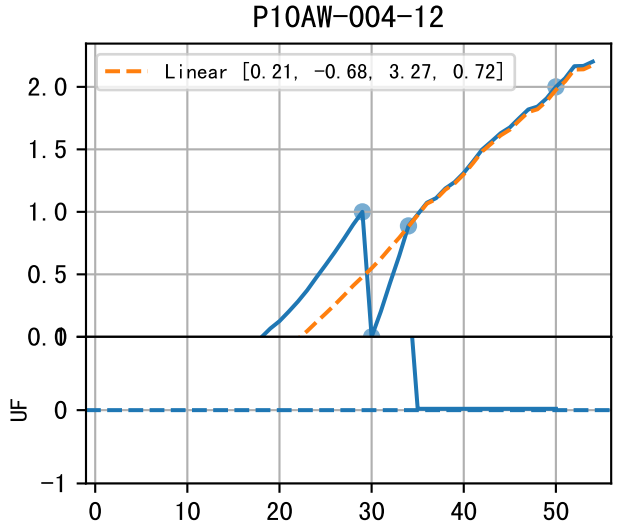

P10AW-025-3
Linear [3.76, -27.63, 7.35, 0.98]
UF

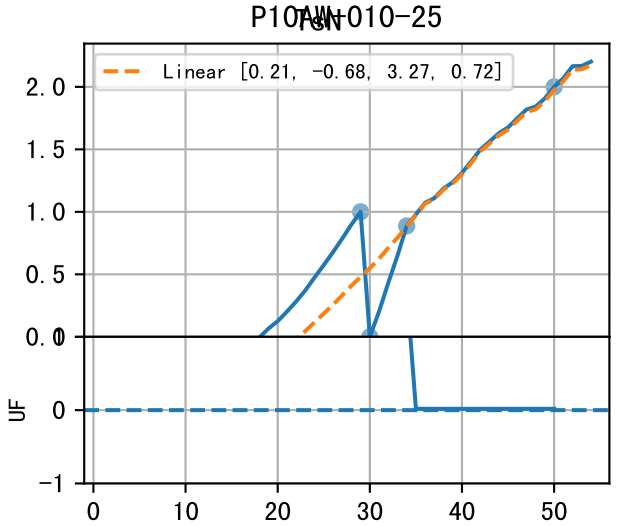

P10AW-032-33
Linear [3.14, -17.84, 5.68, 1.0]
UF

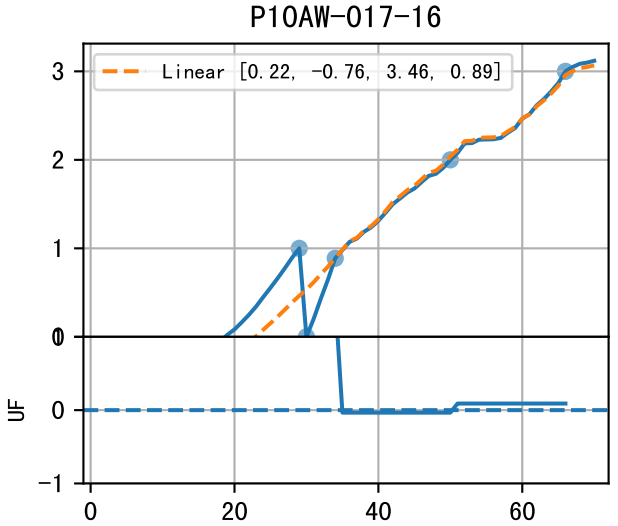

avg1=3.41 8% avg2=na
P10AW StH
P10AW
Object Number
page 1
0
1
2
3
4
5
6

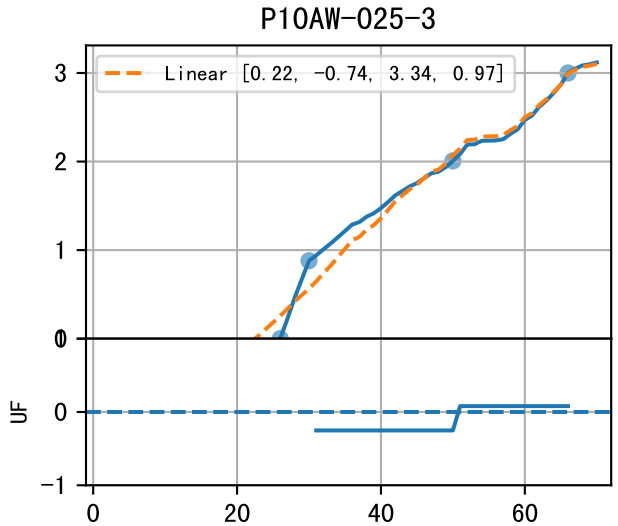
StH

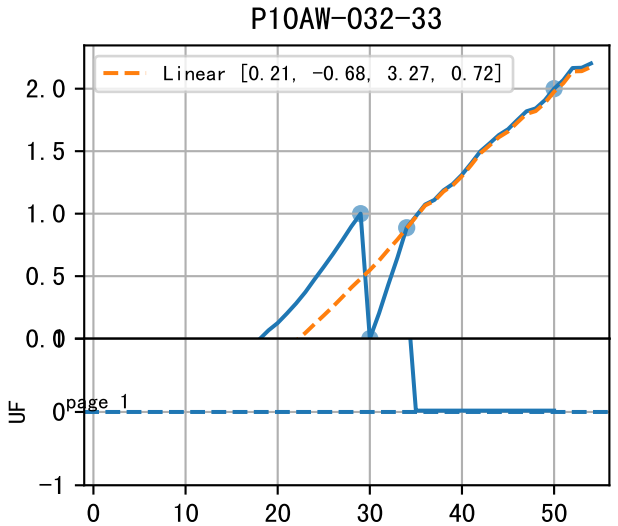

By Start Date
By Plant/Organ Age
P1OAW
1.0
0.5
0.0
−0.5
−1.0
25
30
35
40
45
50
55
60
65
0
10
20
30
40
50
60
page 2

