Supplementary material S3.2

Contents of this file:

(Supplementary datasets S3.1 and S3.2 are uploaded separately)

Section S3.2.1: Reference list for the compiled plant macrofossil records

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Section S3.2.2: Figures S3.9–S3.84 – Age depth models for each core record

The following age-depth model figures were generated using rBacon (v.2.5.7) (Blaauw and Christen, 2011), rplum (v.0.2.2) (Aquino-López et al., 2018), or clam (v.2.4.0) (Blaauw, 2010). For details on the modelling software used for each record, please see supplementary datasets S3.1 and S3.2.

For Bacon age-depth model figures: top panels show the distribution of Markov Chain Monte Carlo (MCMC) iterations (left plot), the prior (green line) and posterior (grey shading) distributions for the accumulation rate (yr cm^{-1}) (centre plot) and memory (right plot). Prior settings for the accumulation rate and memory are reported in red text. The lower panel shows calibrated ^{14}C dates (blue), surface ages and calibrated ^{210}Pb dates (green), and the age-depth model (grey dashed lines indicated 95 % confidence interval; red dashed line indicates the mean age for each depth). Plum age-depth model figures show the same information with additions: plots indicating the prior (green line) and posterior (grey shading) distributions for ^{210}Pb influx (second from right) and the supported levels of ^{210}Pb for each depth (top right); and blue bars demonstrating the ^{210}Pb profile (overlain on the age-depth model). For clam models, plots show: calibrated ^{14}C dates (blue), surface ages (green), dates omitted