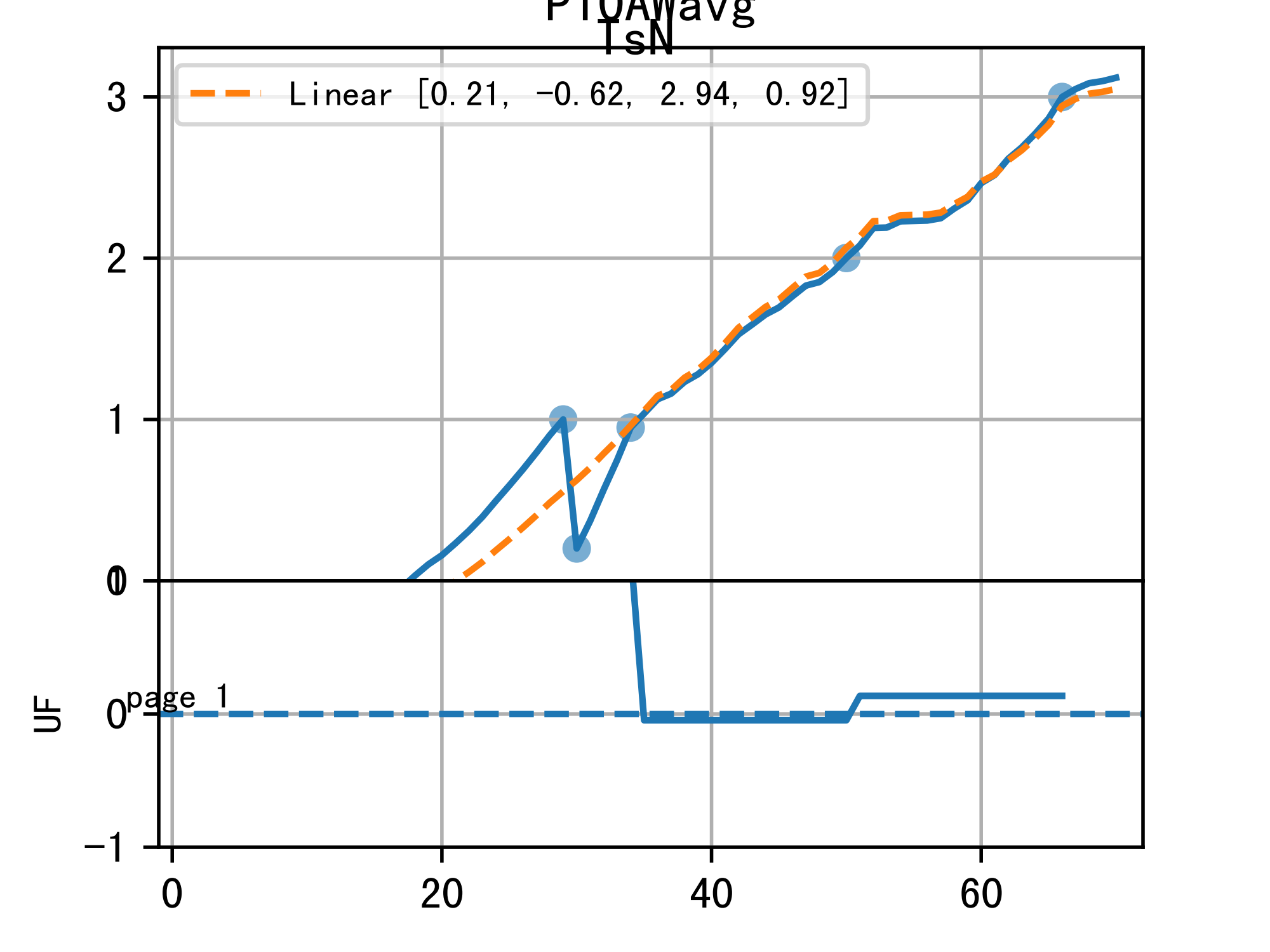

P10AW-004-12
Linear [0.21, -0.68, 3.27, 0.72]
UF

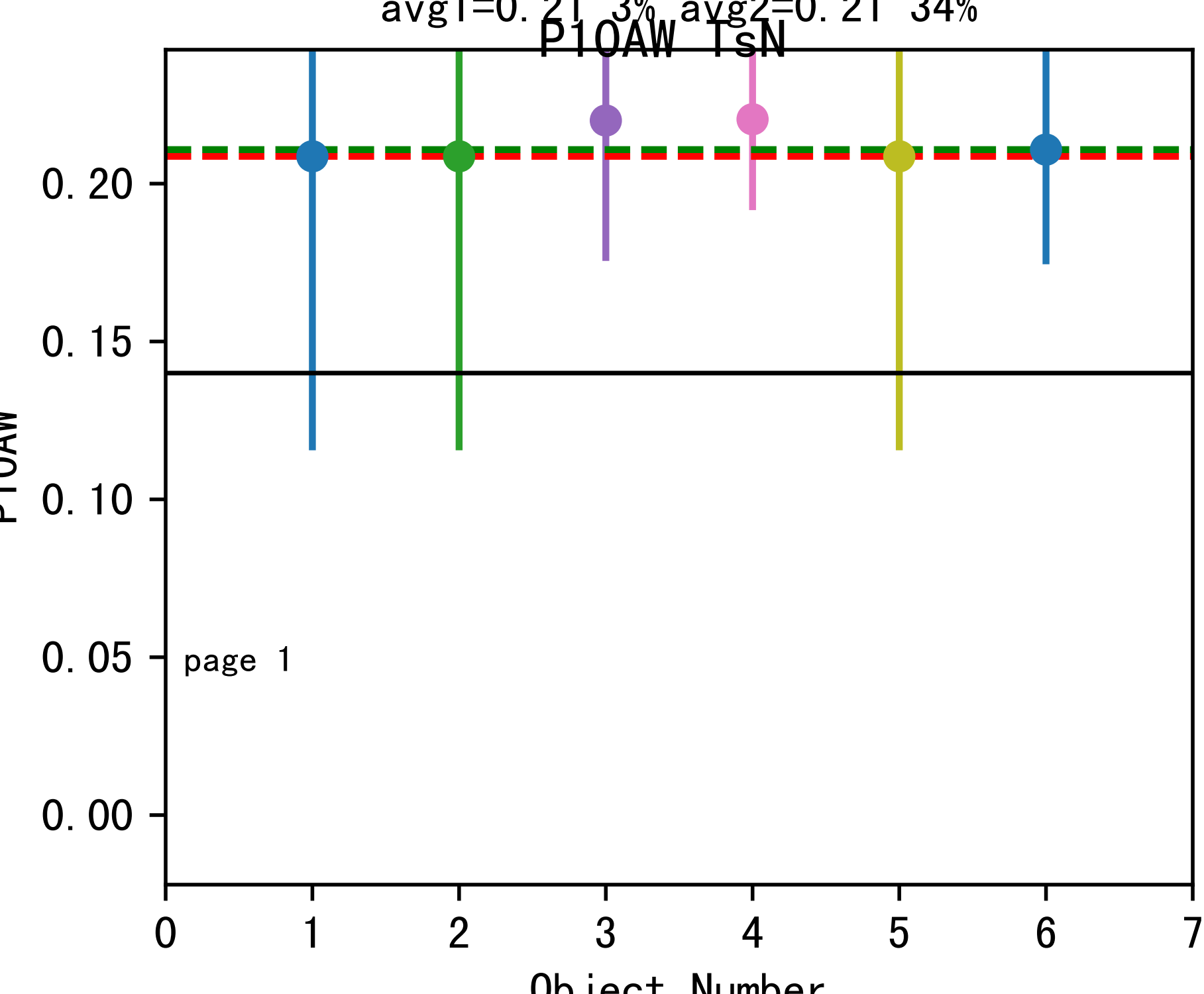

P10AW-010-25
Linear [0.21, -0.68, 3.27, 0.72]
UF


P10AW-017-16
Linear [0.22, -0.76, 3.46, 0.89]
UF

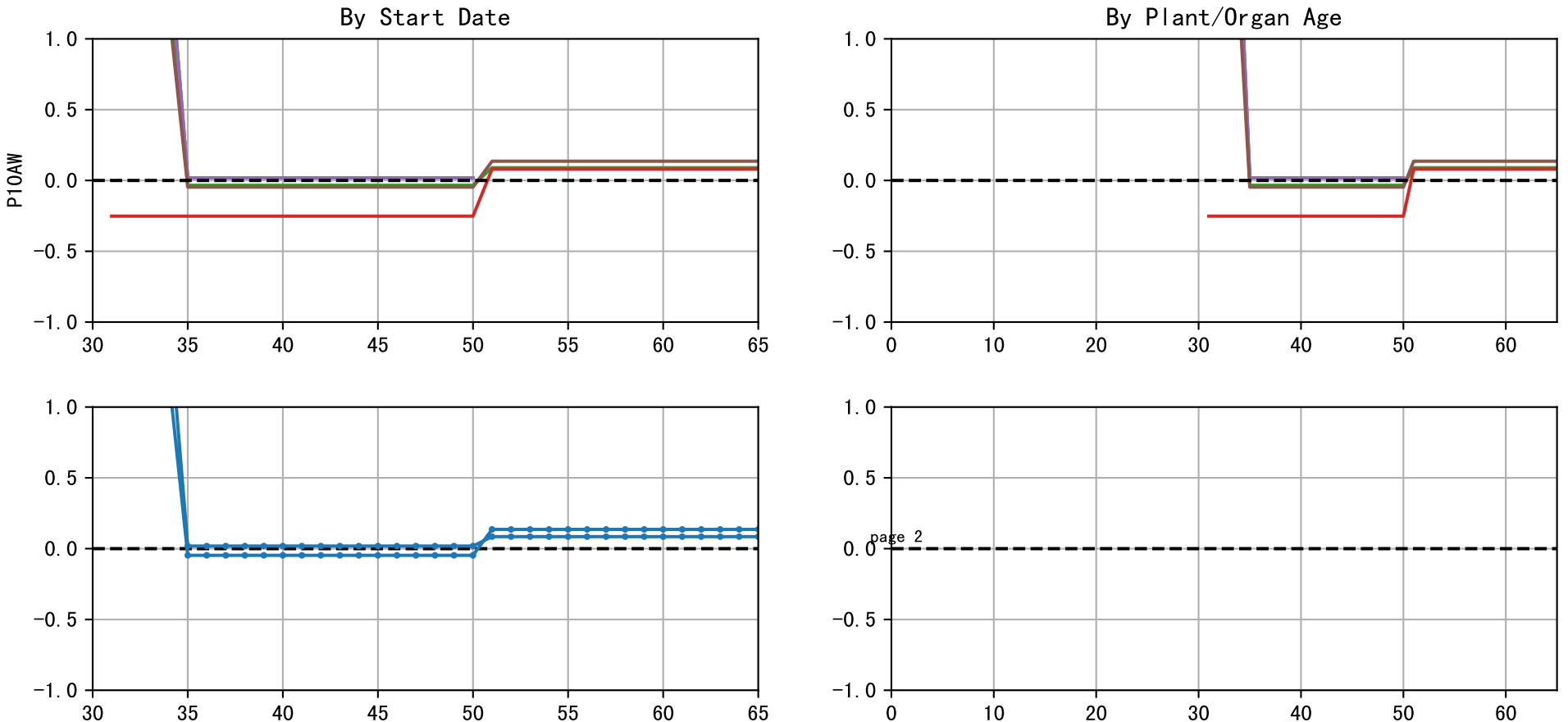

P10AW-025-3
Linear [0.22, -0.74, 3.34, 0.97]
UF

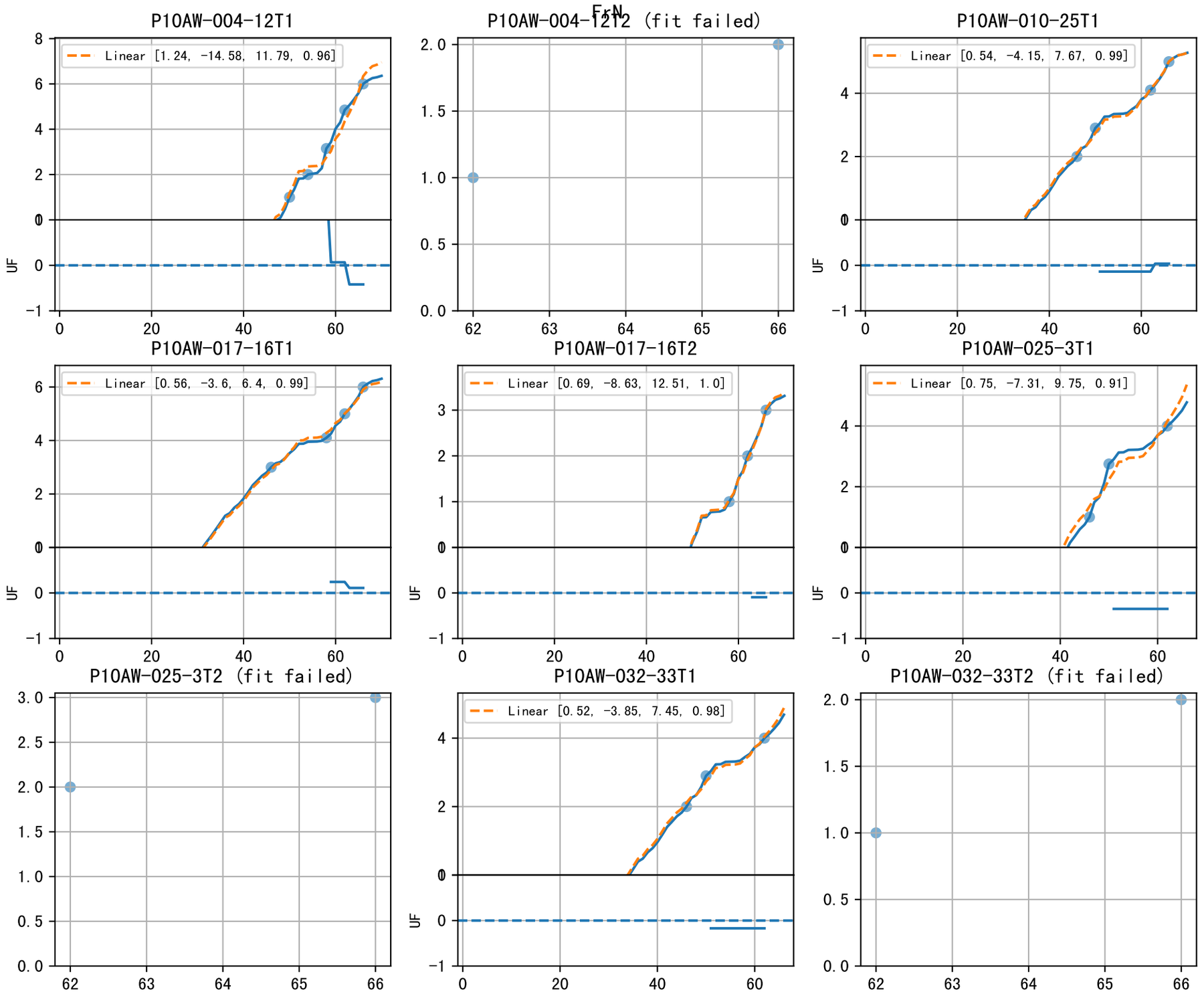

P10AW-032-33
Linear [0.21, -0.68, 3.27, 0.72]
UF

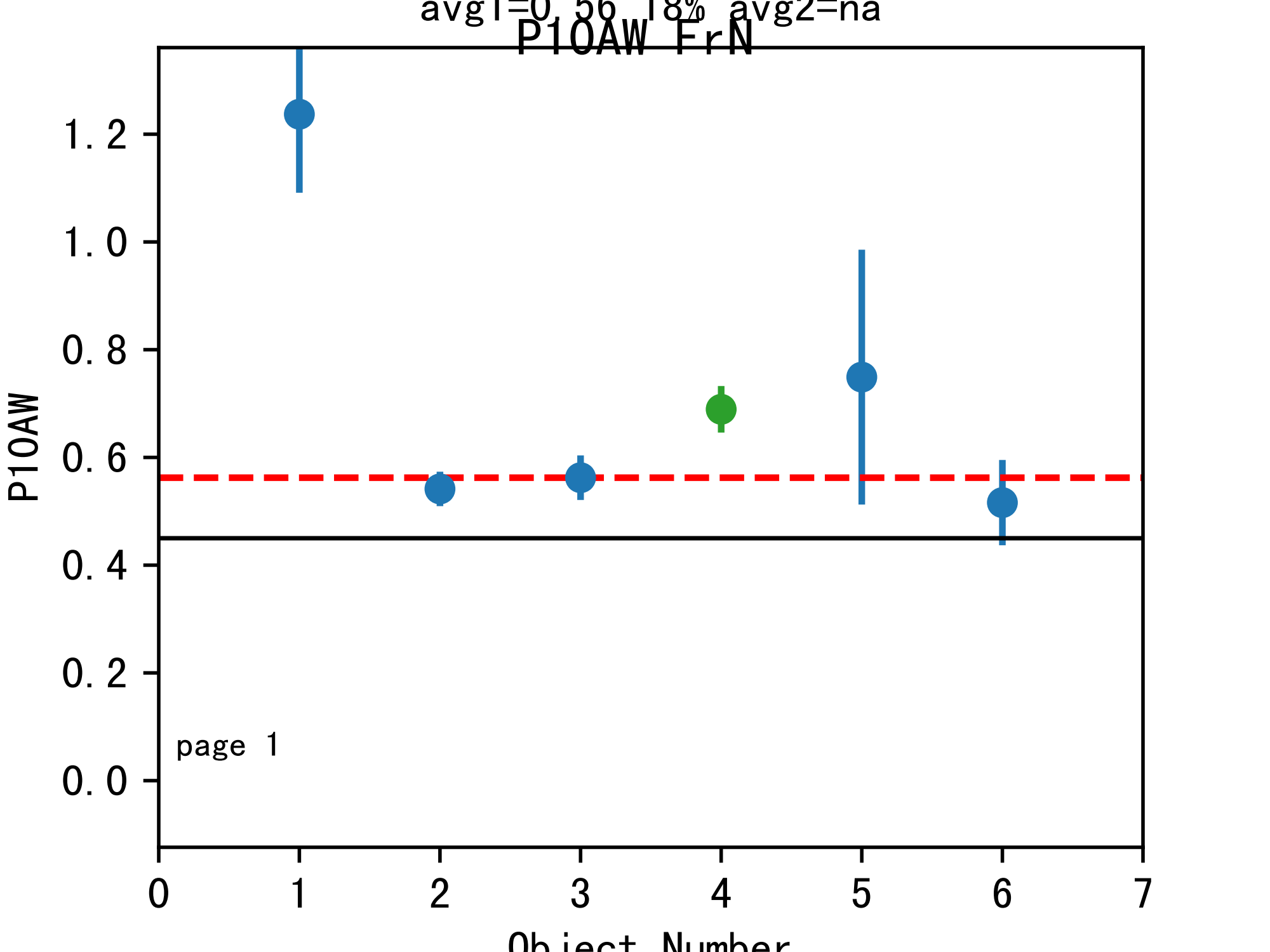

PTOAWavg
TsN
Linear [0.21, -0.62, 2.94, 0.92]
3
2
1
0
0
−1
UF
page 1
0
20
40
60


avg1=0.21 3% avg2=0.21 34%
P10AW TsN
0.20
0.15
0.10
0.05
0.00
P10AW
page 1
0
1
2
3
4
5
6
7
Object Number

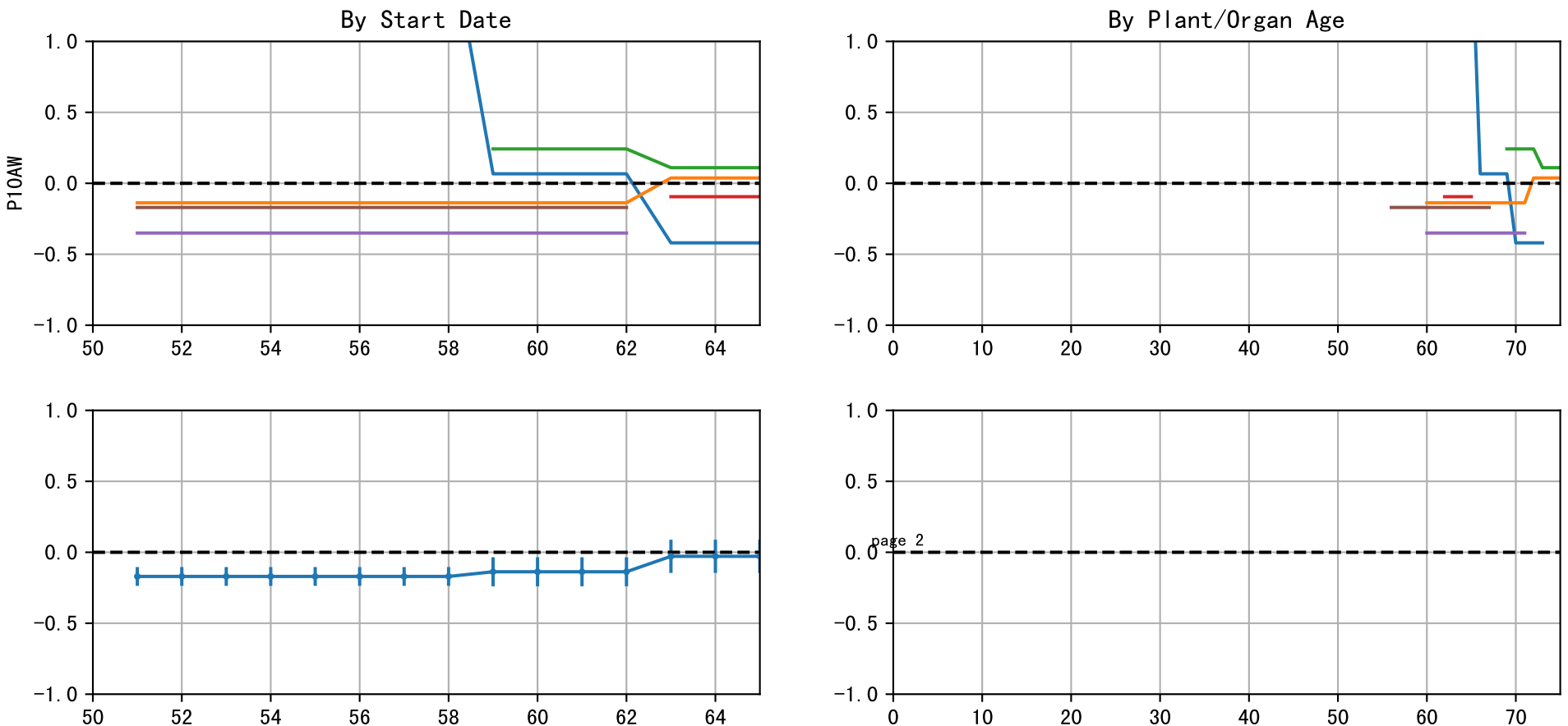
TsN

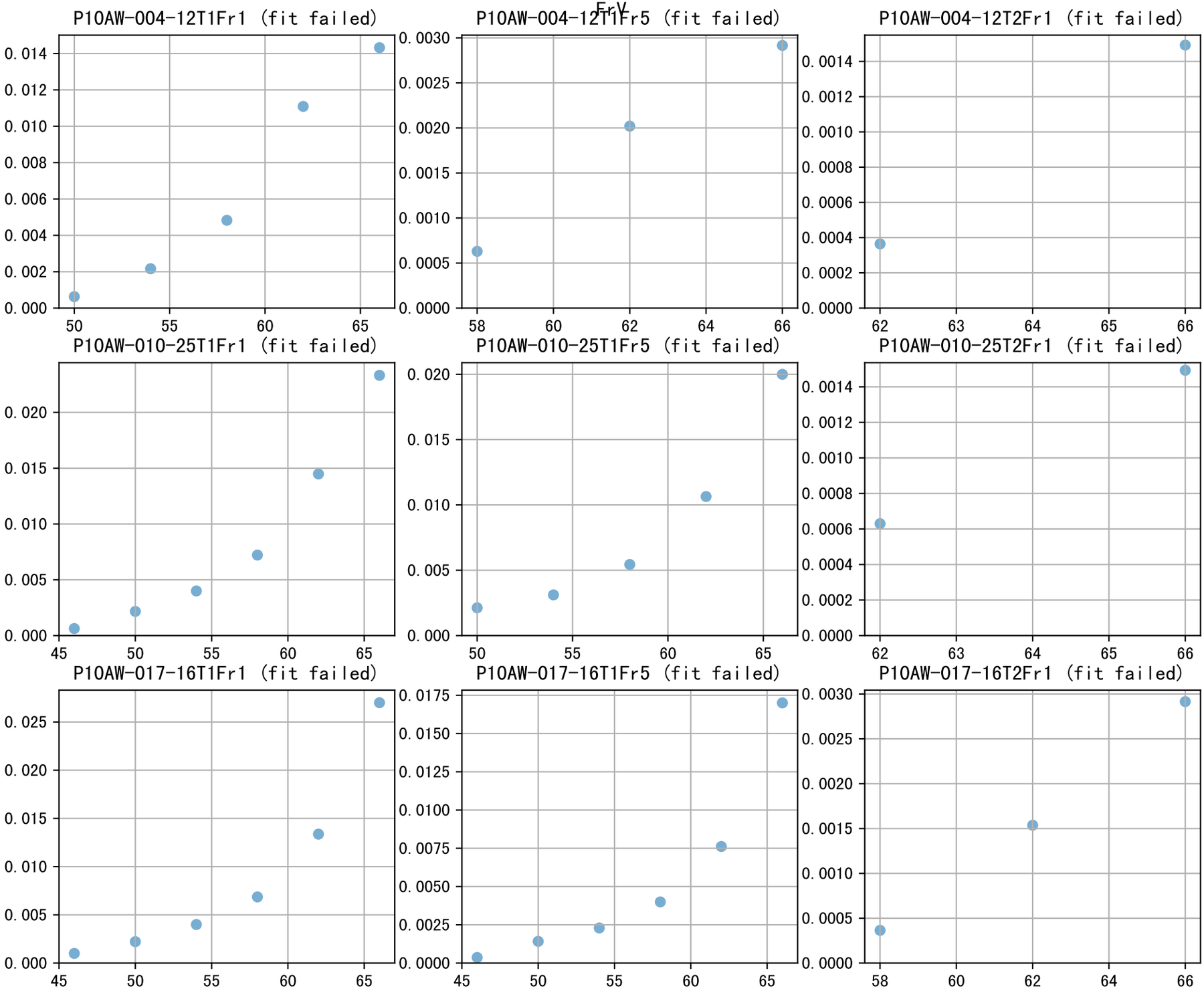

By Start Date
By Plant/Organ Age
P1OAW
1.0
0.5
0.0
−0.5
−1.0
30
35
40
45
50
55
60
65
0
10
20
30
40
50
60
page 2

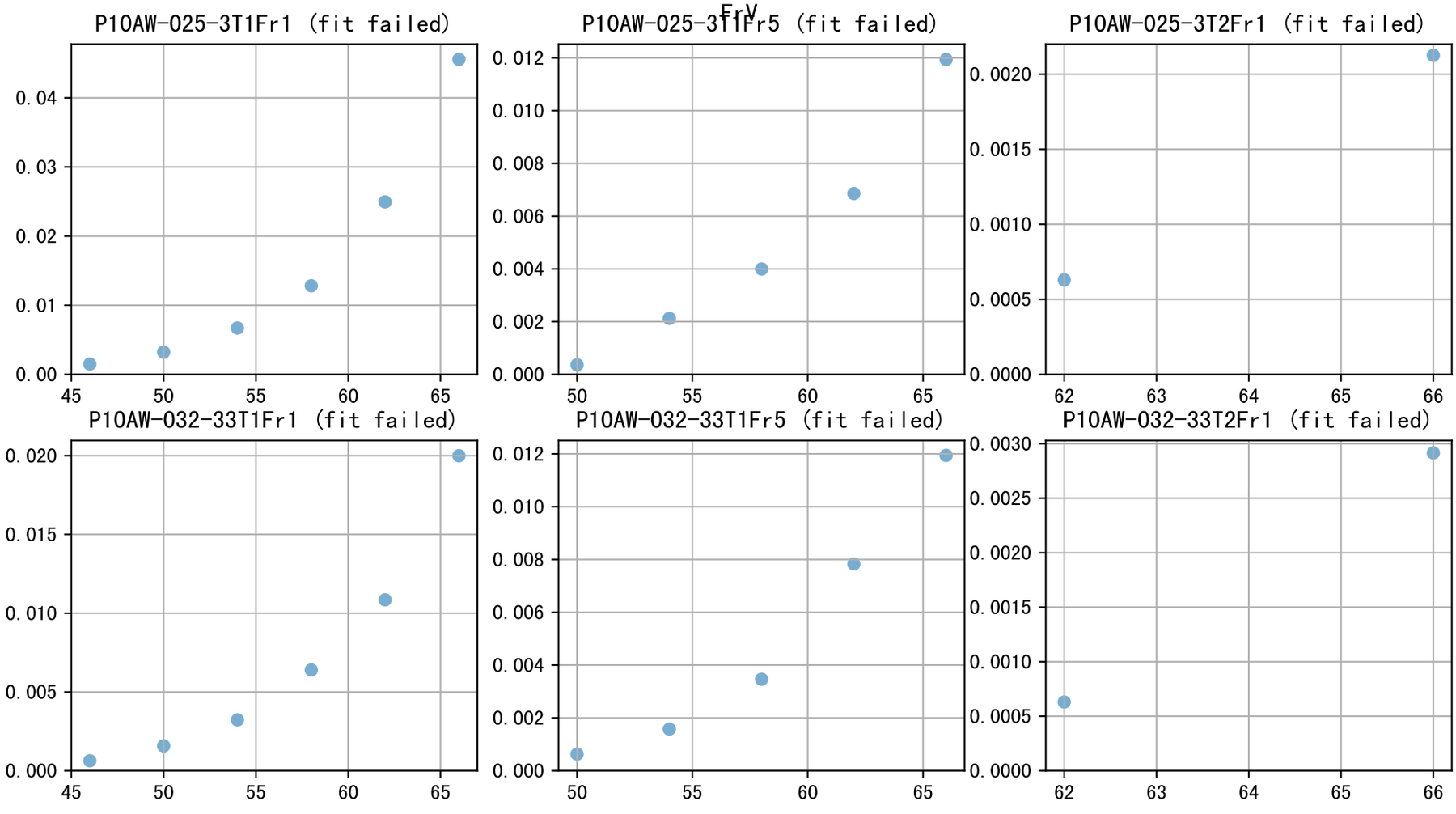

FrN
P10AW-004-12T1
Linear [1.24, -14.58, 11.79, 0.96]
P10AW-004-12T2 (fit failed)
P10AW-010-25T1
Linear [0.54, -4.15, 7.67, 0.99]
P10AW-017-16T1
Linear [0.56, -3.6, 6.4, 0.99]
P10AW-017-16T2
Linear [0.69, -8.63, 12.51, 1.0]
P10AW-025-3T1
Linear [0.75, -7.31, 9.75, 0.91]
P10AW-025-3T2 (fit failed)
P10AW-032-33T1
Linear [0.52, -3.85, 7.45, 0.98]
P10AW-032-33T2 (fit failed)
UF

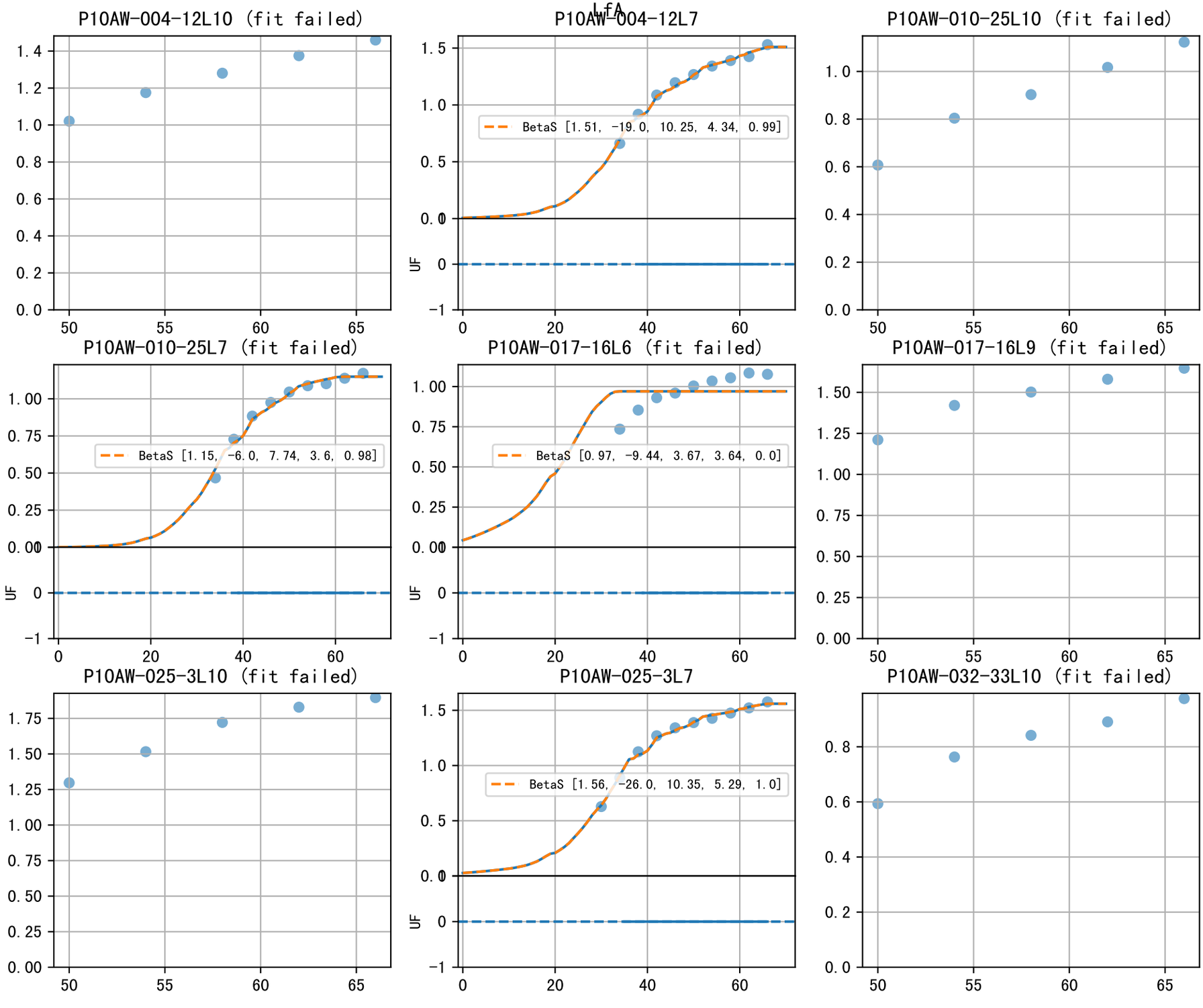

avg1=0.56 18% avg2=na
P10AW FrN
P10AW
1.2
1.0
0.8
0.6
0.4
0.2
0.0
page 1
0
1
2
3
4
5
6
7
Object Number

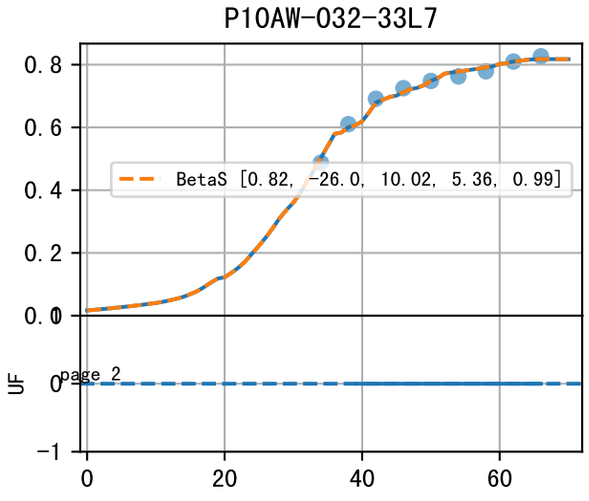
FrN


By Start Date
By Plant/Organ Age
P10AW
1.0
0.5
0.0
−0.5
−1.0
50
52
54
56
58
60
62
64
0
10
20
30
40
50
60
70
page 2

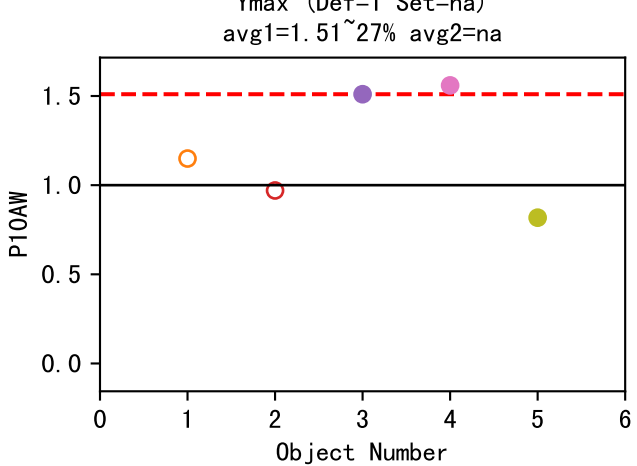

FrV
P10AW-004-12T1Fr1 (fit failed)
P10AW-004-12T1Fr5 (fit failed)
P10AW-004-12T2Fr1 (fit failed)
P10AW-010-25T1Fr1 (fit failed)
P10AW-010-25T1Fr5 (fit failed)
P10AW-010-25T2Fr1 (fit failed)
P10AW-017-16T1Fr1 (fit failed)
P10AW-017-16T1Fr5 (fit failed)
P10AW-017-16T2Fr1 (fit failed)

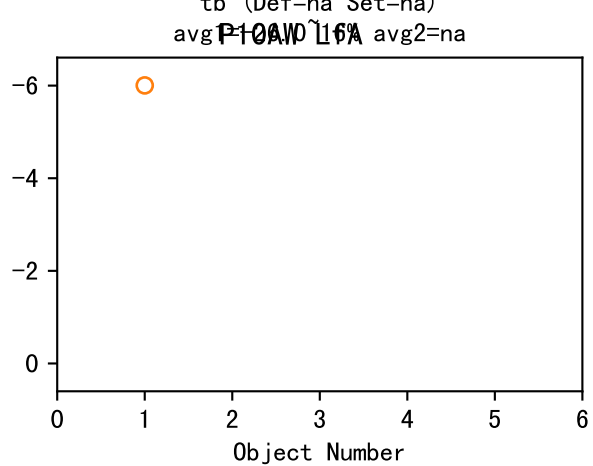

FrV
P10AW-025-3T1Fr1 (fit failed)
P10AW-025-3T1Fr5 (fit failed)
P10AW-025-3T2Fr1 (fit failed)
P10AW-032-33T1Fr1 (fit failed)
P10AW-032-33T1Fr5 (fit failed)
P10AW-032-33T2Fr1 (fit failed)

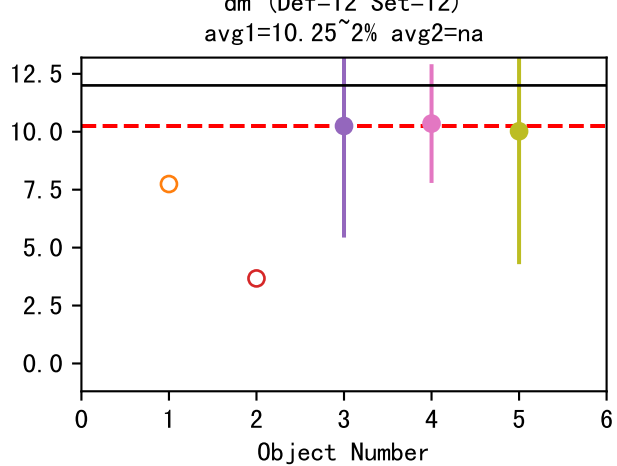

P10AW-004-12L10 (fit failed)
P10AW-004-12L7
BetaS [1.51, -19.0, 10.25, 4.34, 0.99]
P10AW-010-25L10 (fit failed)
P10AW-010-25L7 (fit failed)
BetaS [1.15, -6.0, 7.74, 3.6, 0.98]
P10AW-017-16L6 (fit failed)
BetaS [0.97, -9.44, 3.67, 3.64, 0.0]
P10AW-017-16L9 (fit failed)
P10AW-025-3L10 (fit failed)
P10AW-025-3L7
BetaS [1.56, -26.0, 10.35, 5.29, 1.0]
P10AW-032-33L10 (fit failed)
UF

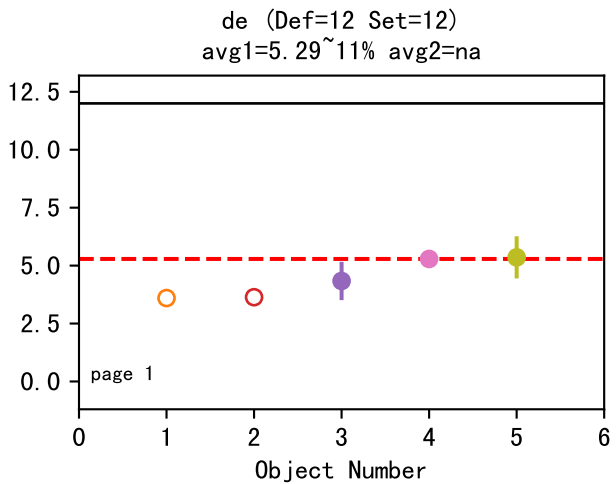

P10AW-032-33L7
BetaS [0.82, -26.0, 10.02, 5.36, 0.99]
UF
page 2
0.8
0.6
0.4
0.2
0.0
0
-1
0
20
40
60

LfA

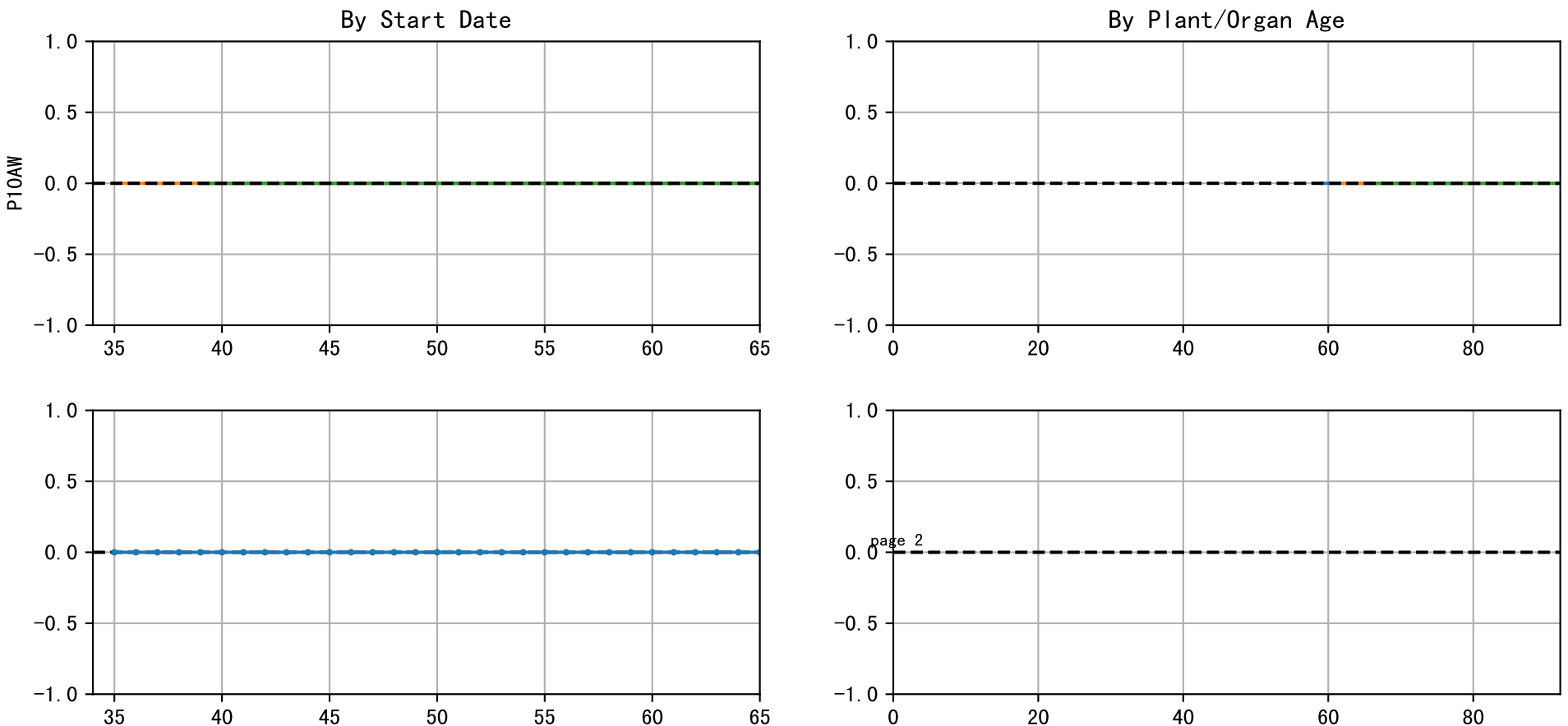

Ymax (Def=1 Set=na)
avg1=1.51~27% avg2=na
P10AW
1.5
1.0
0.5
0.0
0
1
2
3
4
5
6
Object Number

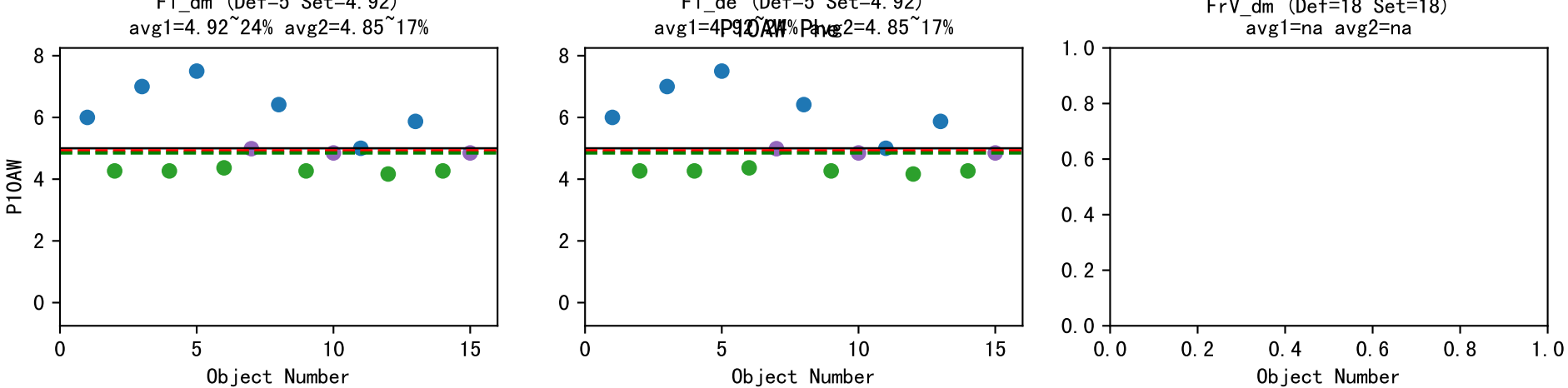

tb (Def=na Set=na)
avg1=-2.40~16% avg2=na
P10AW L1A
−6
−4
−2
0
0
1
2
3
4
5
6
Object Number