from age-depth modelling (red), the age-depth model (black line), and 95 % confidence intervals (grey shading).

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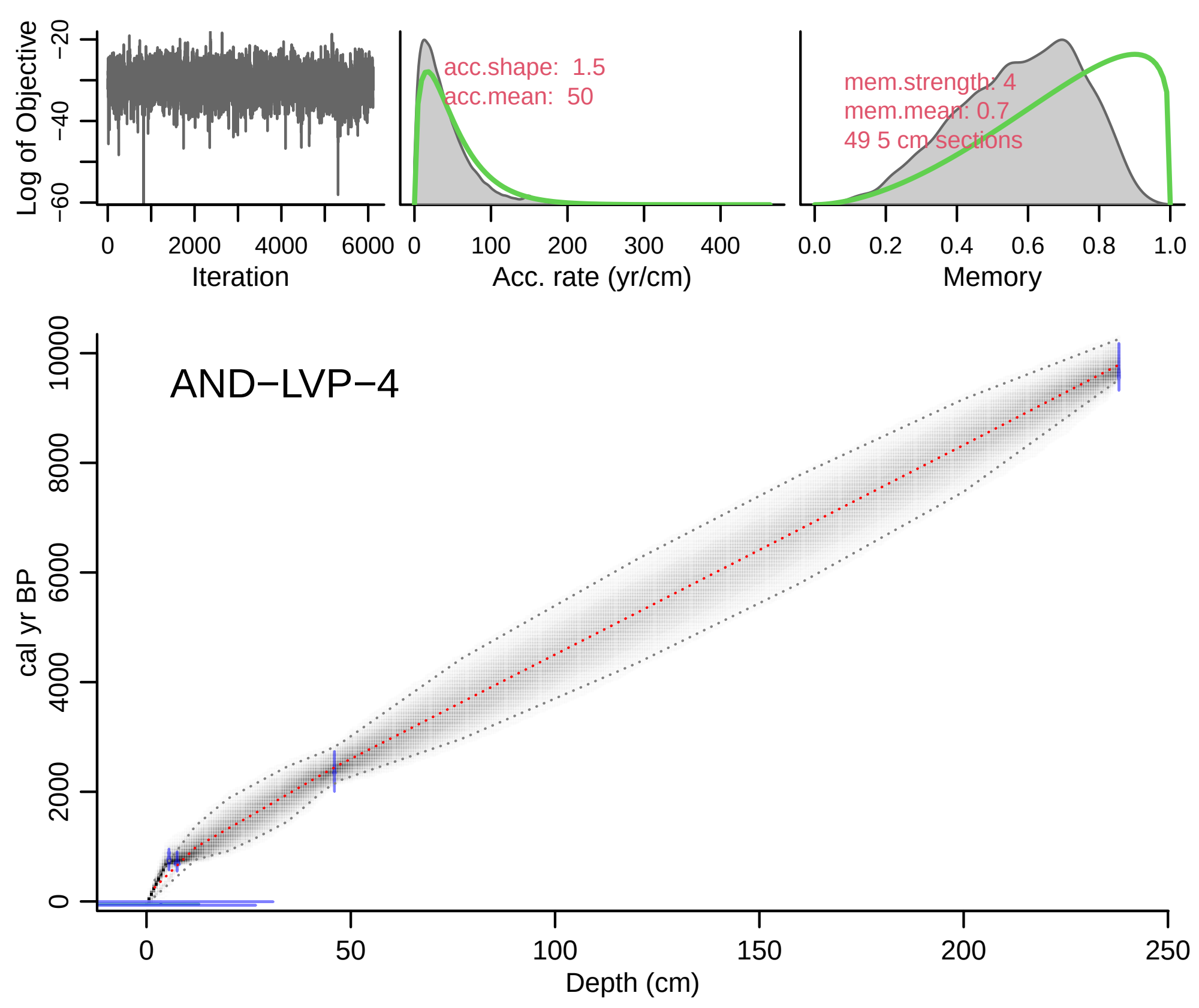
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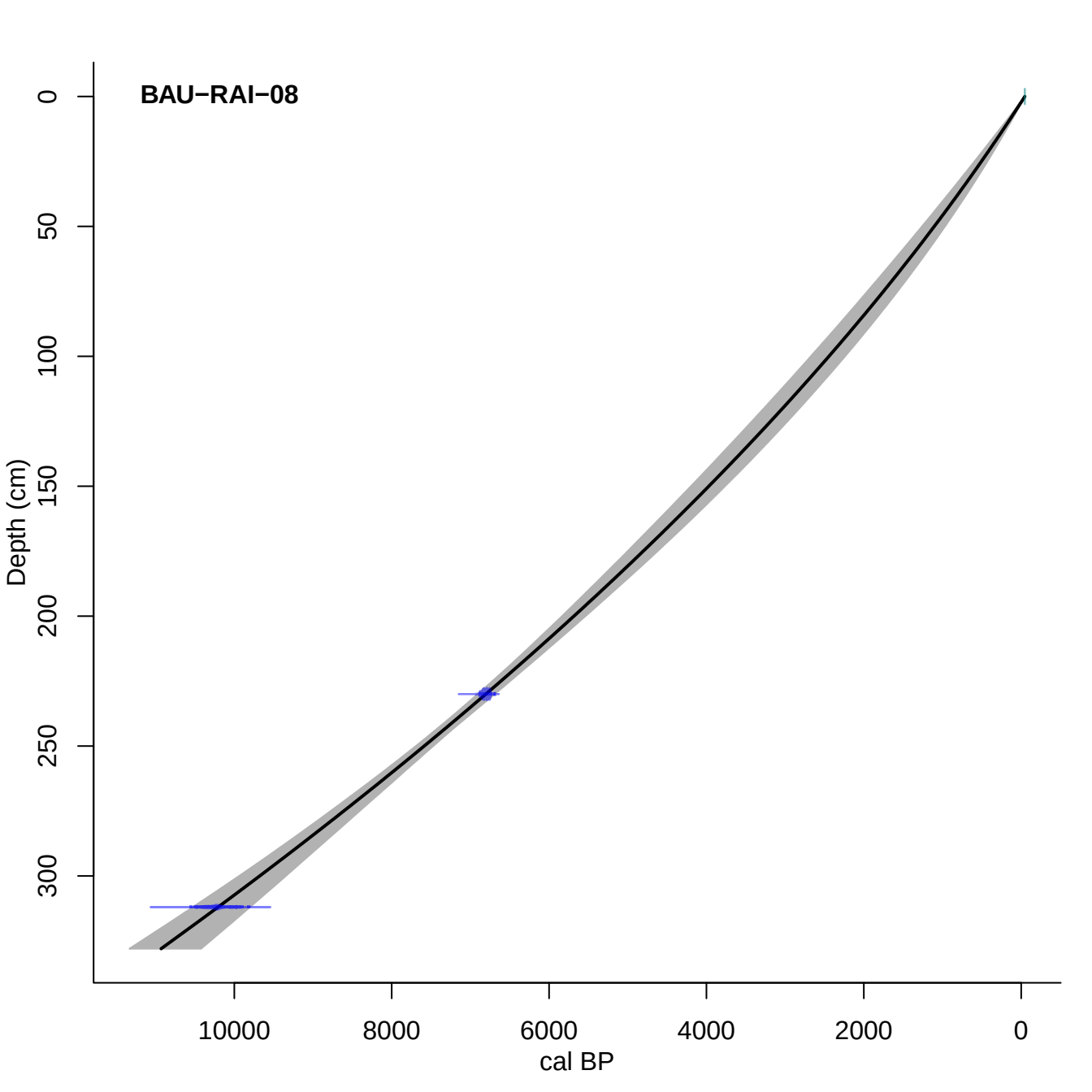
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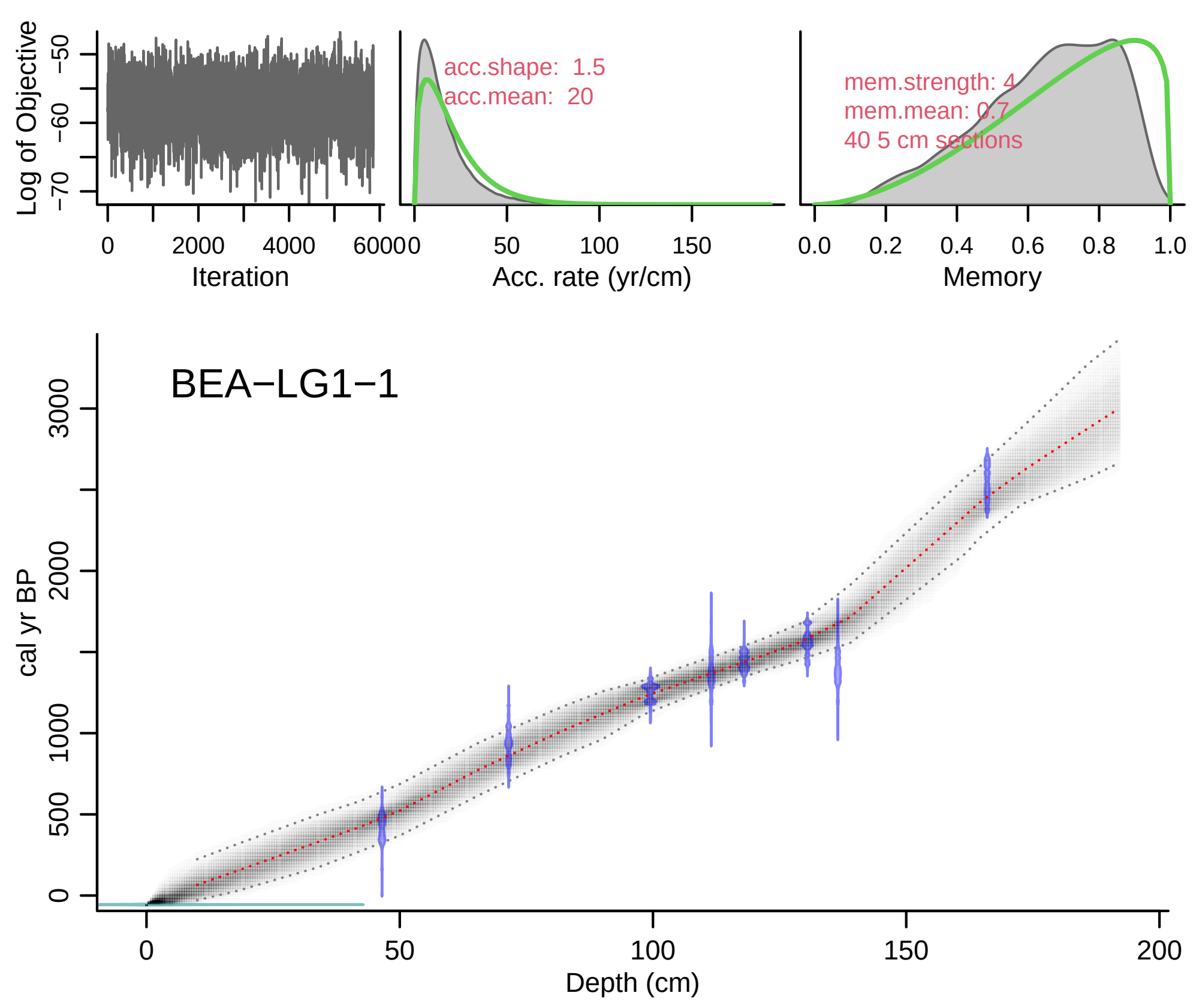