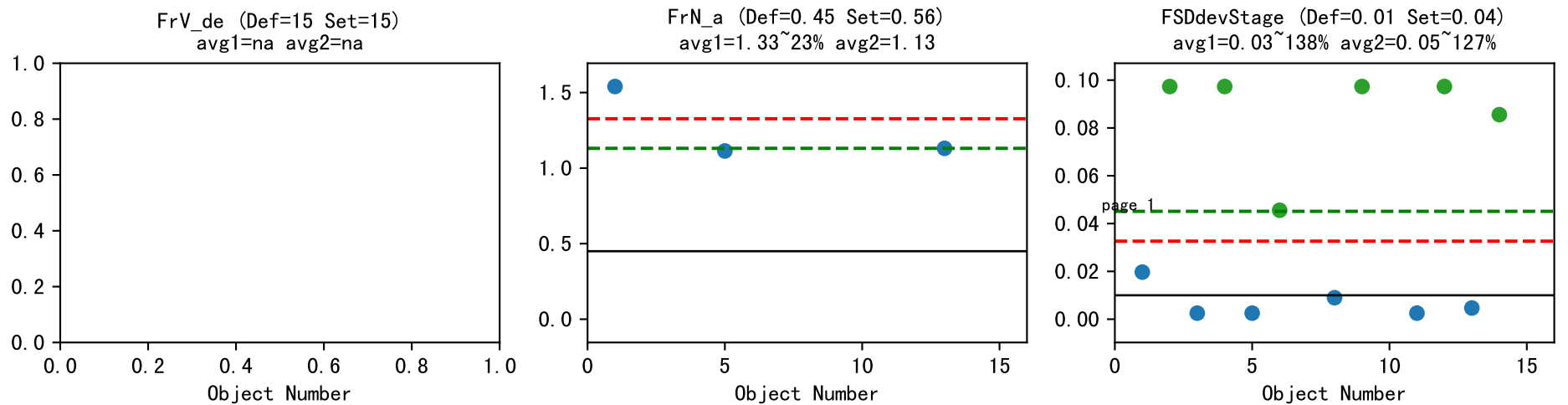

dm (Def=12 Set=12)
avg1=10.25~2% avg2=na
12.5
10.0
7.5
5.0
2.5
0.0
0
1
2
3
4
5
6
Object Number

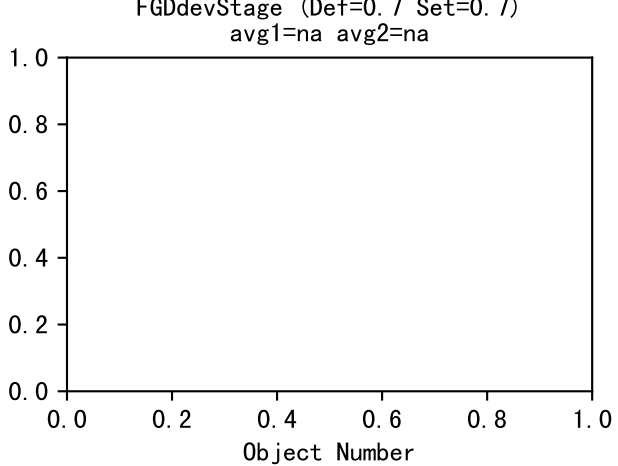

de (Def=12 Set=12)
avg1=5.29~11% avg2=na
12.5
10.0
7.5
5.0
2.5
0.0
page 1
0
1
2
3
4
5
6
Object Number

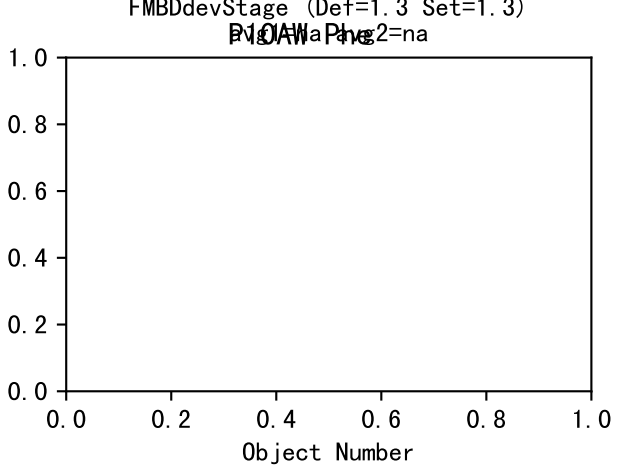
LfA

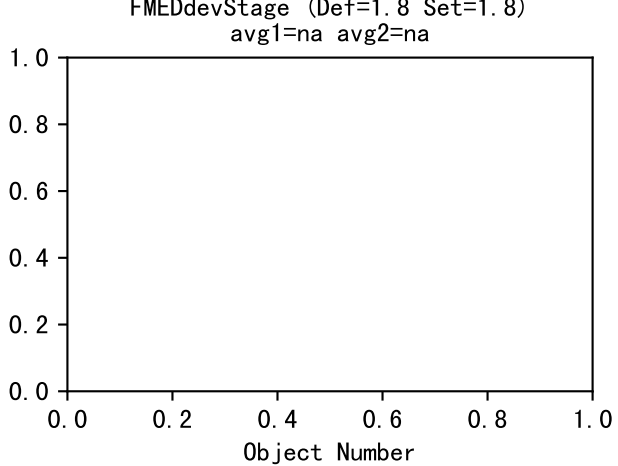

By Start Date
By Plant/Organ Age
P1OAW
1.0
0.5
0.0
−0.5
−1.0
35
40
45
50
55
60
65
0
20
40
60
80
page 2

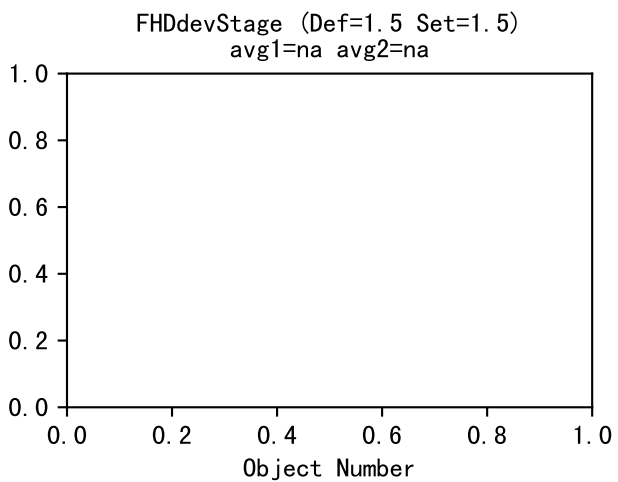

Ft_dm (Def=5 Set=4.92)
avg1=4.92~24% avg2=4.85~17%
P10AW
Object Number
Ft_de (Def=5 Set=4.92)
avg1=4.92~24% avg2=4.85~17%
Object Number
FrV_dm (Def=18 Set=18)
avg1=na avg2=na
Object Number

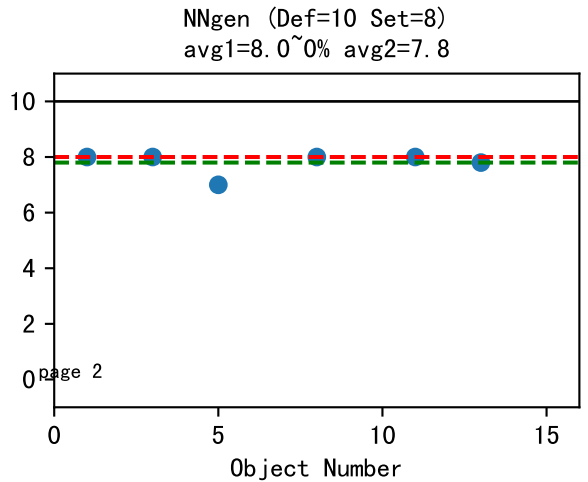

FrV_de (Def=15 Set=15)
avg1=na avg2=na
Object Number
FrN_a (Def=0.45 Set=0.56)
avg1=1.33~23% avg2=1.13
Object Number
FSDdevStage (Def=0.01 Set=0.04)
avg1=0.03~138% avg2=0.05~127%
page 1
Object Number

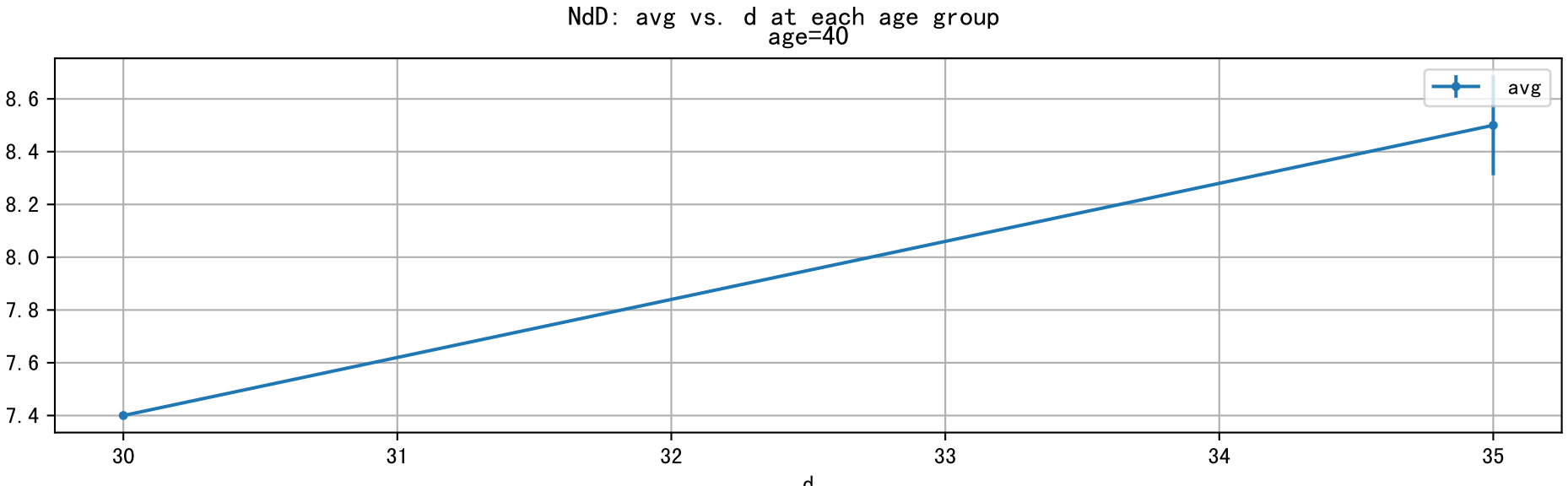

FGDdevStage (Def=0.7 Set=0.7)
avg1=na avg2=na
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
Object Number

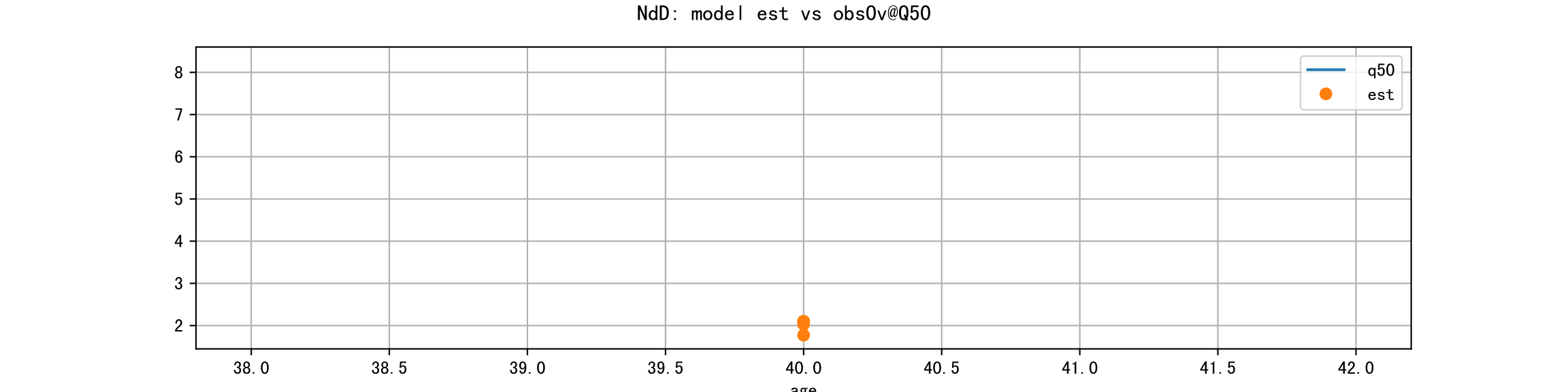

FMBDdevStage (Def=1.3 Set=1.3)
avg1=na avg2=na
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
Object Number

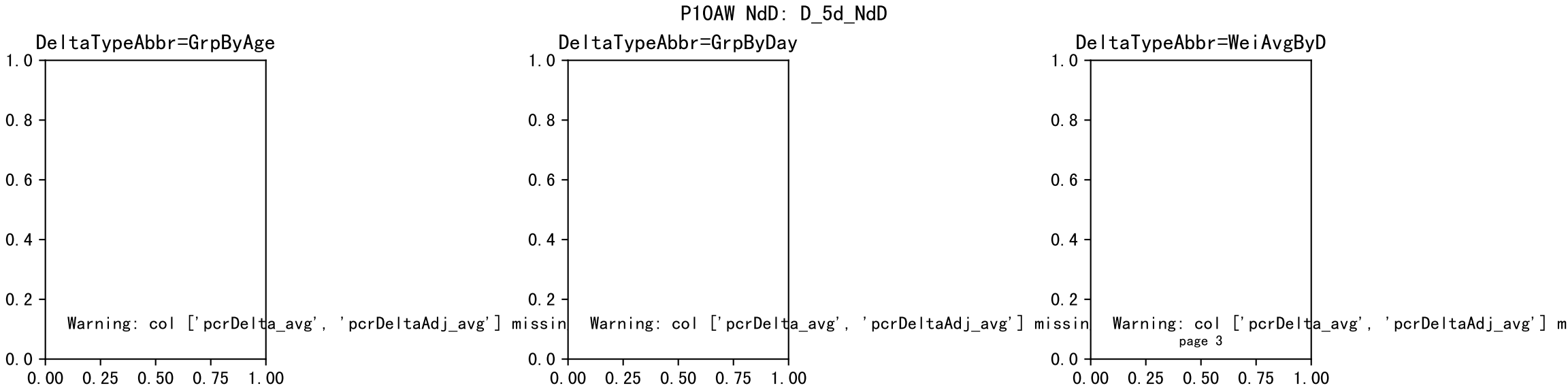

FMEDdevStage (Def=1.8 Set=1.8)
avg1=na avg2=na
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
Object Number

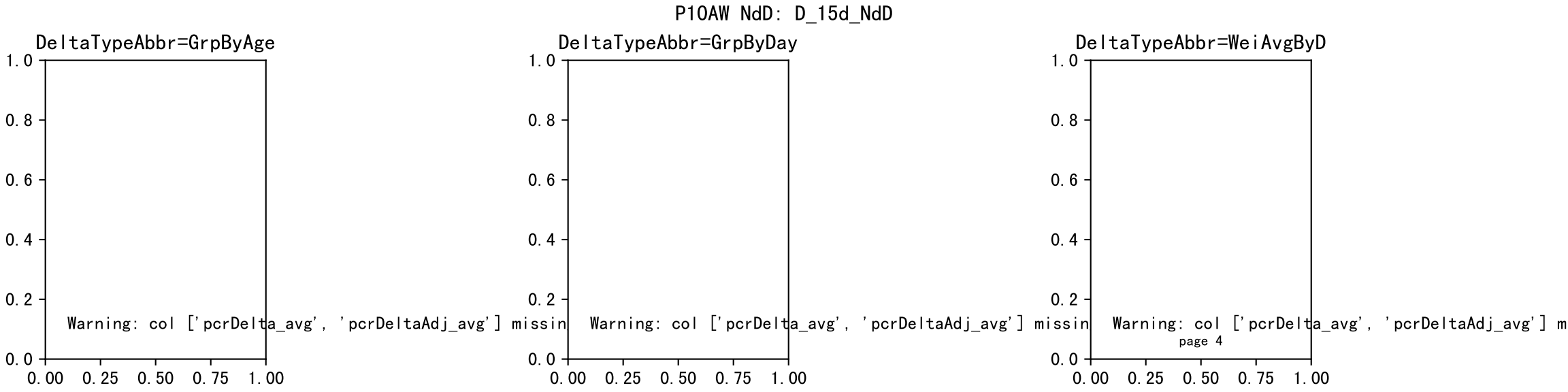

FHDdevStage (Def=1.5 Set=1.5)
avg1=na avg2=na
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
Object Number

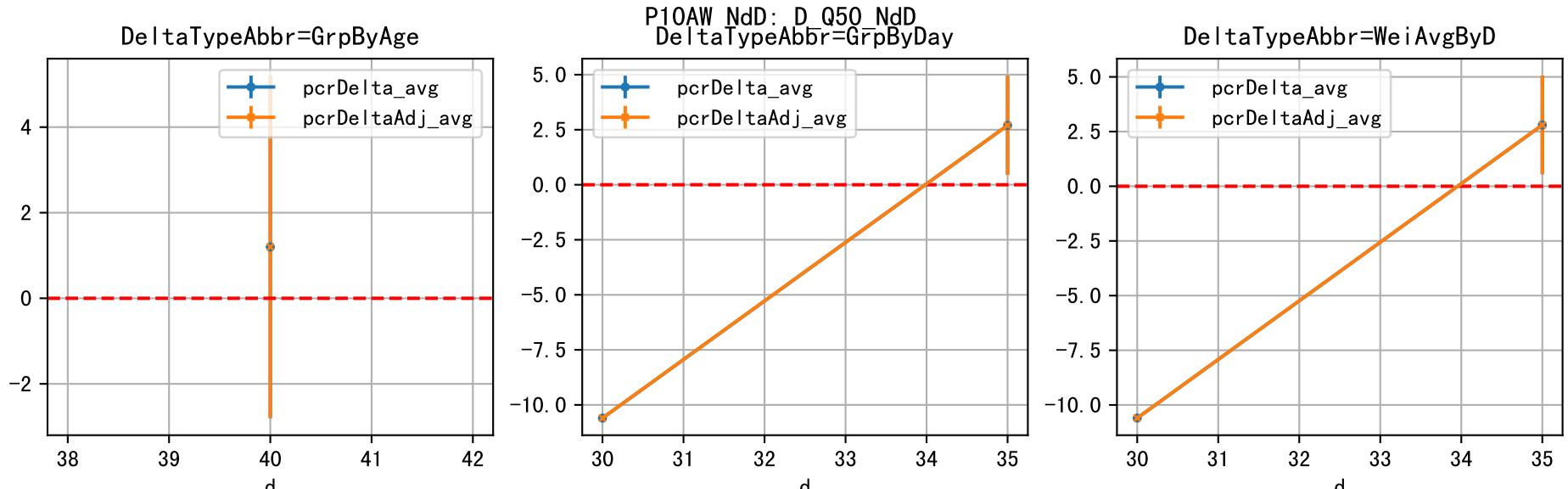

NNgen (Def=10 Set=8)
avg1=8.0~0% avg2=7.8
10
8
6
4
2
0
page 2
0
5
10
15
Object Number

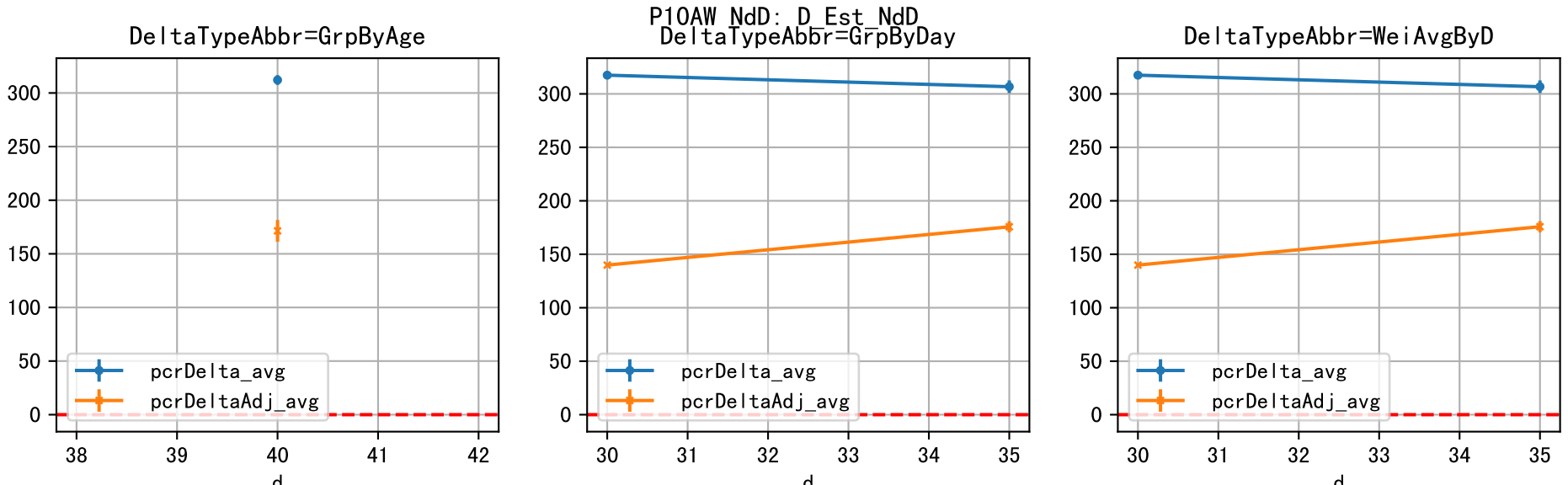

NdD: avg vs. d at each age group
age=40
avg
8.6
8.4
8.2
8.0
7.8
7.6
7.4
30
31
32
33
34
35
d

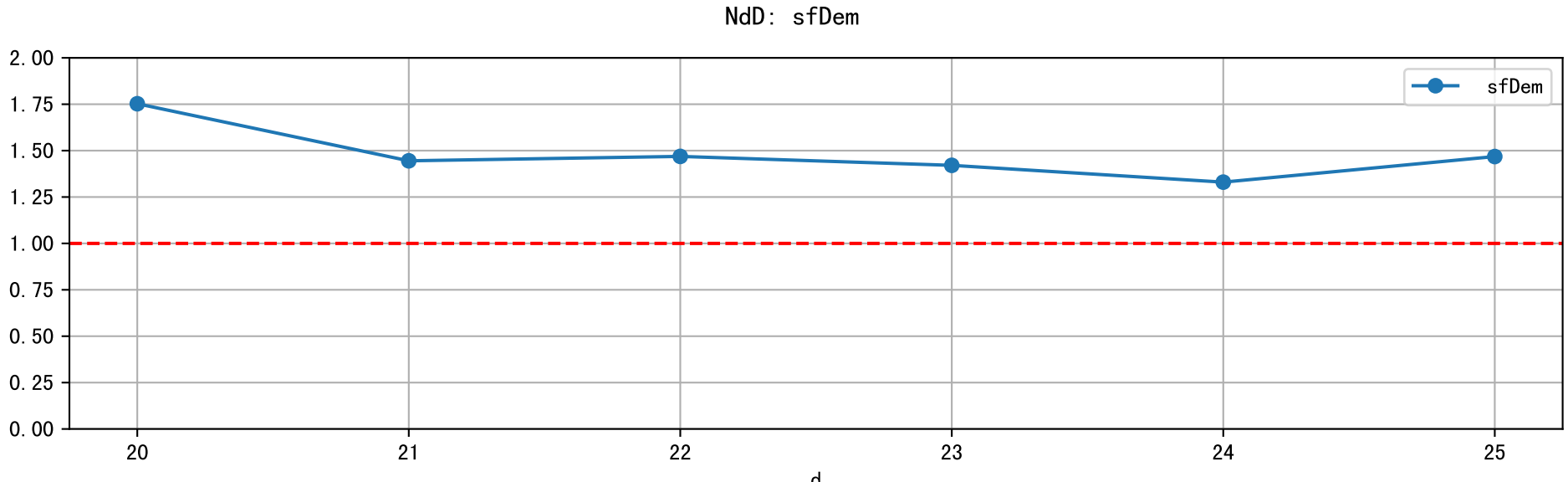

NdD: model est vs obsOv@Q50
q50
est
8
7
6
5
4
3
2
38.0
38.5
39.0
39.5
40.0
40.5
41.0
41.5
42.0
age

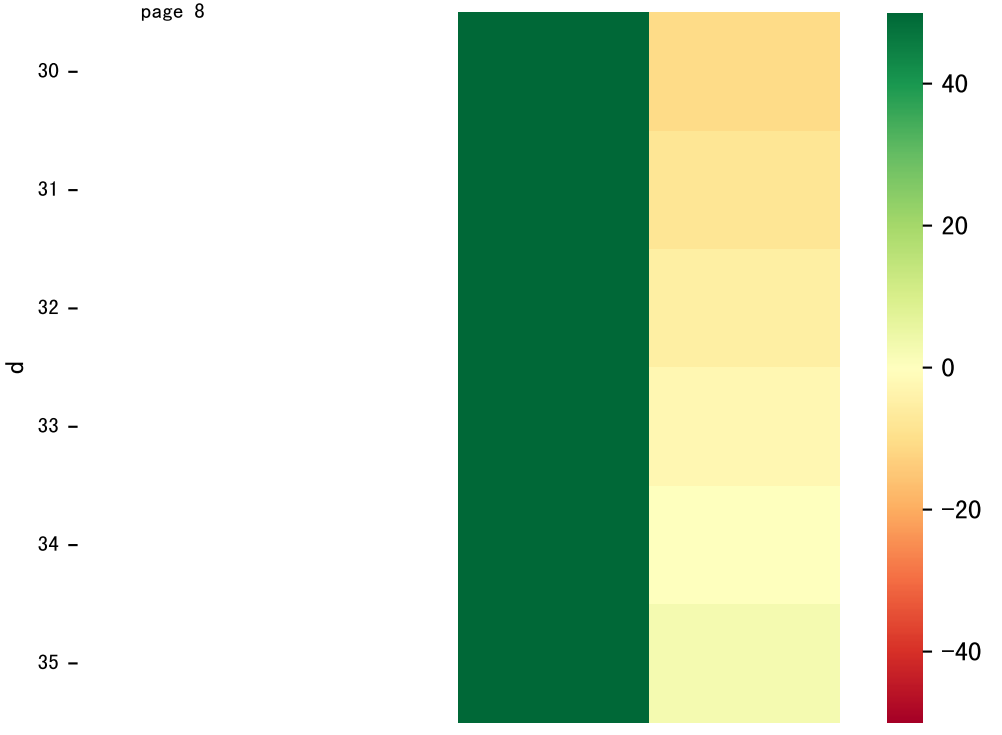

P1OAW NdD: D_5d_NdD
DeltaTypeAbbr=GrpByAge
DeltaTypeAbbr=GrpByDay
DeltaTypeAbbr=WeiAvgByD
1.0
0.8
0.6
0.4
0.2
0.0
0.00
0.25
0.50
0.75
1.00
Warning: col ['pcrDelta_avg', 'pcrDeltaAdj_avg'] missin
Warning: col ['pcrDelta_avg', 'pcrDeltaAdj_avg'] missin
Warning: col ['pcrDelta_avg', 'pcrDeltaAdj_avg'] m
page 3

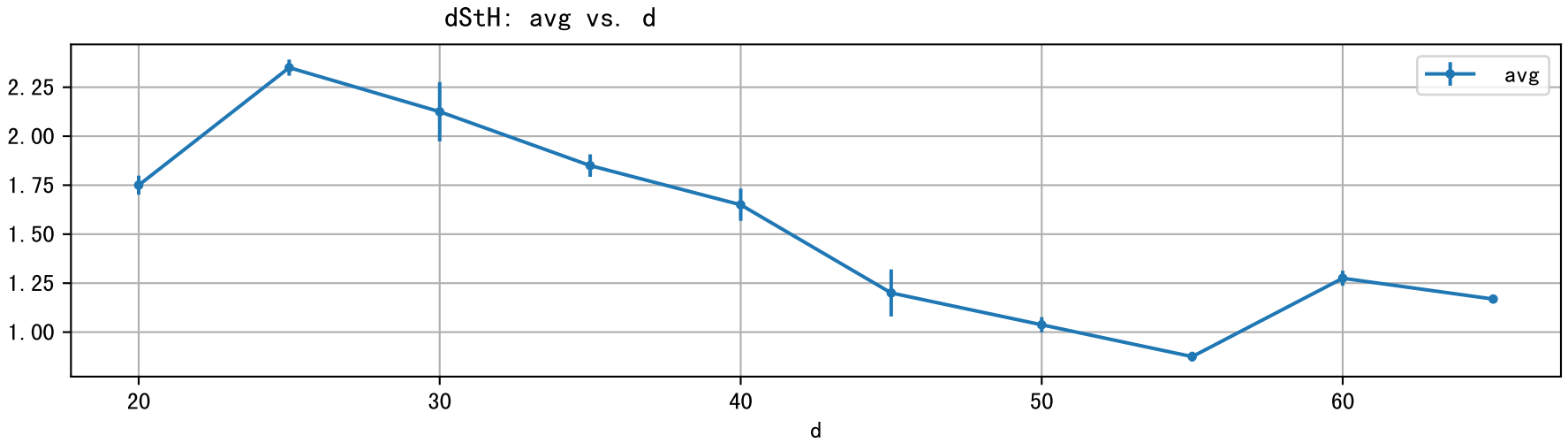

P10AW NdD: D_15d_NdD
DeltaTypeAbbr=GrpByAge
DeltaTypeAbbr=GrpByDay
DeltaTypeAbbr=WeiAvgByD
1.0
0.8
0.6
0.4
0.2
0.0
0.00
0.25
0.50
0.75
1.00
Warning: col ['pcrDelta_avg', 'pcrDeltaAdj_avg'] missin
Warning: col ['pcrDelta_avg', 'pcrDeltaAdj_avg'] missin
Warning: col ['pcrDelta_avg', 'pcrDeltaAdj_avg'] m

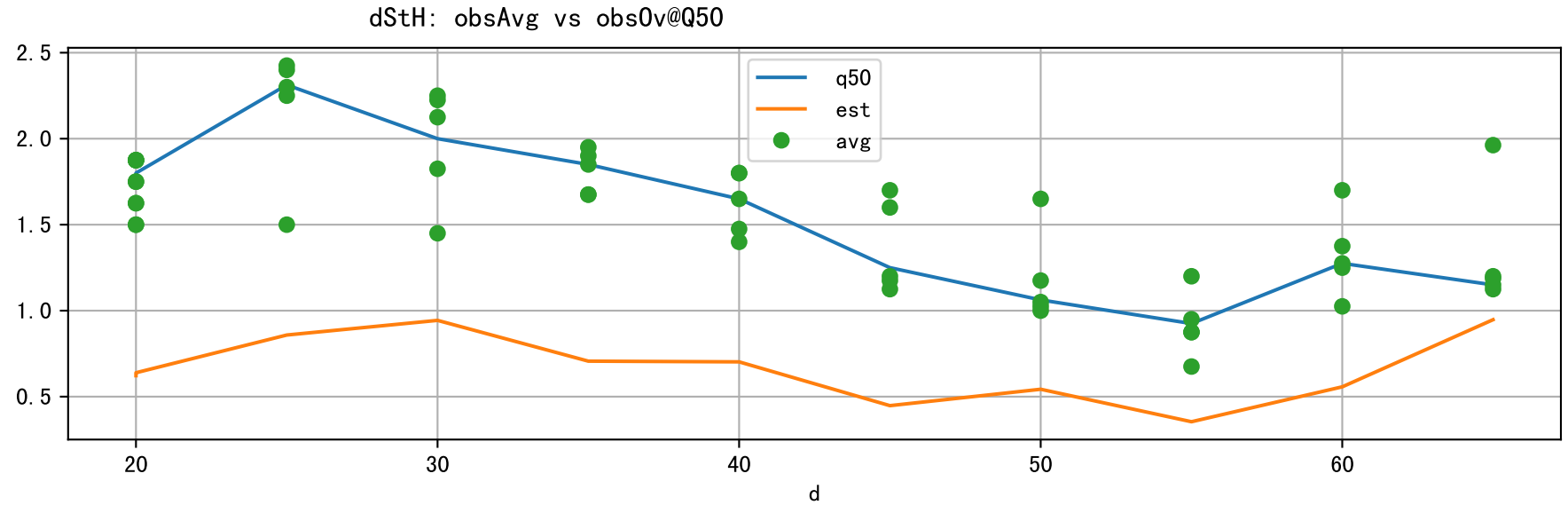

P10AW_NdD: D_Q50_NdD
DeltaTypeAbbr=GrpByAge
DeltaTypeAbbr=GrpByDay
DeltaTypeAbbr=WeiAvgByD
pcrDelta_avg
pcrDeltaAdj_avg
d

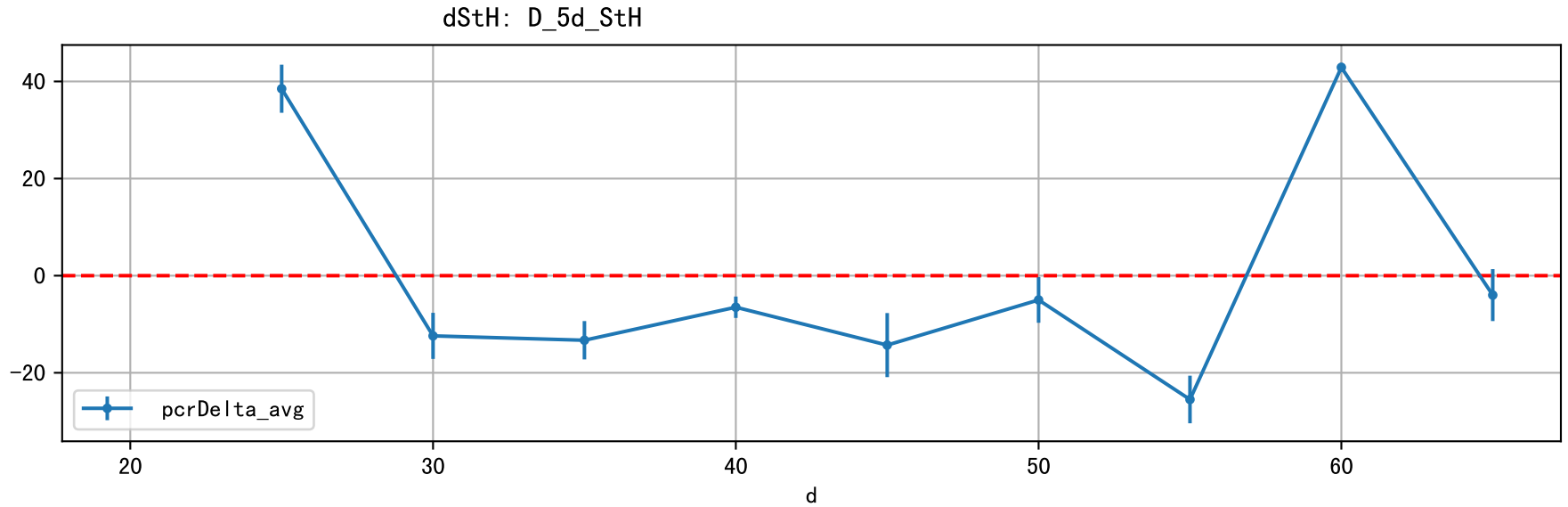

P10AW_NdD: D_Est_NdD
DeltaTypeAbbr=GrpByAge
DeltaTypeAbbr=GrpByDay
DeltaTypeAbbr=WeiAvgByD
pcrDelta_avg
pcrDeltaAdj_avg
d