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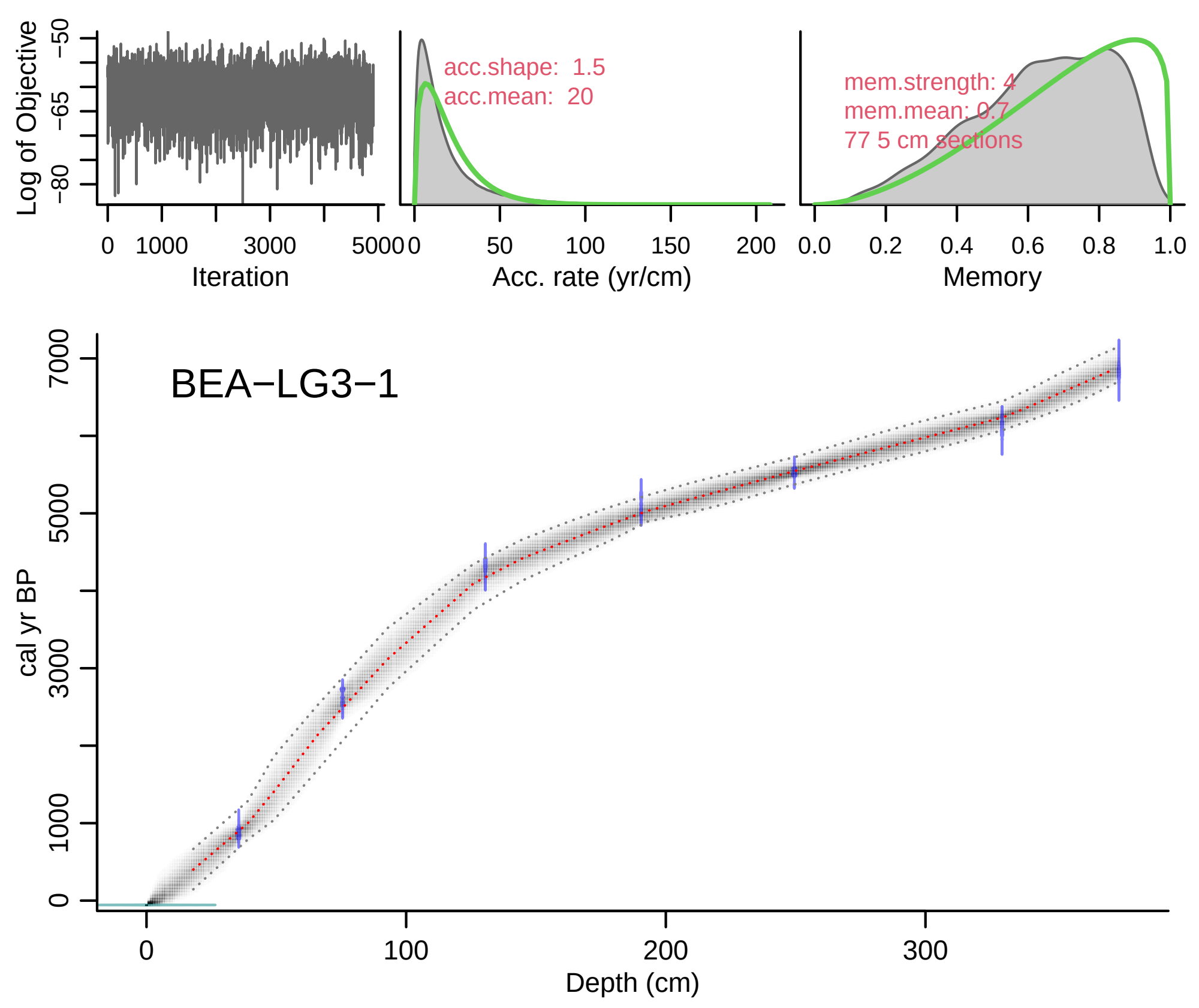
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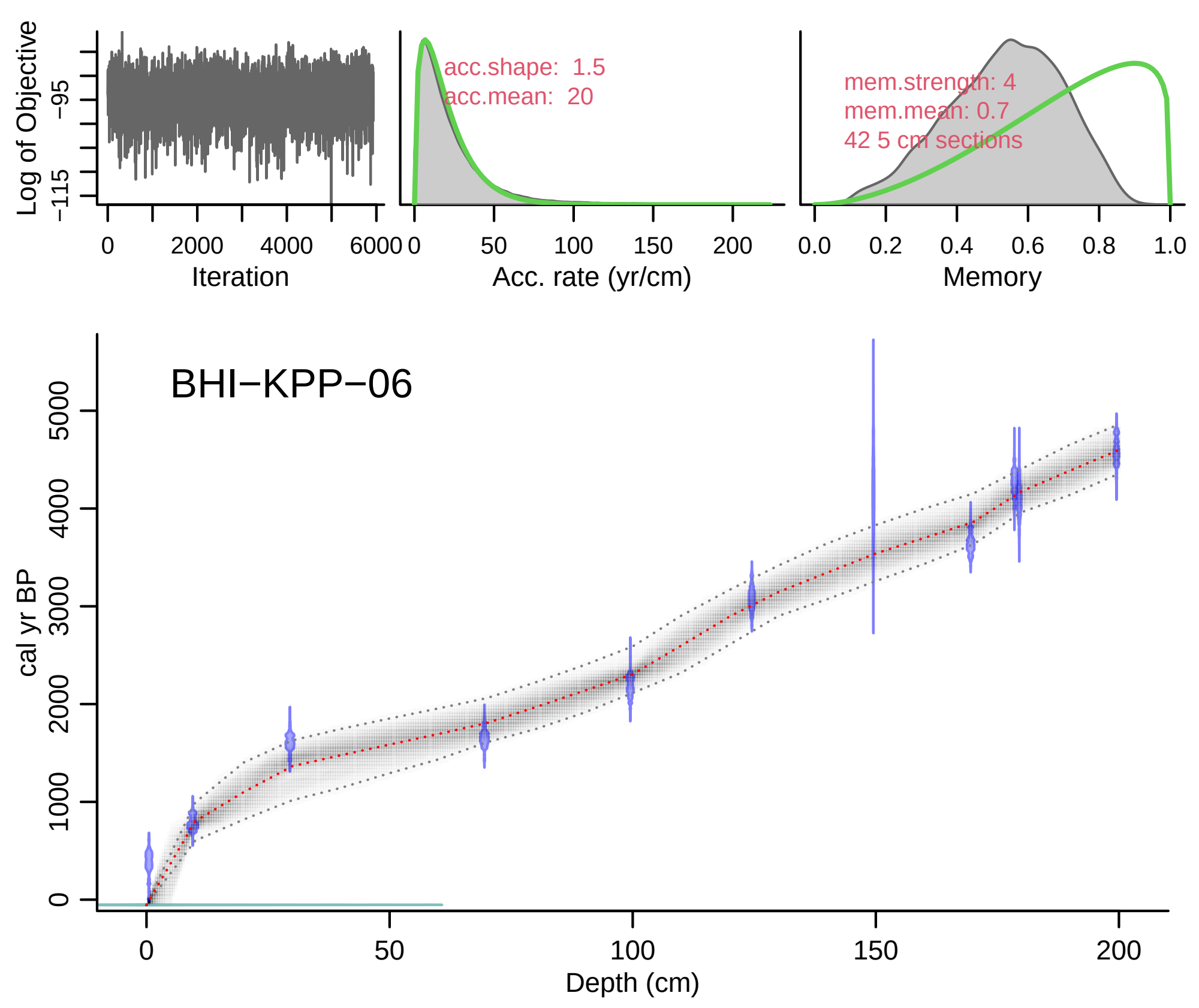
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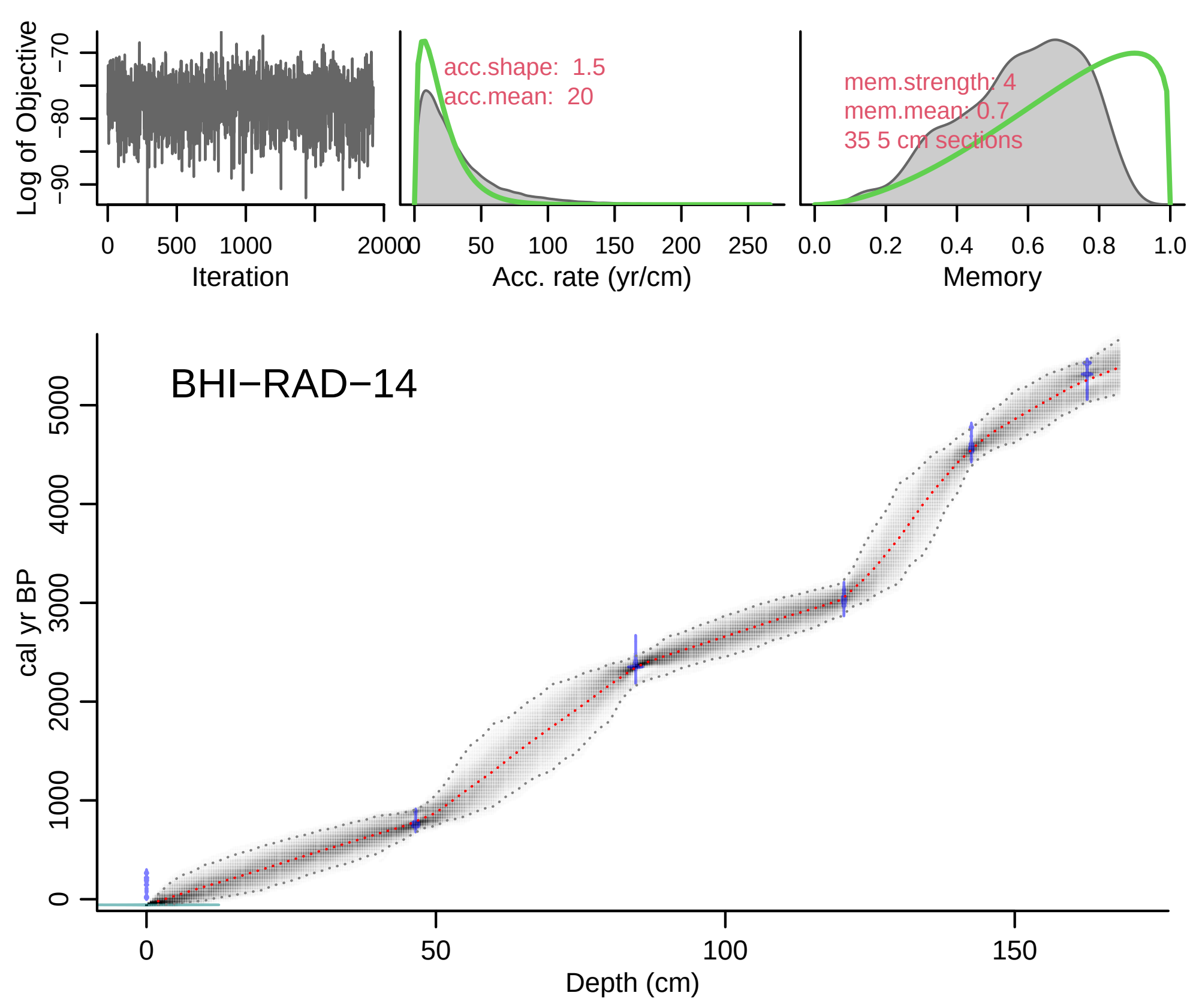
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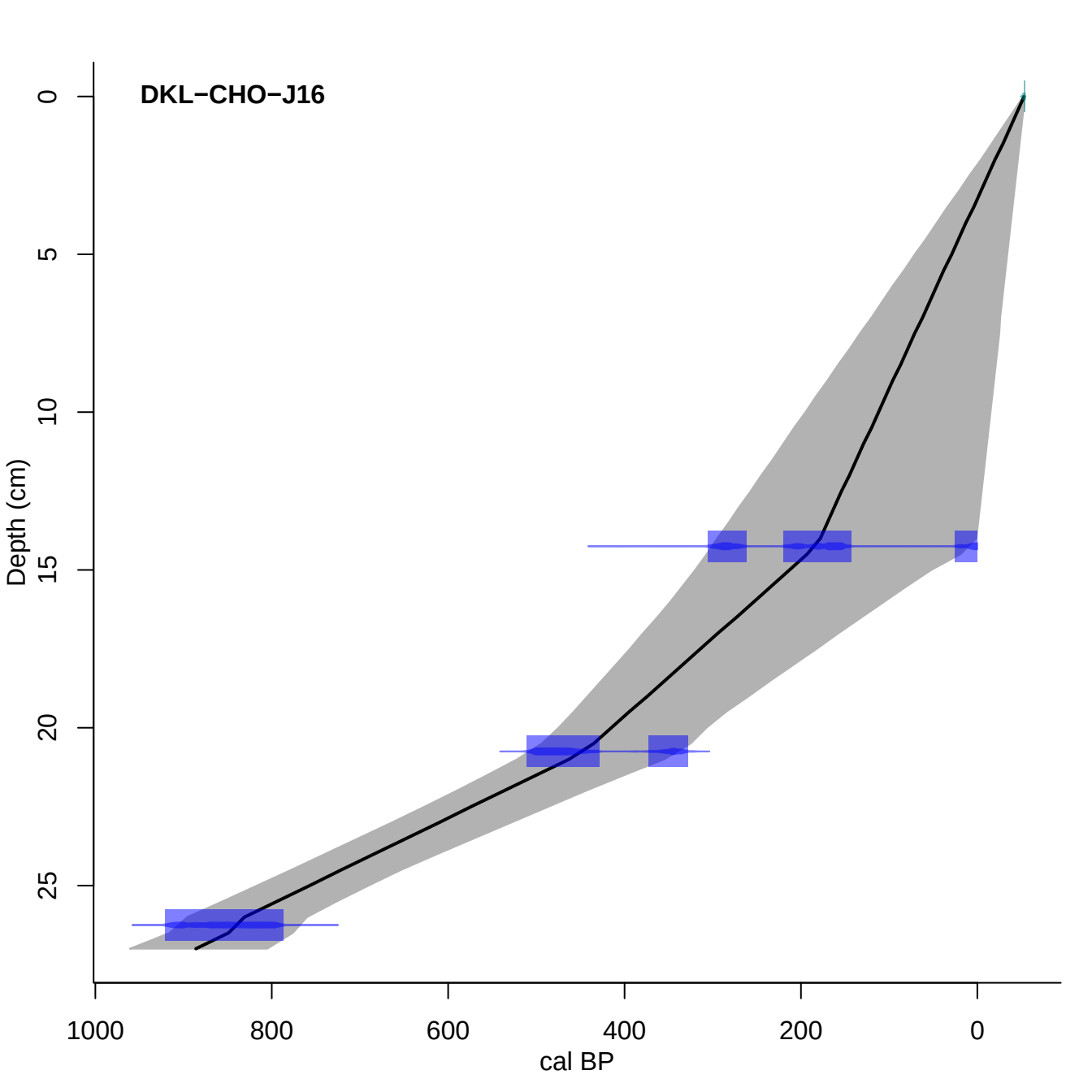
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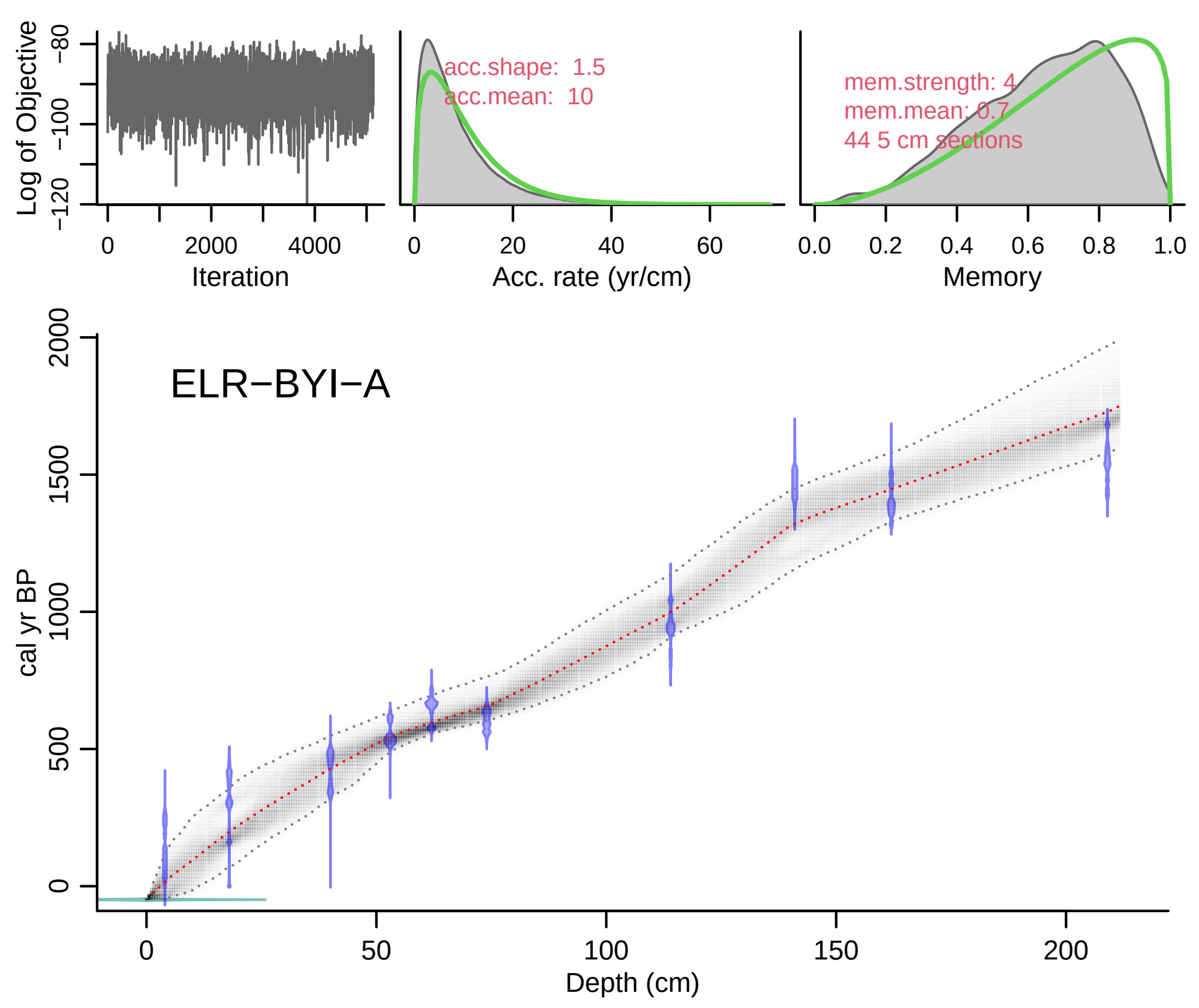