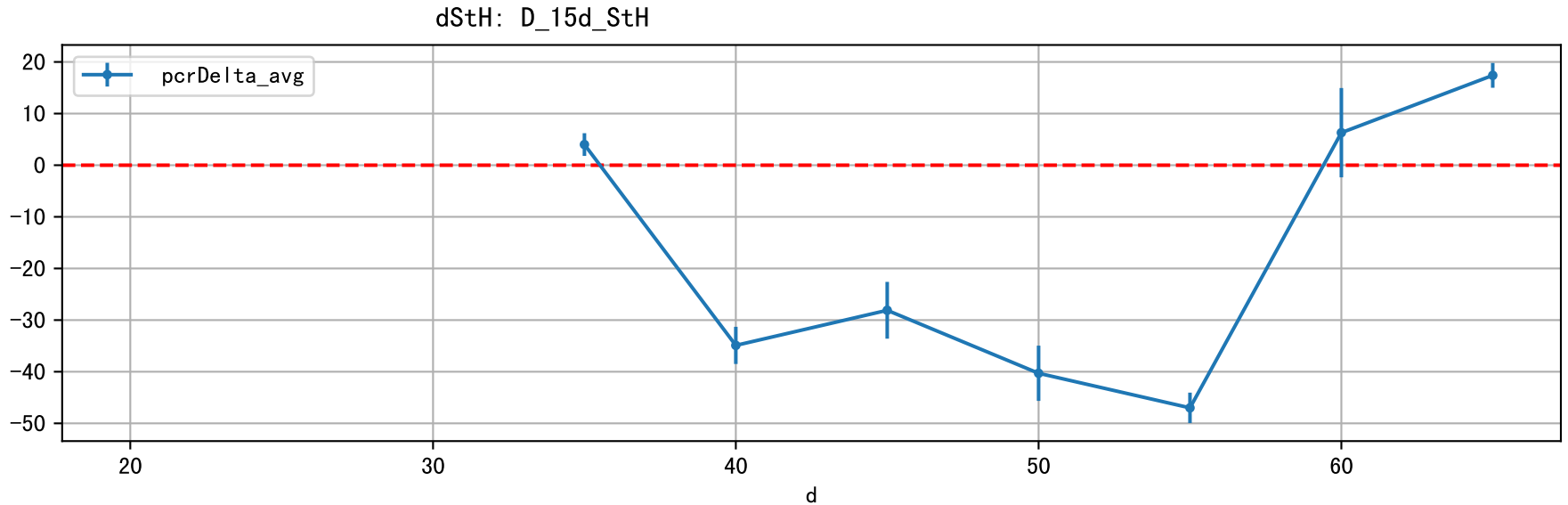

NdD: sfDem
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
20
21
22
23
24
25
d
sfDem

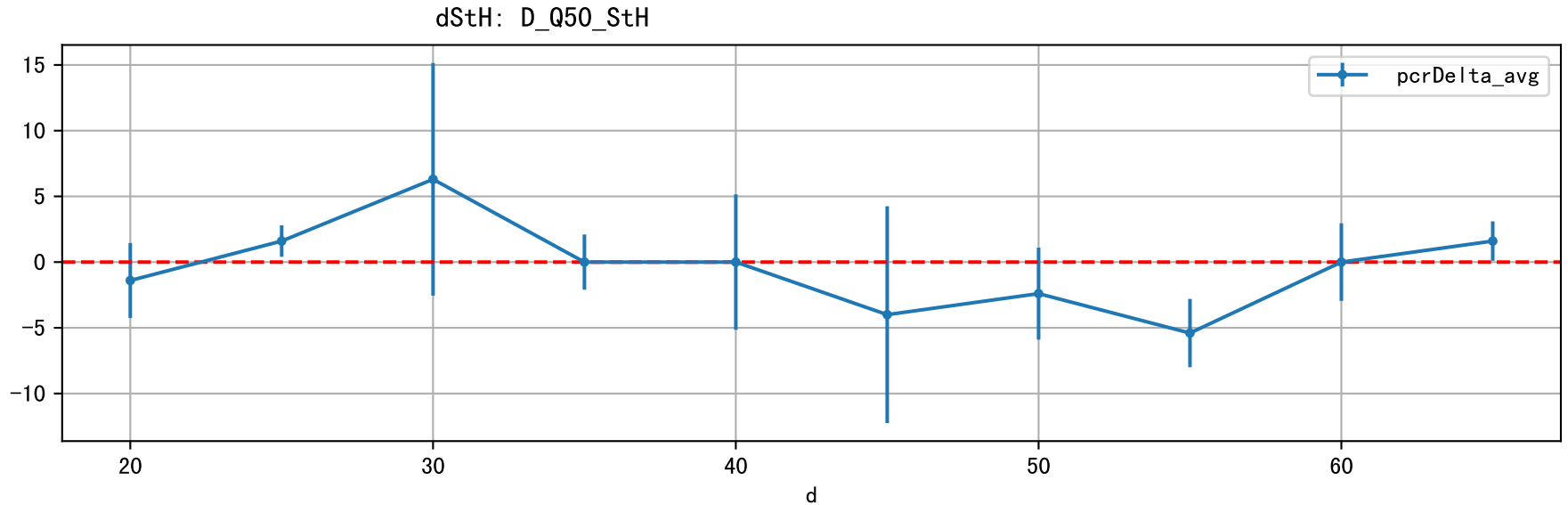

d
30
31
32
33
34
35
40
20
0
−20
−40

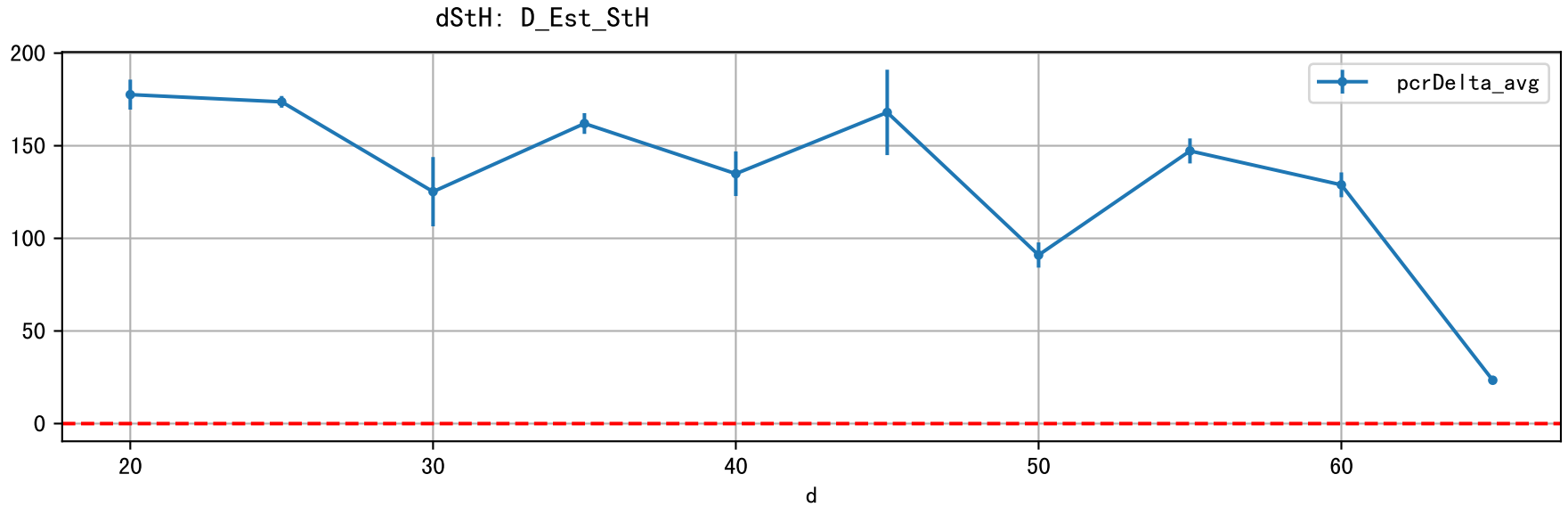

dStH: avg vs. d
avg
2.25
2.00
1.75
1.50
1.25
1.00
20
30
40
50
60
d

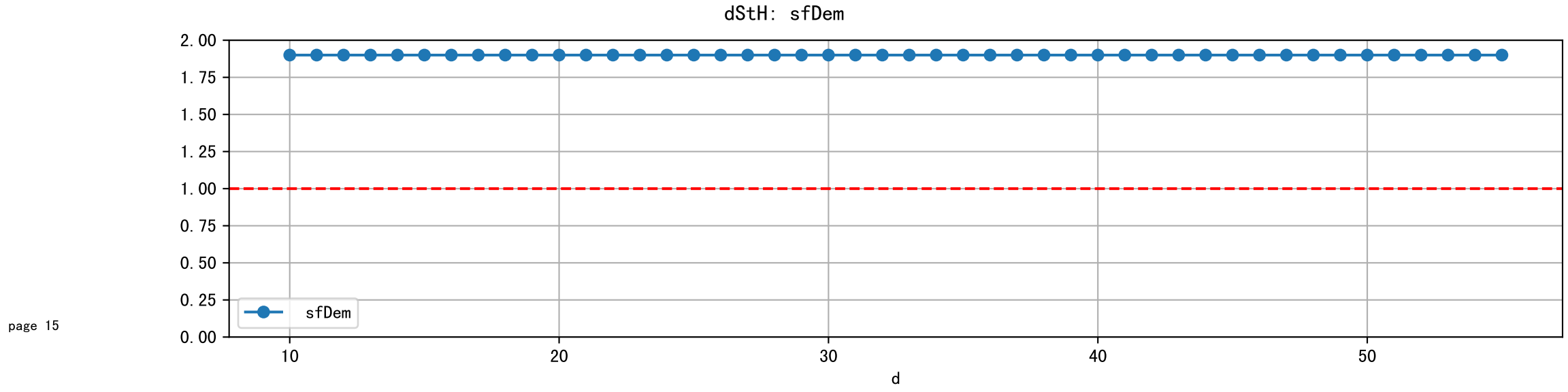

dStH: obsAvg vs obsOv@Q50
2.5
2.0
1.5
1.0
0.5
20
30
40
50
60
d
q50
est
avg

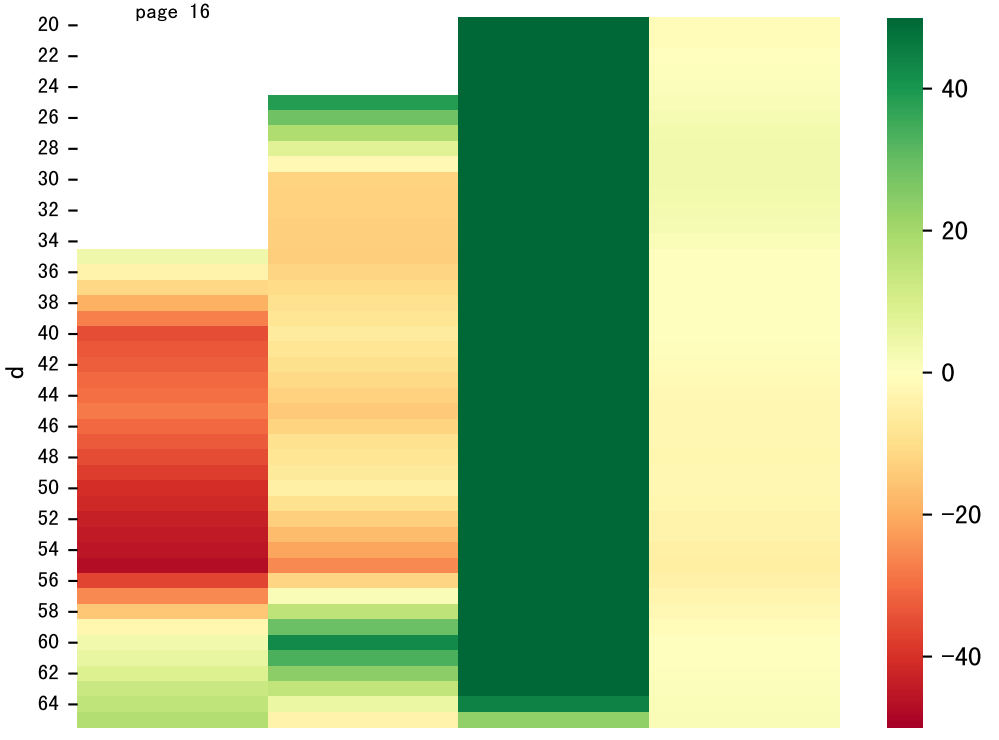

dStH: D_5d_StH
40
20
0
−20
pcrDelta_avg
20
30
40
50
60
d


dStH: D_15d_StH
pcrDelta_avg
20
10
0
−10
−20
−30
−40
−50
20
30
40
50
60
d

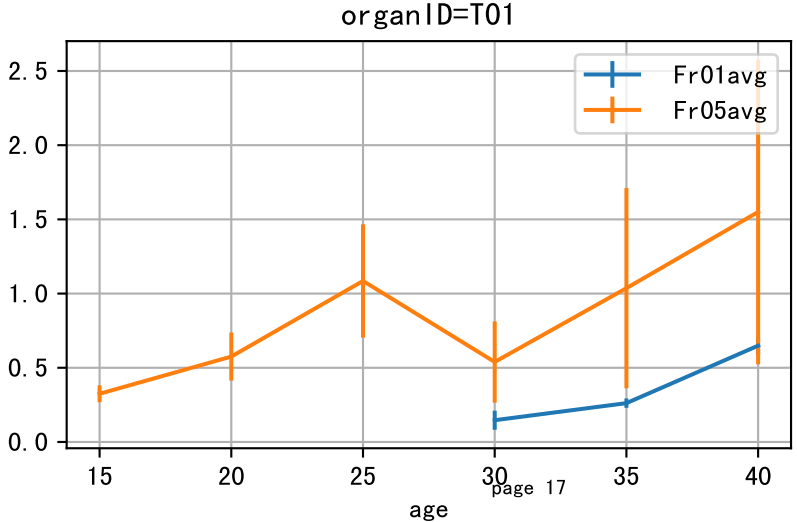

dStH: D_Q50_StH
pcrDelta_avg
15
10
5
0
−5
−10
20
30
40
50
60
d

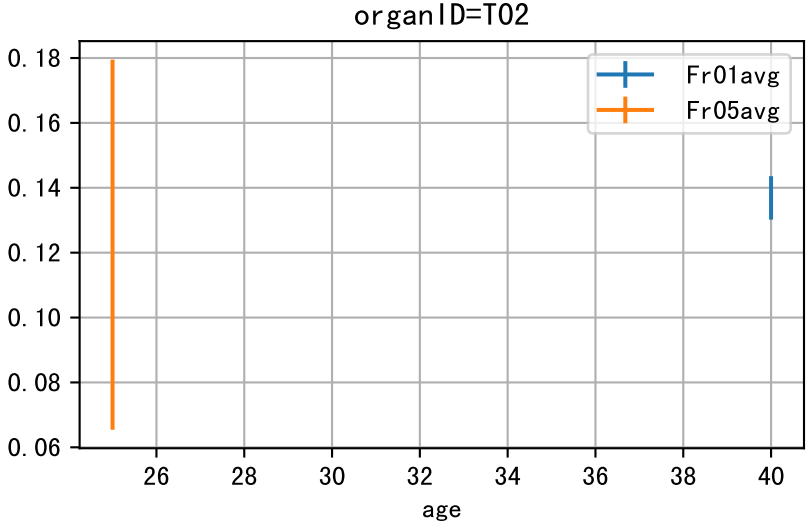

dStH: D_Est_StH
pcrDelta_avg
200
150
100
50
0
20
30
40
50
60
d

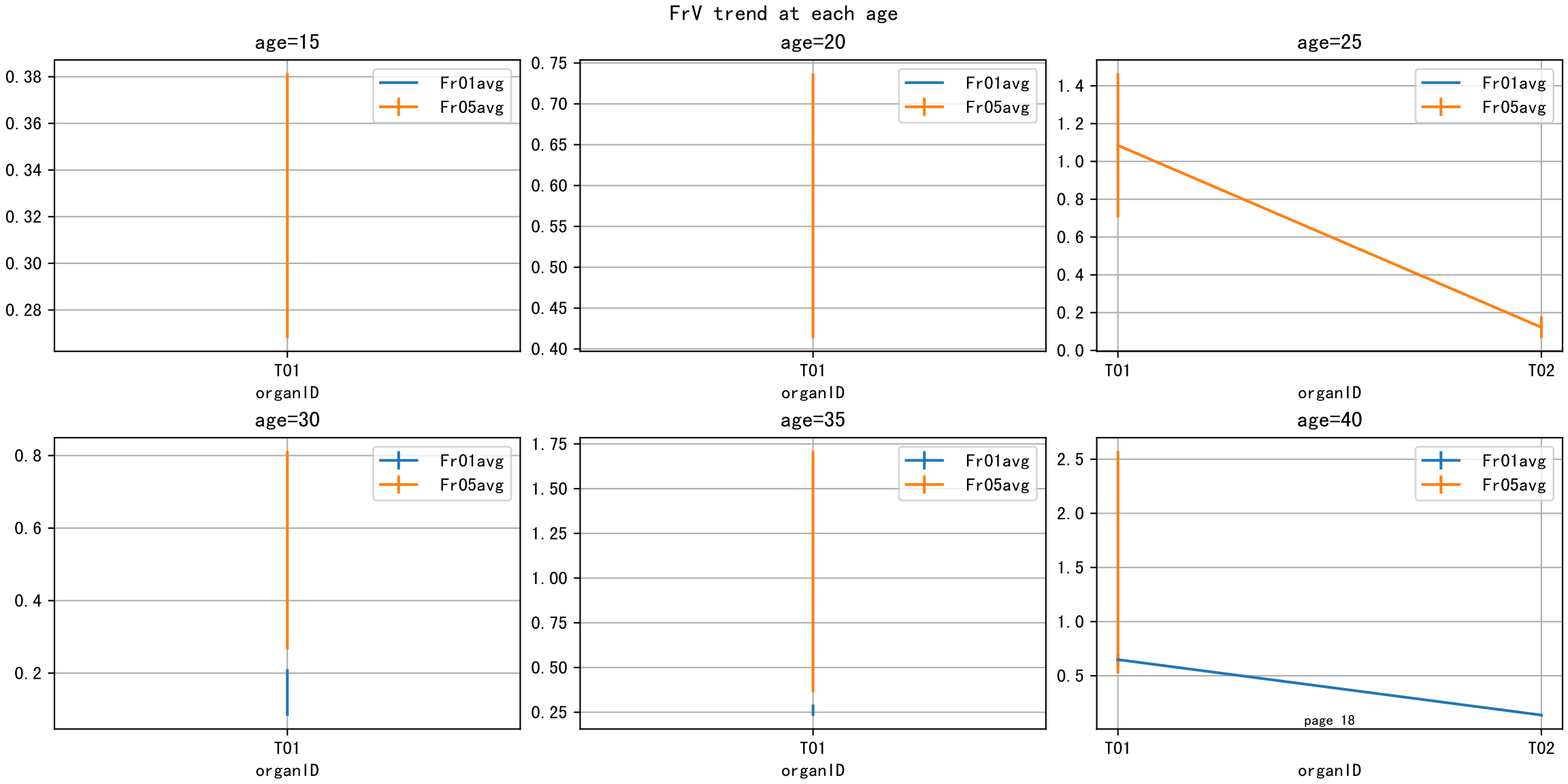

dStH: sfDem
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
sfDem
10
20
30
40
50
d