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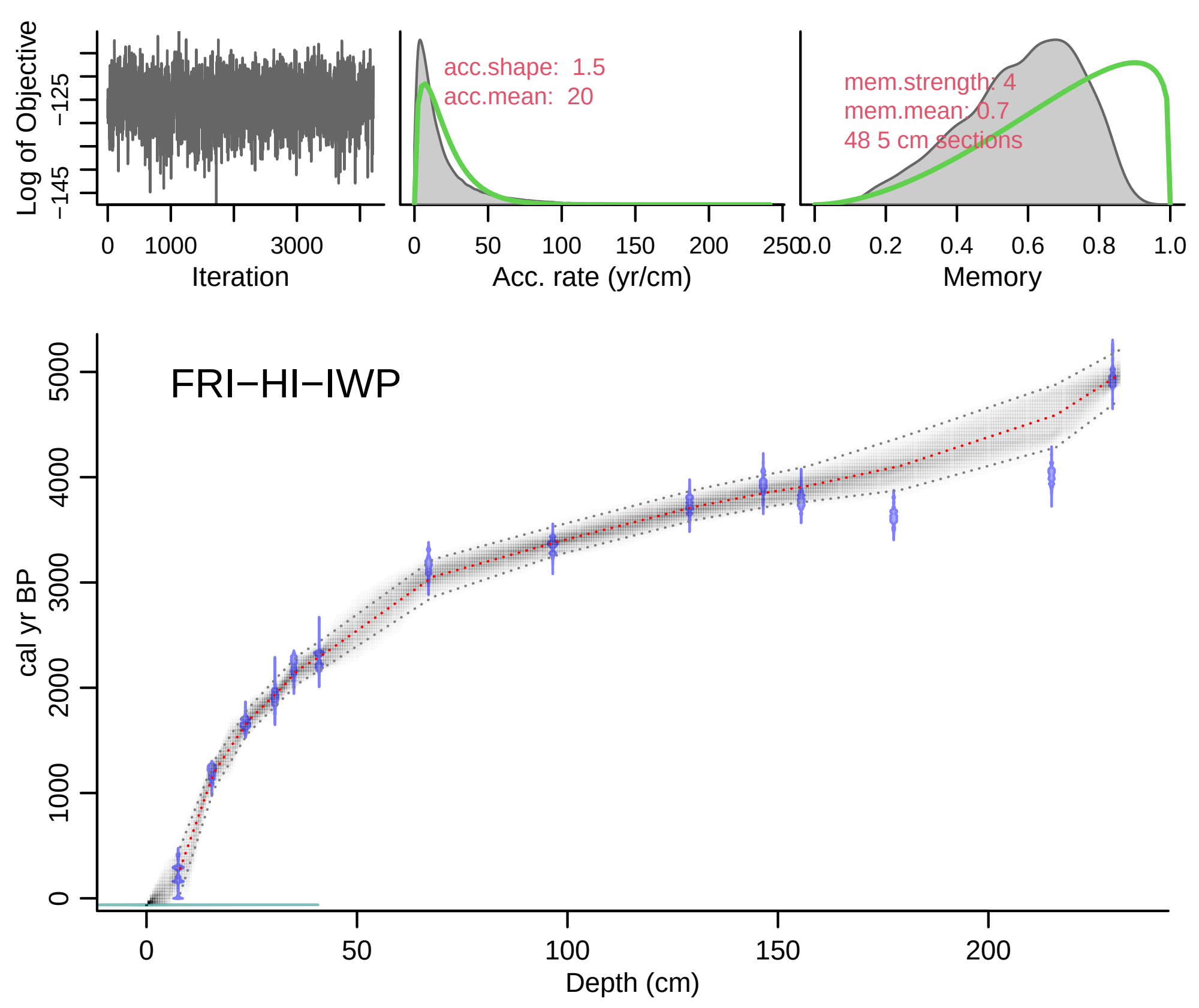
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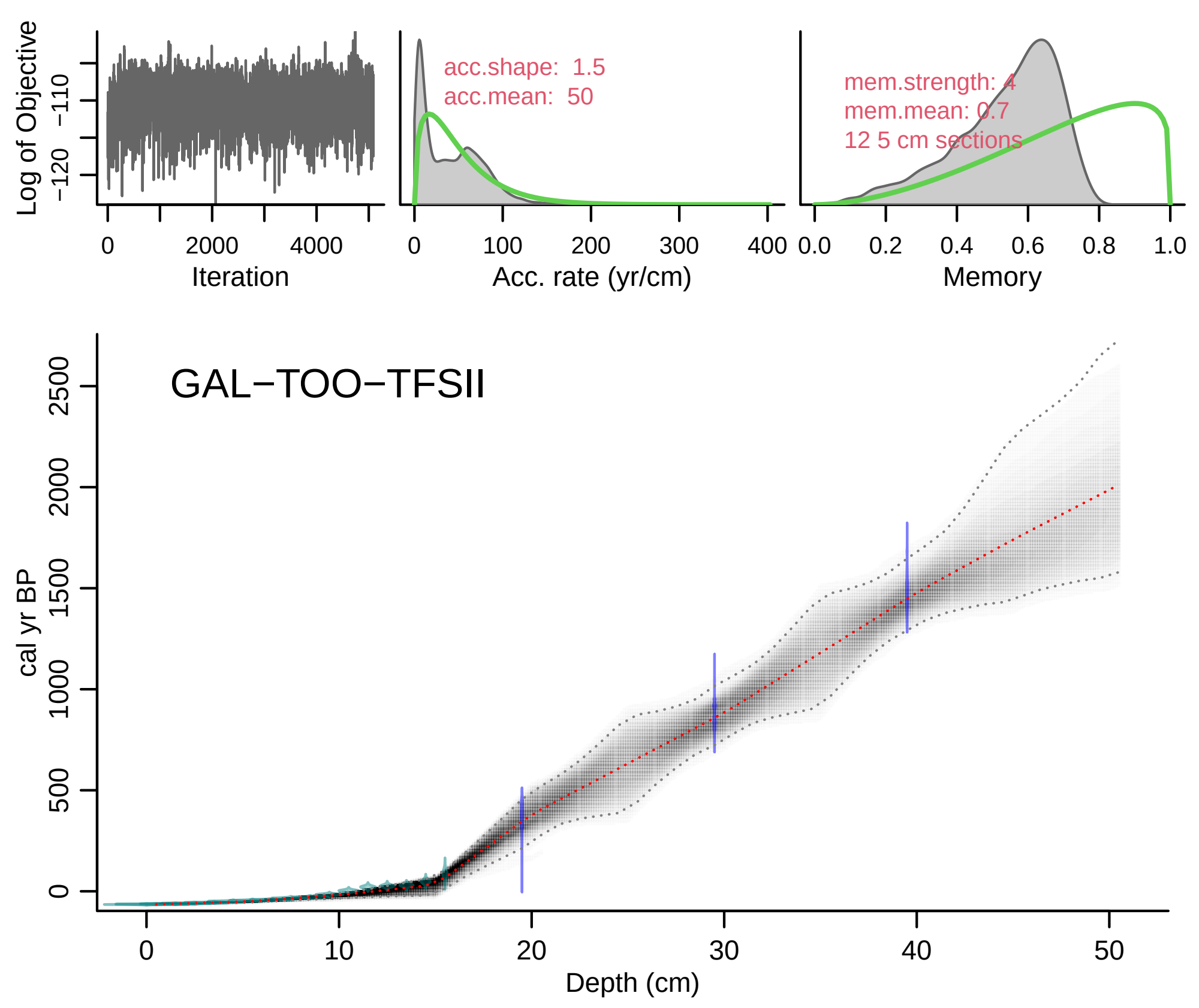
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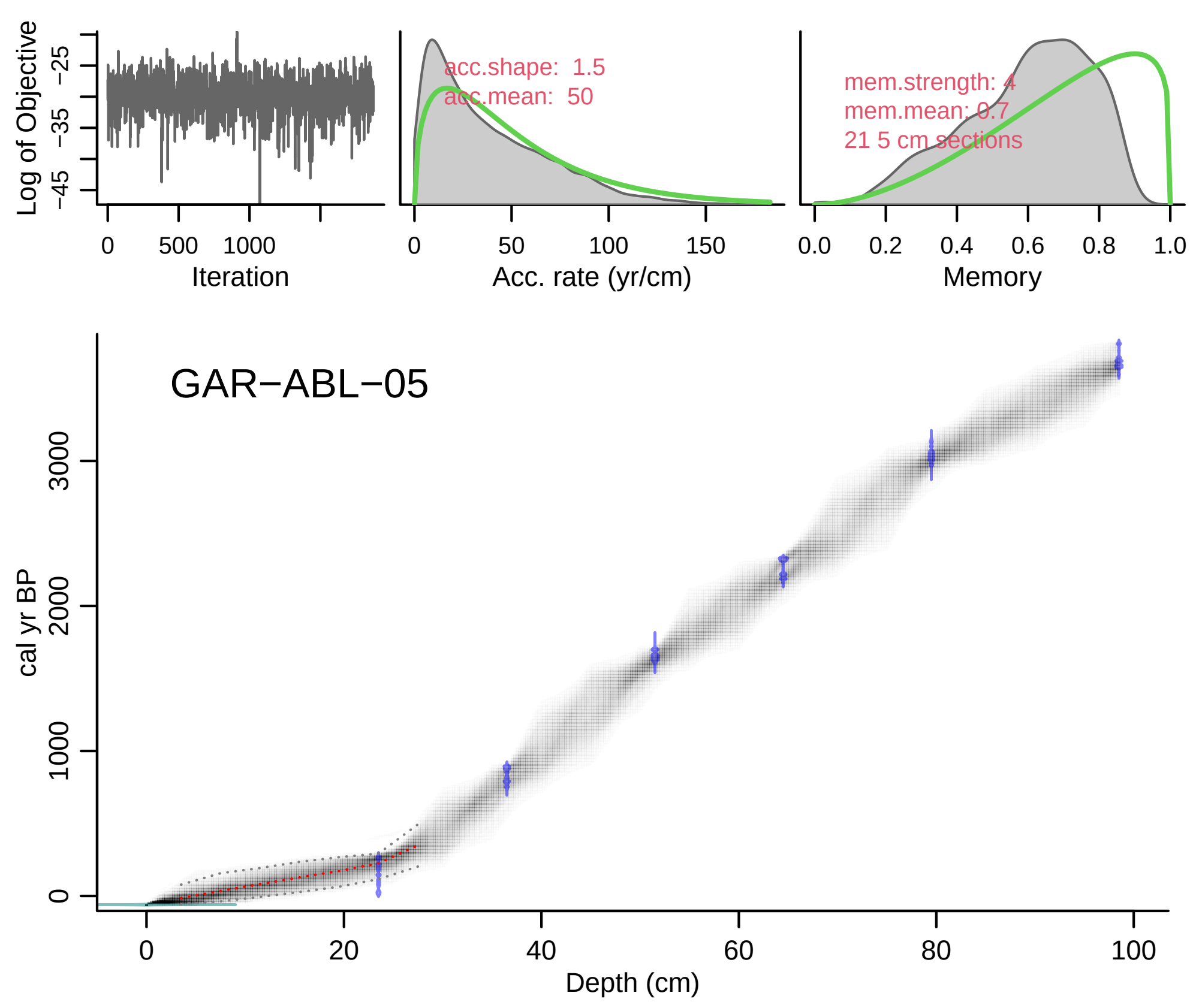
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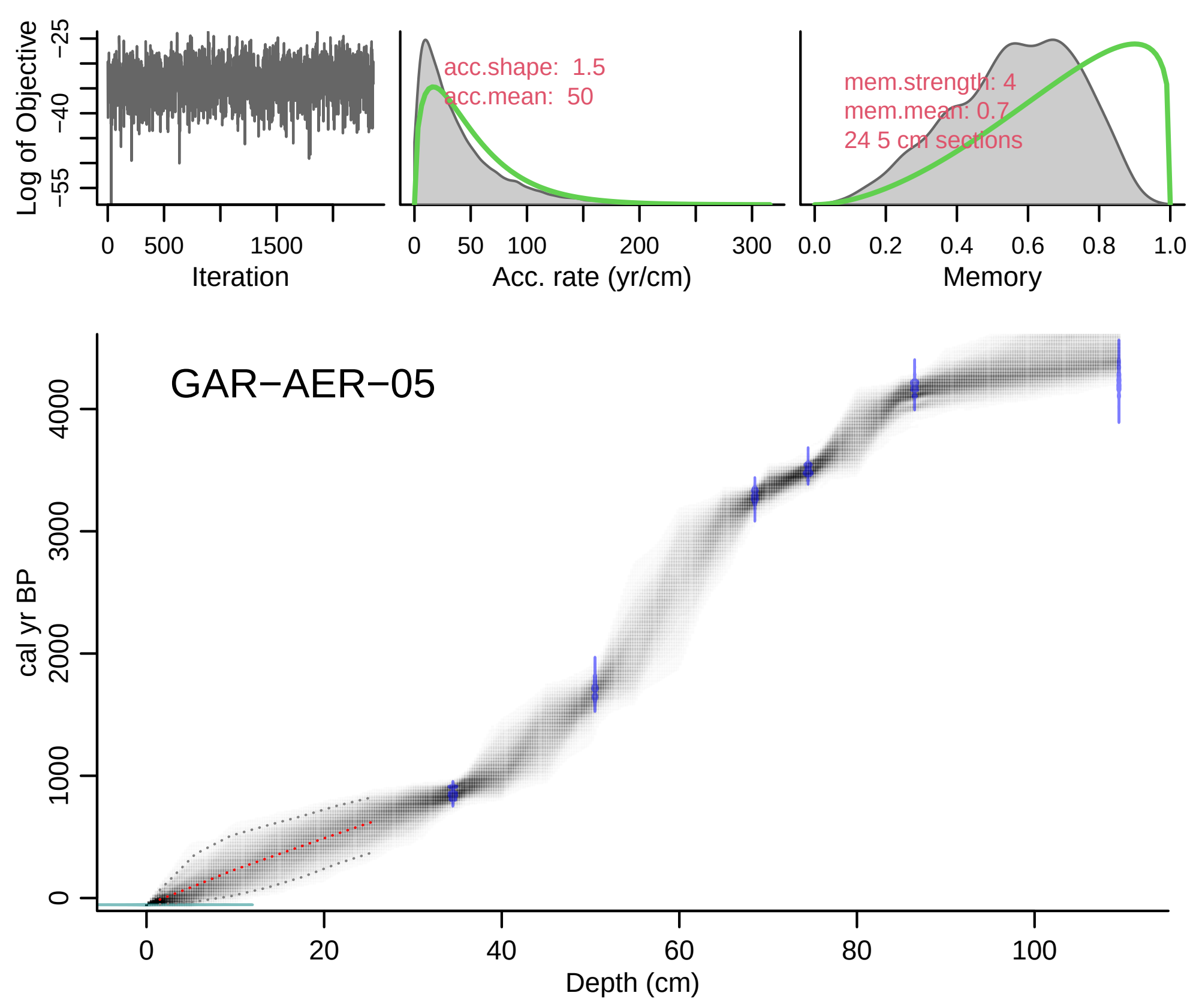