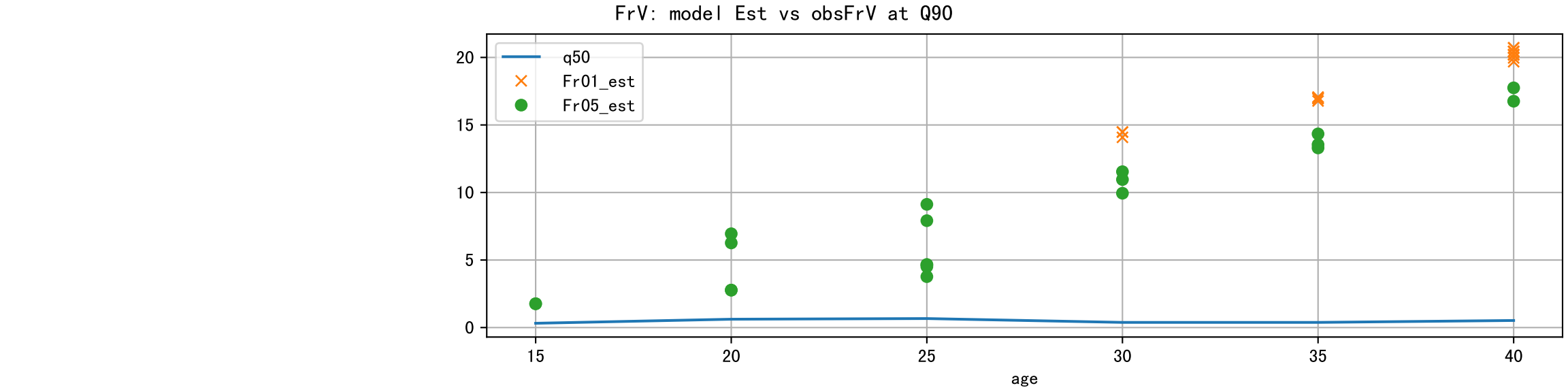

page 16
d
20
22
24
26
28
30
32
34
36
38
40
42
44
46
48
50
52
54
56
58
60
62
64
40
20
0
−20
−40

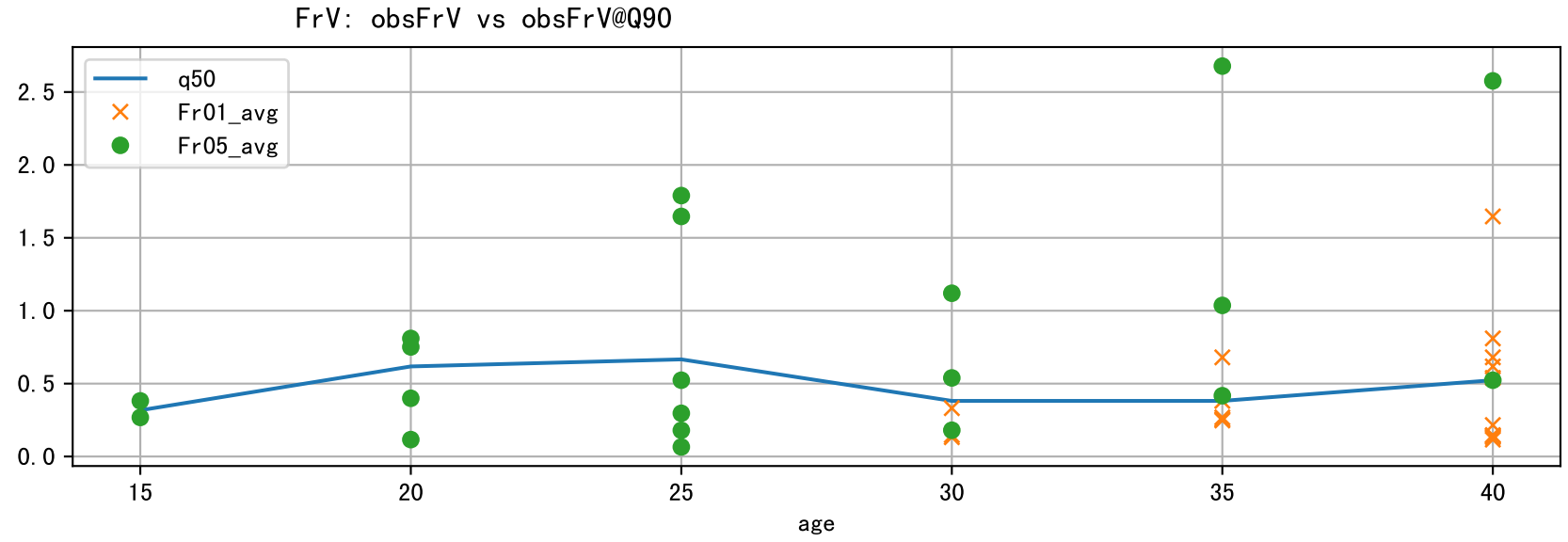
FrV: Fr01 vs Fr05 at each truss

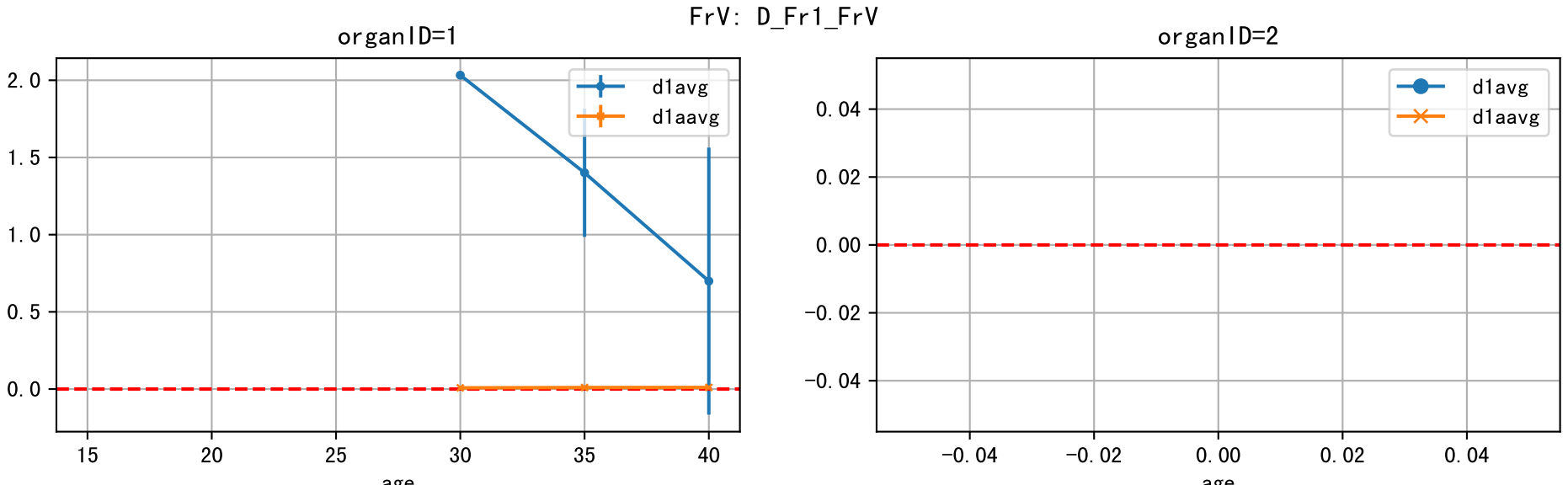


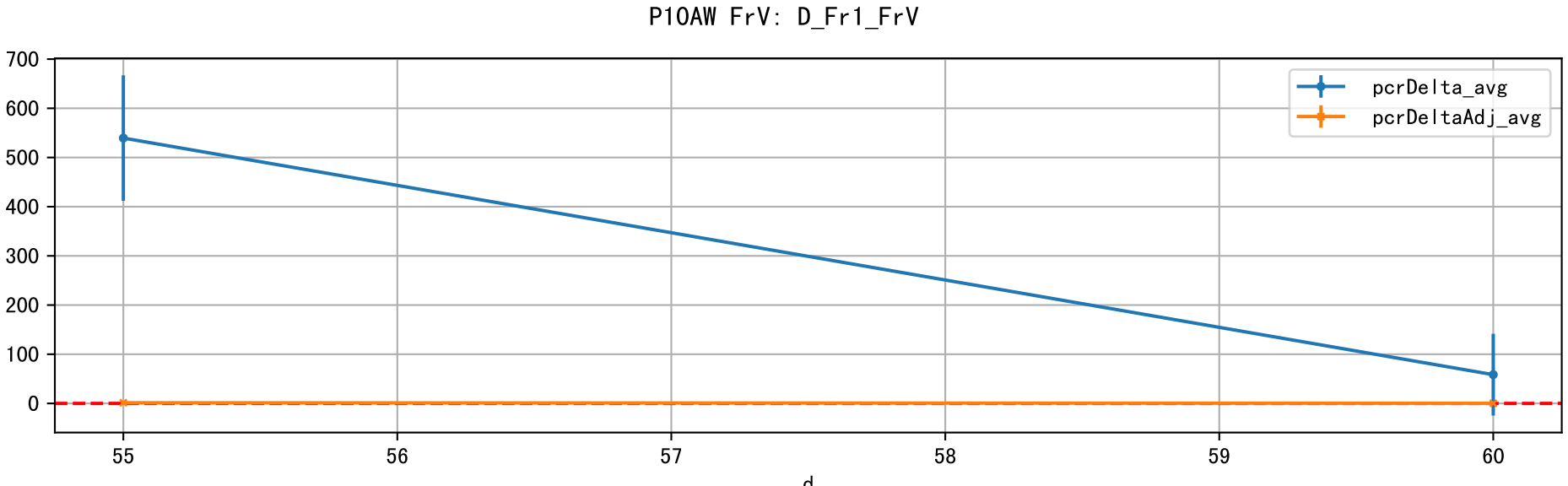



FrV trend at each age
age=15
age=20
age=25
age=30
age=35
age=40
Fr01avg
Fr05avg
organID
T01
T02
page 18

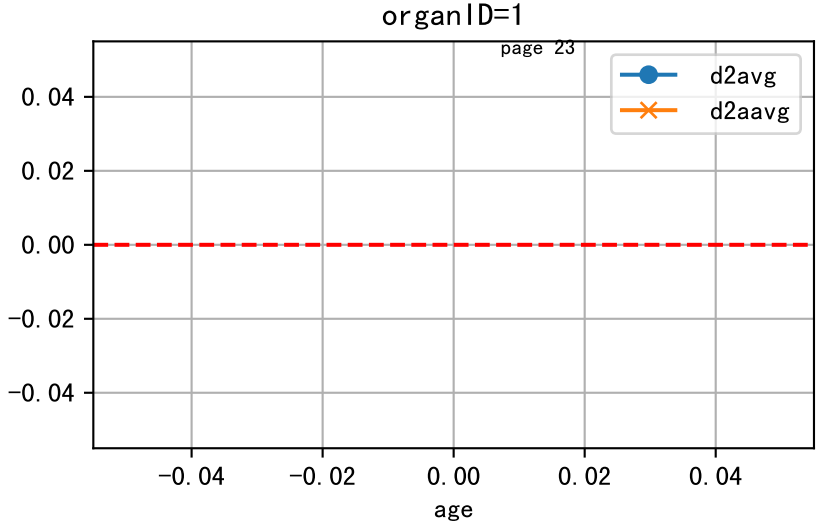

FrV: model Est vs obsFrV at Q90
q50
Fr01_est
Fr05_est
20
15
10
5
0
15
20
25
30
35
40
age

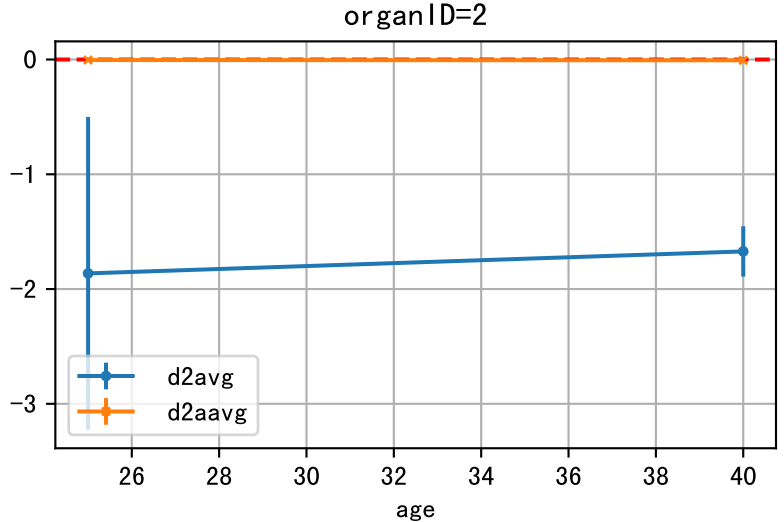

FrV: obsFrV vs obsFrV@Q90
q50
Fr01_avg
Fr05_avg
2.5
2.0
1.5
1.0
0.5
0.0
15
20
25
30
35
40
age

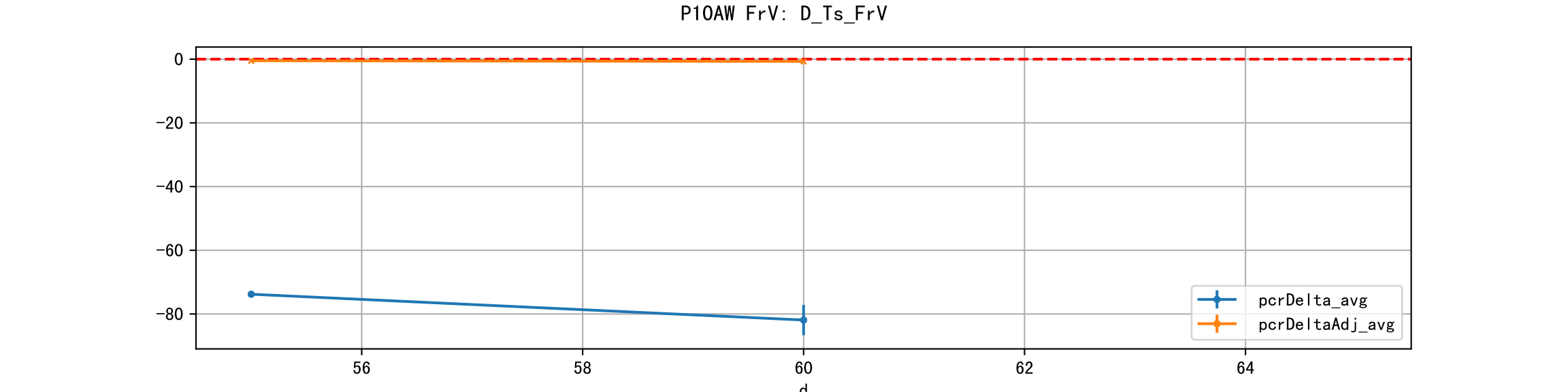

FrV: D_Fr1_FrV
organID=1
organID=2
d1avg
d1aavg
2.0
1.5
1.0
0.5
0.0
0.04
0.02
0.00
-0.02
-0.04
15
20
25
30
35
40
age


P10AW FrV: D_Fr1_FrV
700
600
500
400
300
200
100
0
55
56
57
58
59
60
d
pcrDelta_avg
pcrDeltaAdj_avg

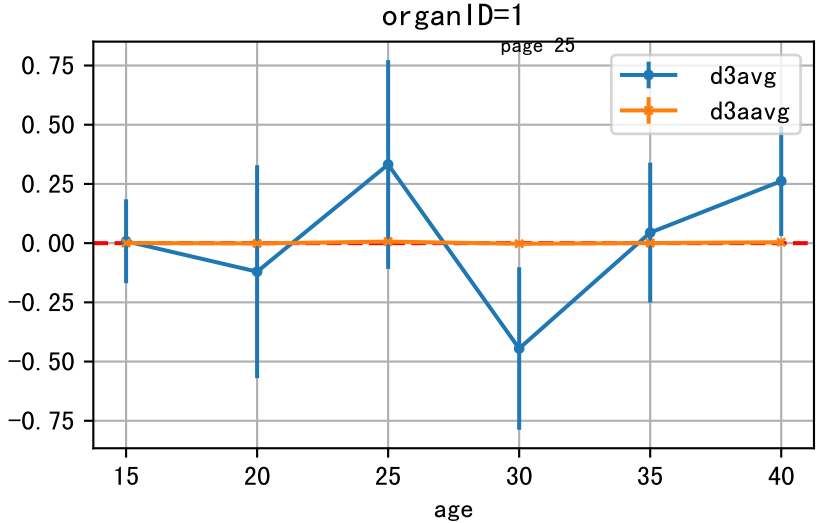
FrV: D_Ts_FrV

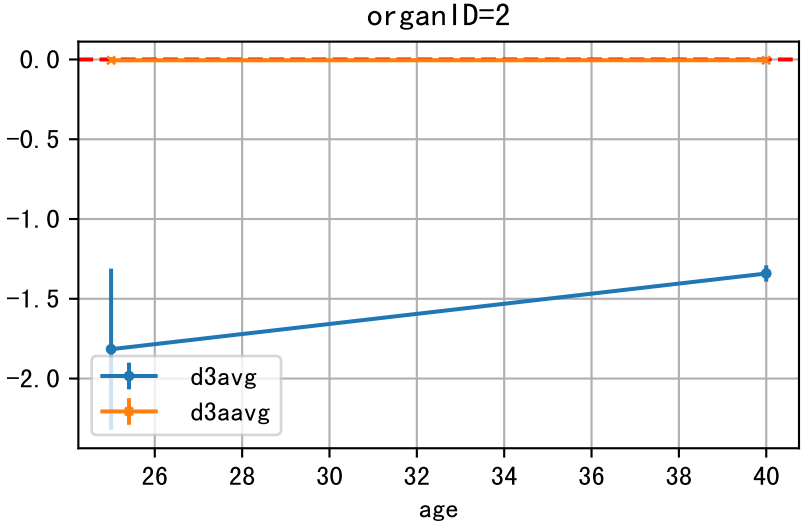

organID=1
page 23
d2avg
d2aavg
0.04
0.02
0.00
-0.02
-0.04
-0.04
-0.02
0.00
0.02
0.04
age

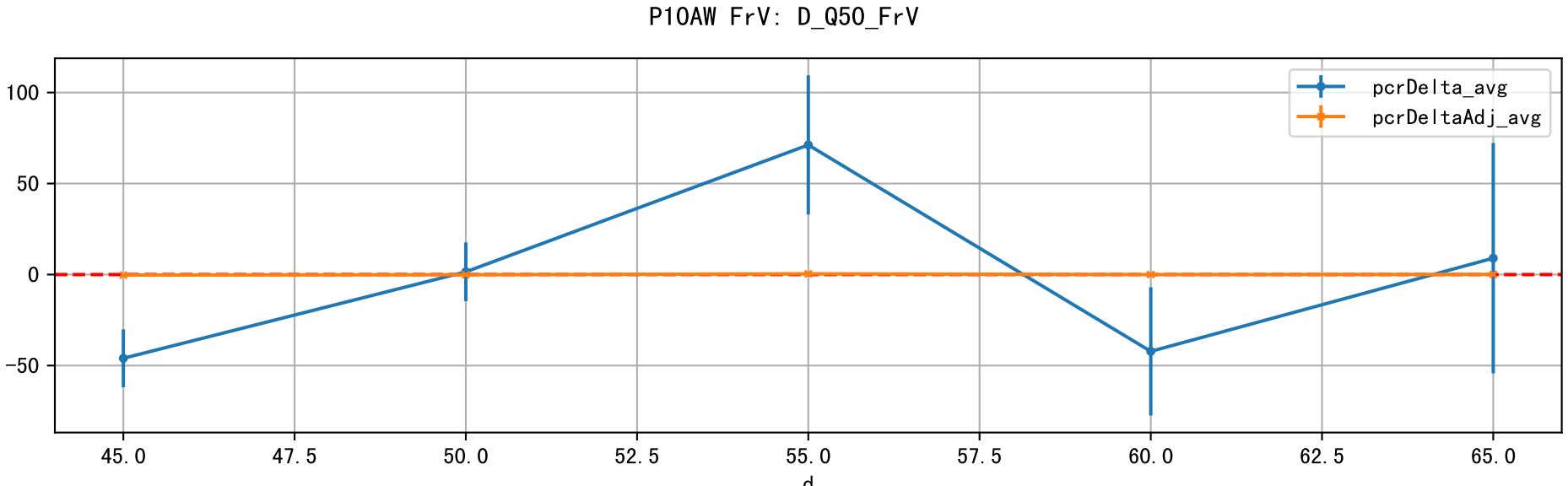

organID=2
0
-1
-2
-3
d2avg
d2aavg
26
28
30
32
34
36
38
40
age


P10AW FrV: D_Ts_FrV
0
−20
−40
−60
−80
56
58
60
62
64
d
pcrDelta_avg
pcrDeltaAdj_avg

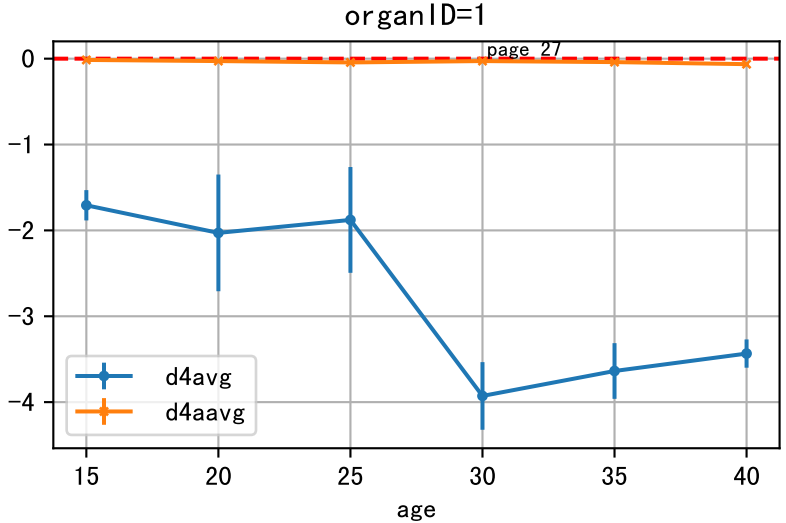
FrV: D_Q50_FrV

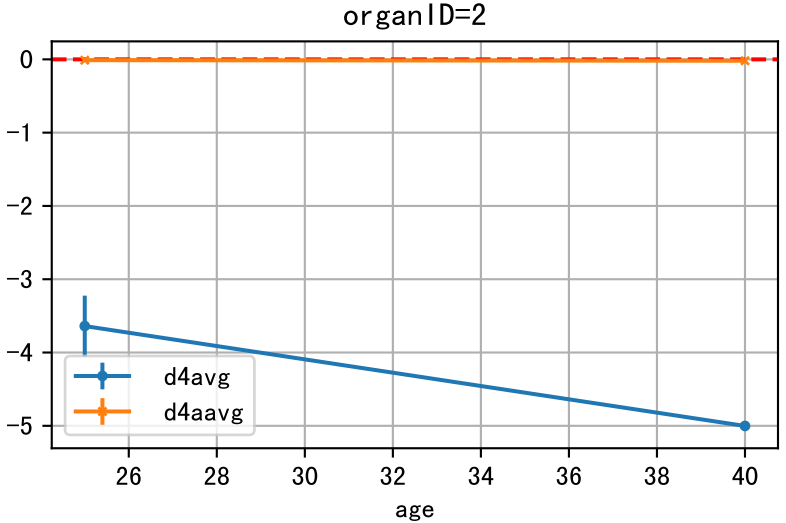

organID=1
page 25
d3avg
d3aavg
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
15
20
25
30
35
40
age

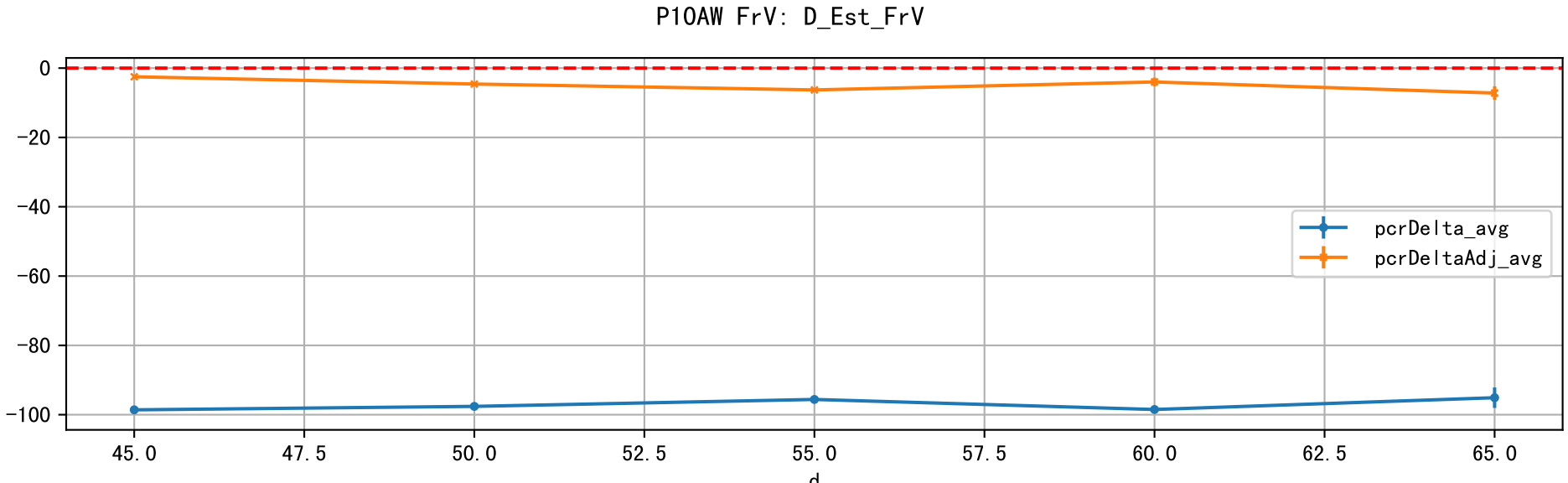

organID=2
0.0
−0.5
−1.0
−1.5
−2.0
d3avg
d3aavg
26
28
30
32
34
36
38
40
age

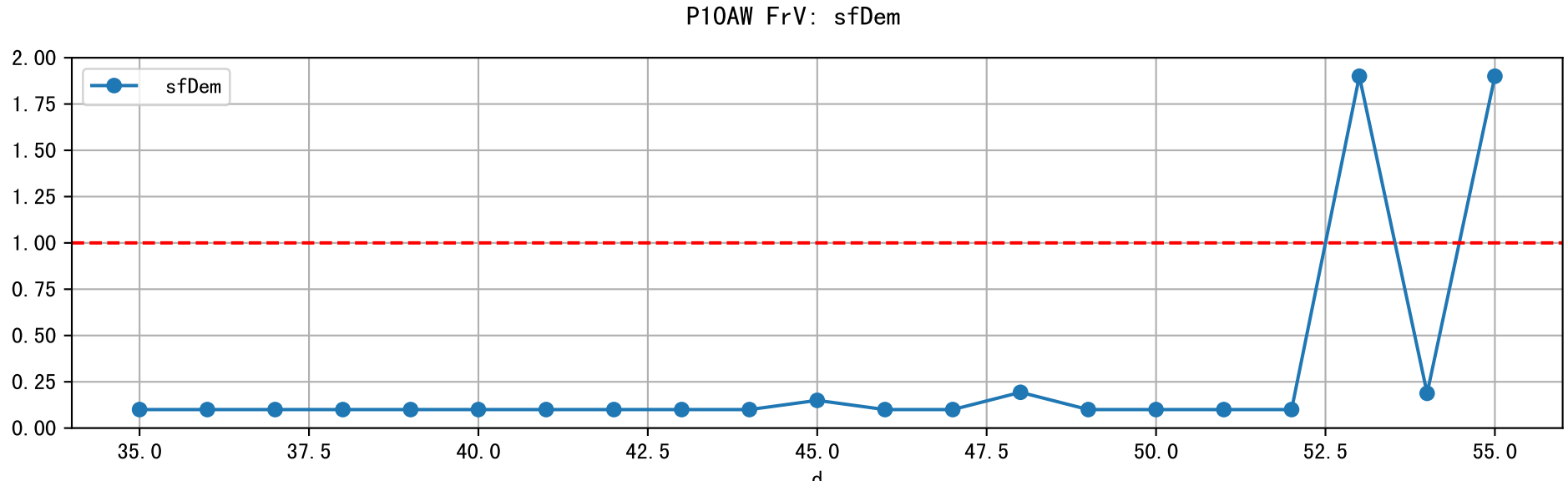

P10AW FrV: D_Q50_FrV
pcrDelta_avg
pcrDeltaAdj_avg
100
50
0
−50
45.0
47.5
50.0
52.5
55.0
57.5
60.0
62.5
65.0

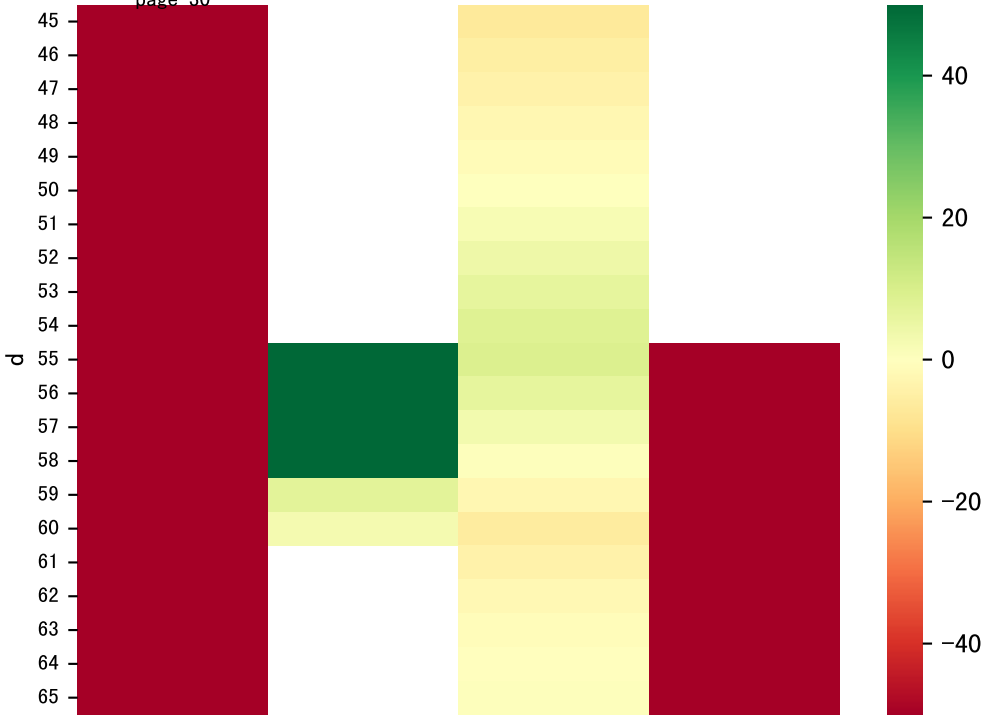
FrV: D_Est_FrV

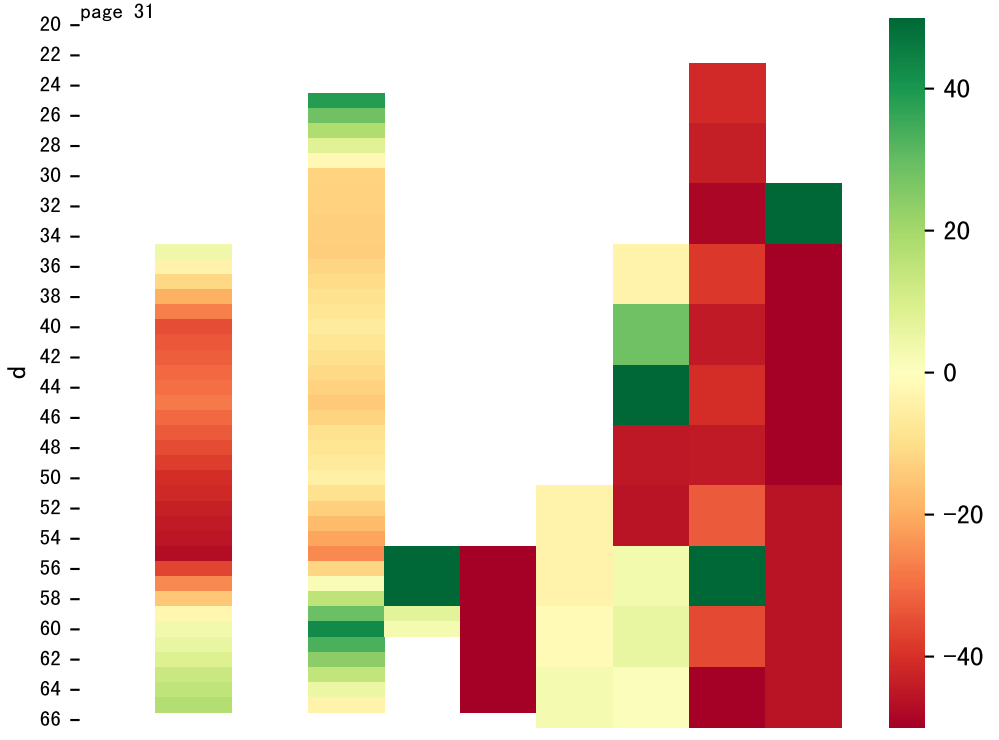

organID=1
page 27
0
−1
−2
−3
−4
d4avg
d4aavg
15
20
25
30
35
40
age


organID=2
0
−1
−2
−3
−4
−5
d4avg
d4aavg
26
28
30
32
34
36
38
40
age


P10AW FrV: D_Est_FrV
0
-20
-40
-60
-80
-100
45.0
47.5
50.0
52.5
55.0
57.5
60.0
62.5
65.0
d
pcrDelta_avg
pcrDeltaAdj_avg


P10AW FrV: sfDem
sfDem
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
35.0
37.5
40.0
42.5
45.0
47.5
50.0
52.5
55.0
d


d
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
40
20
0
−20
−40


page 31
d
20
22
24
26
28
30
32
34
36
38
40
42
44
46
48
50
52
54
56
58
60
62
64
66
40
20
0
−20
−40