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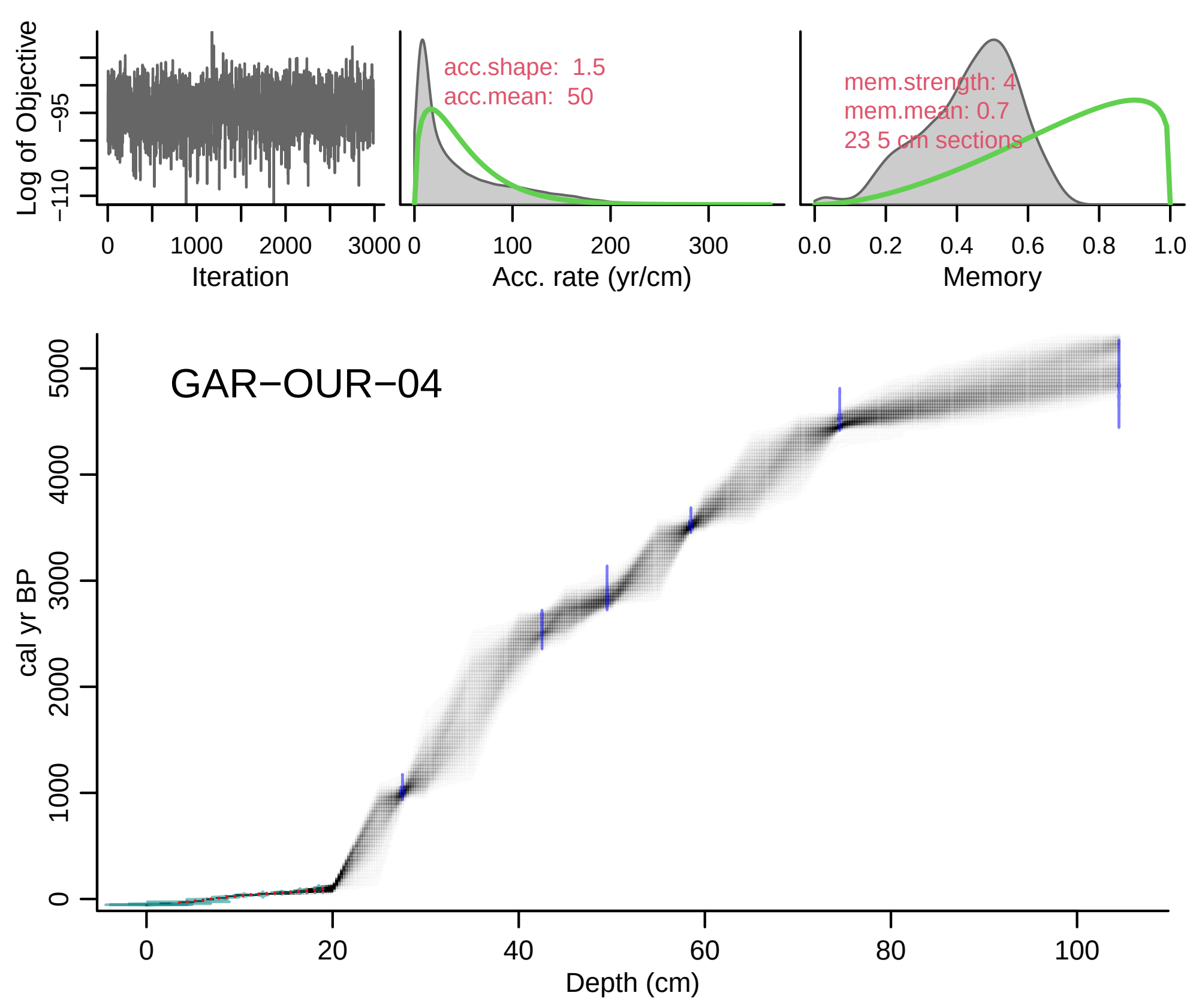
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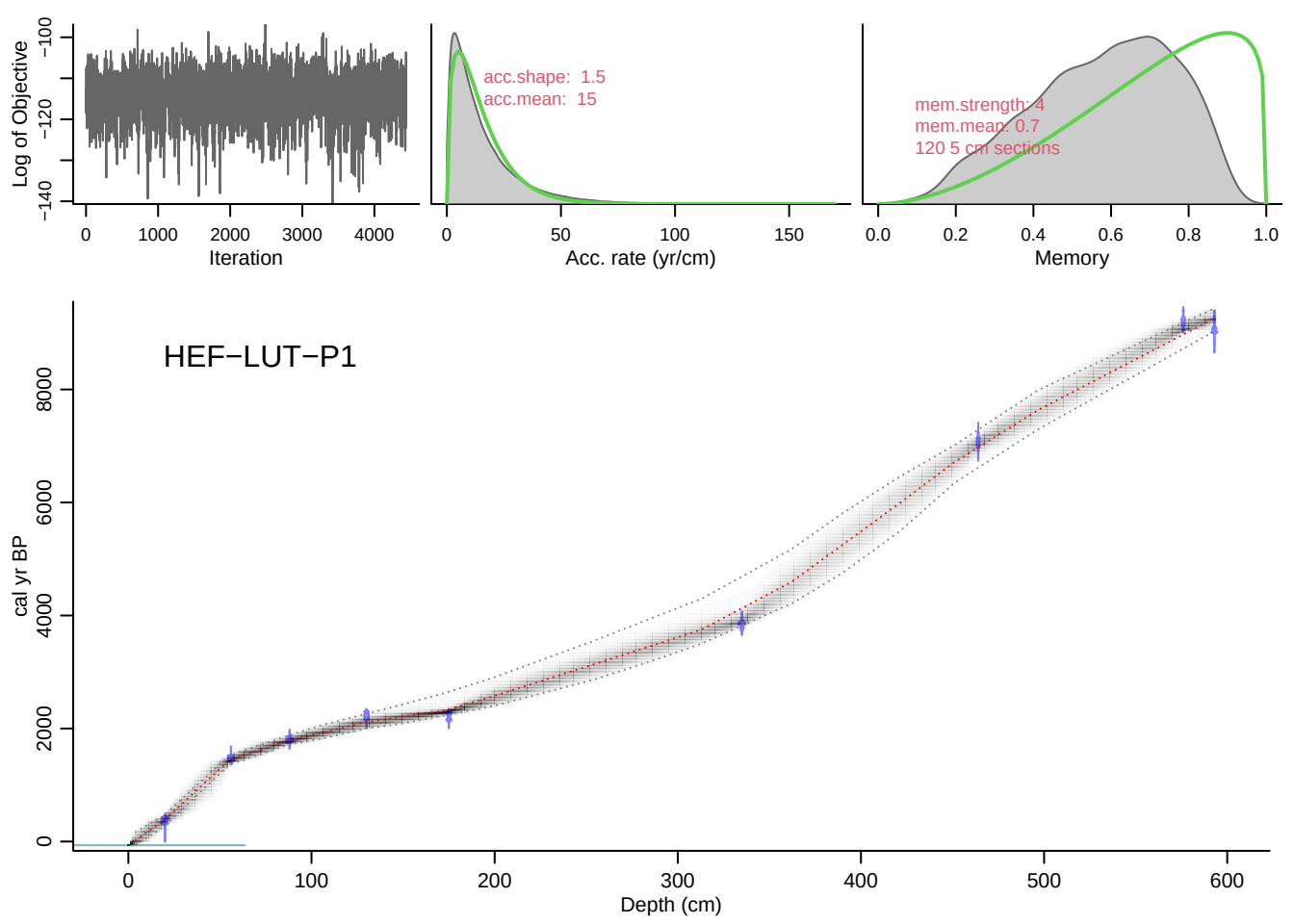
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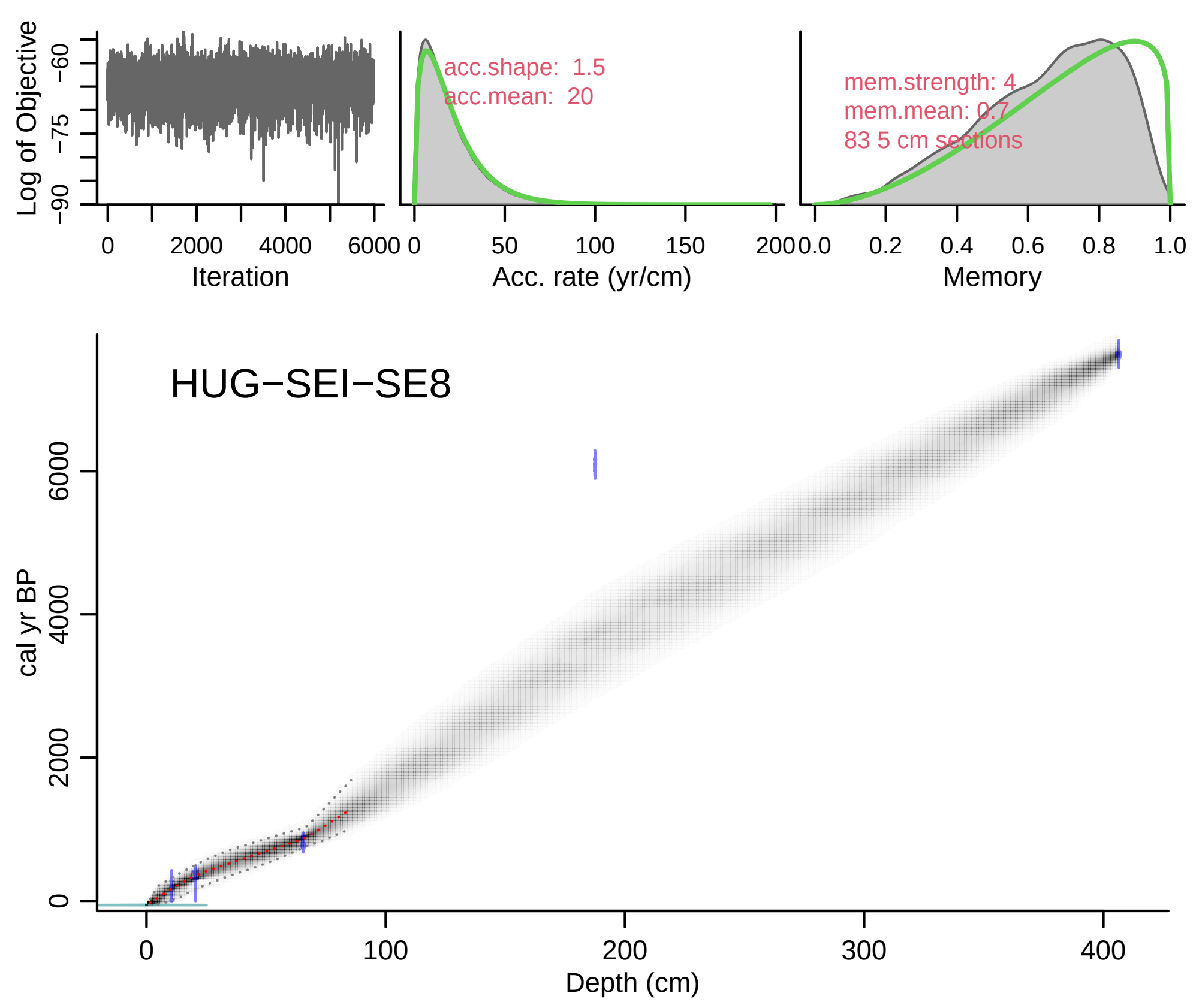
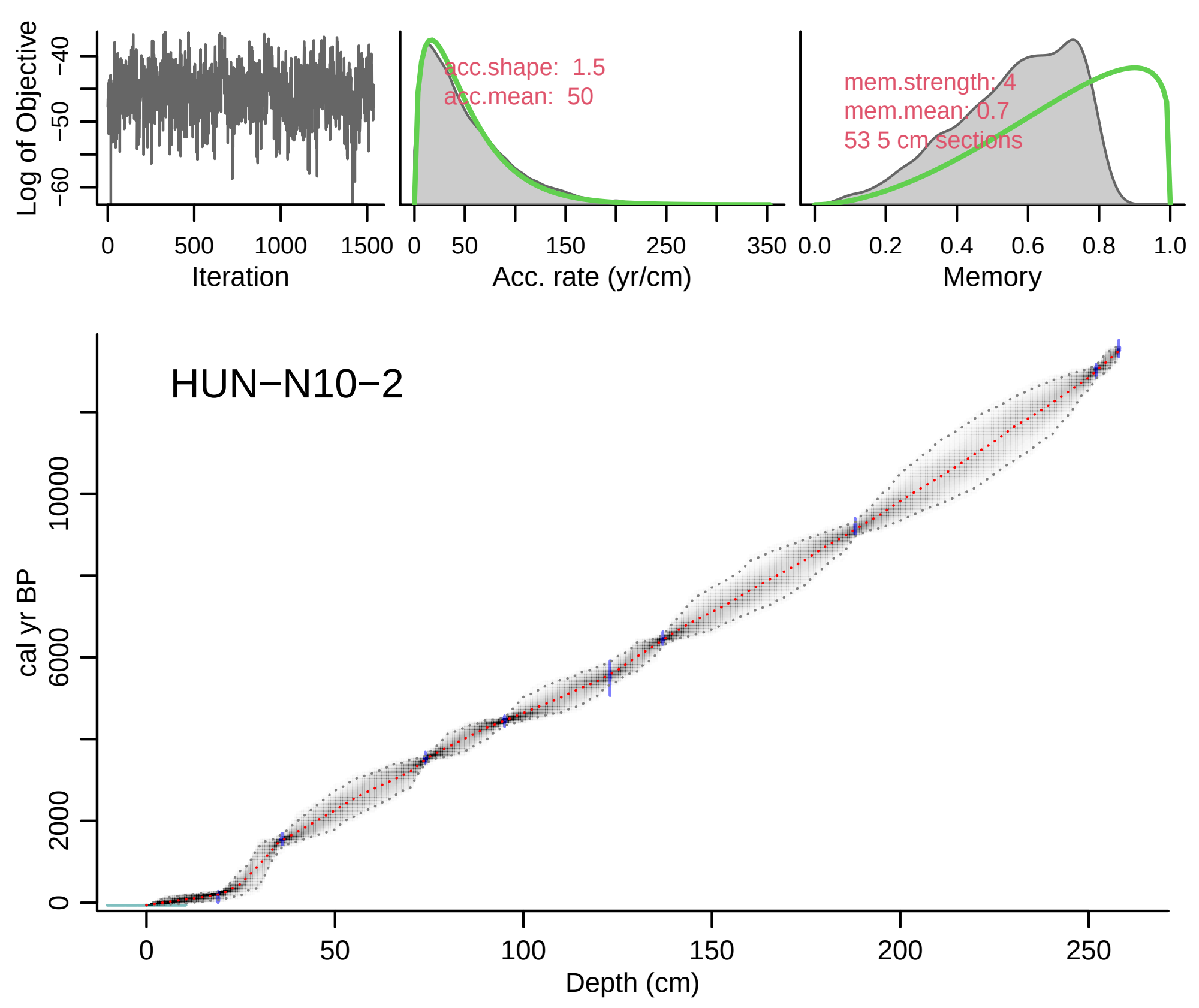
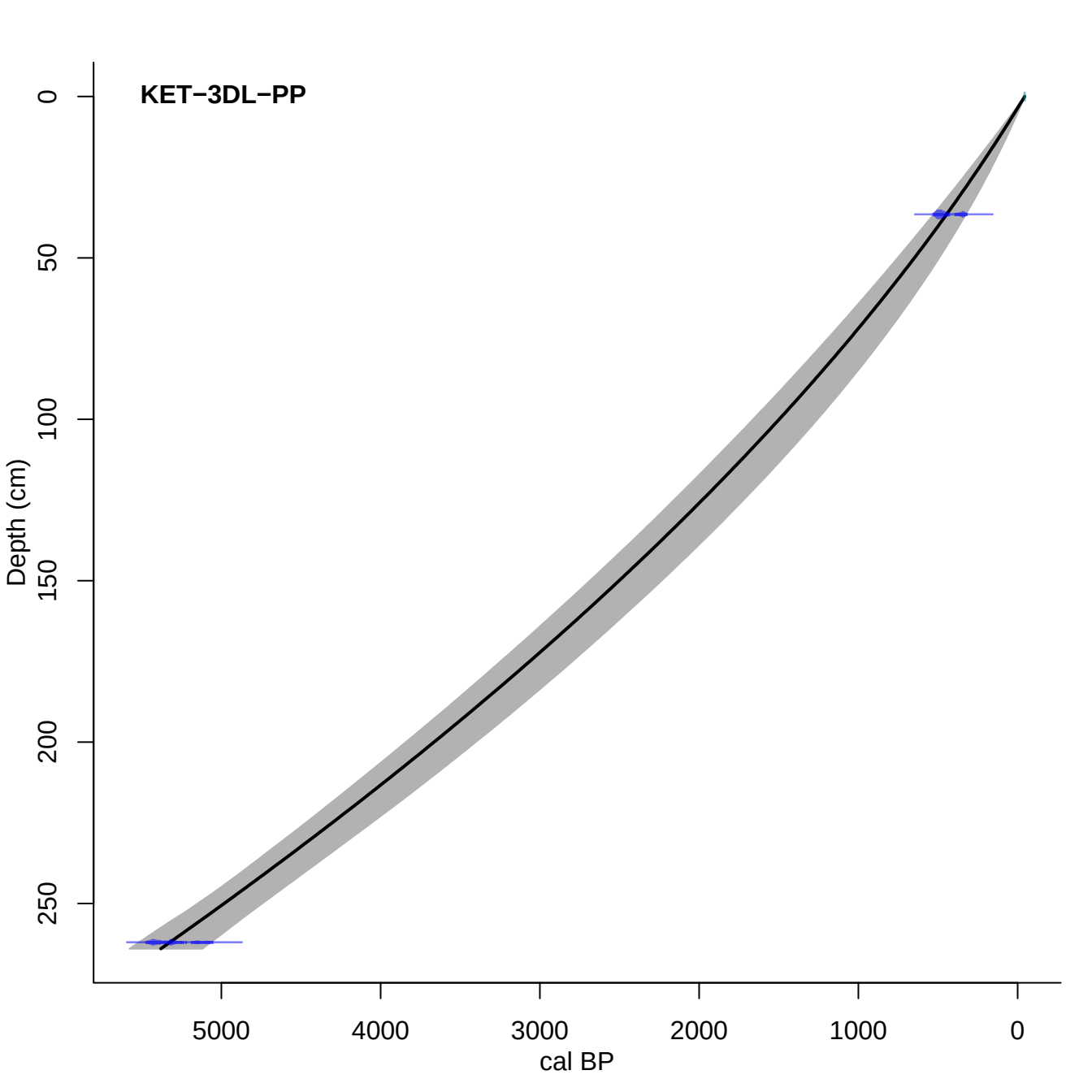
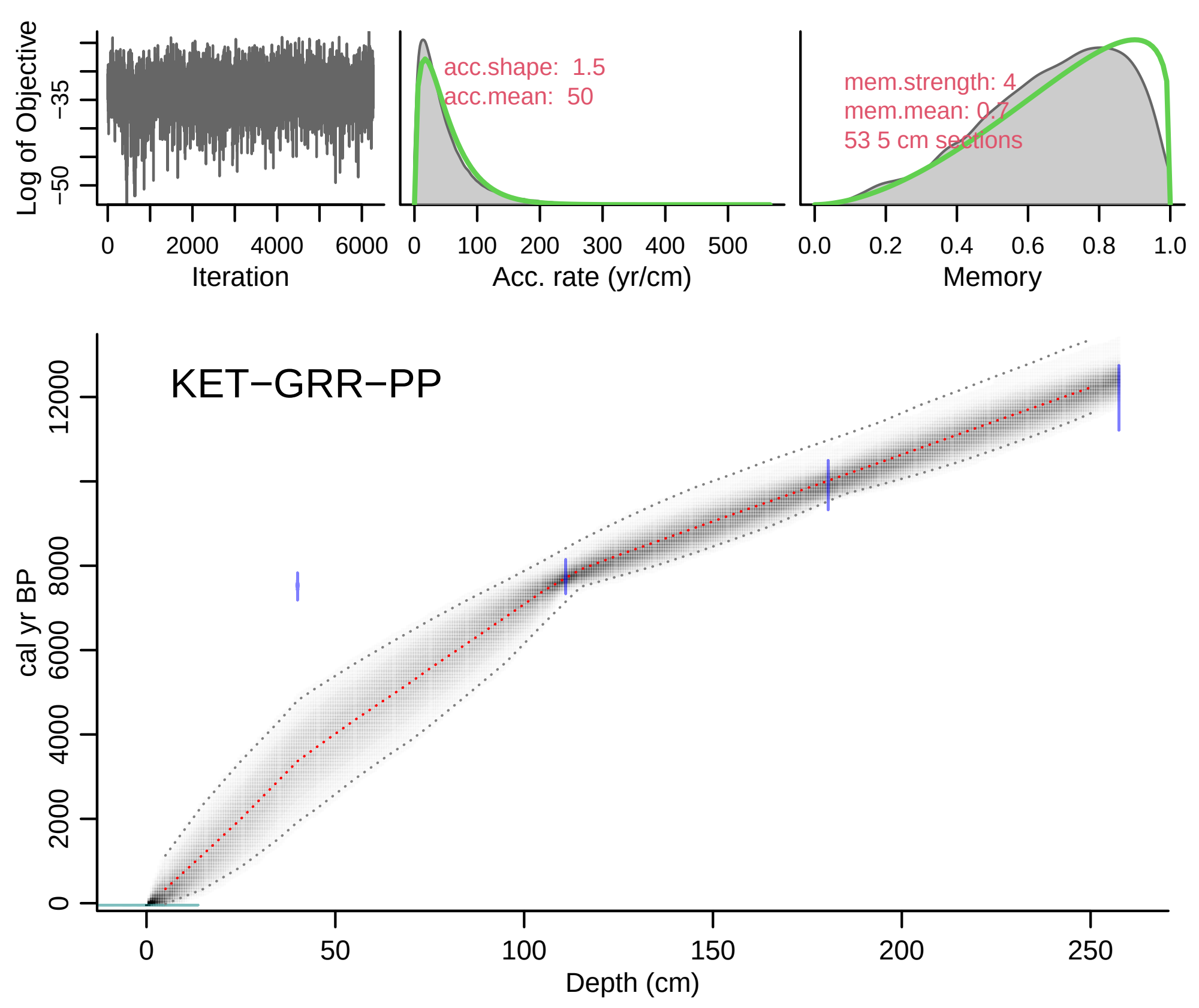
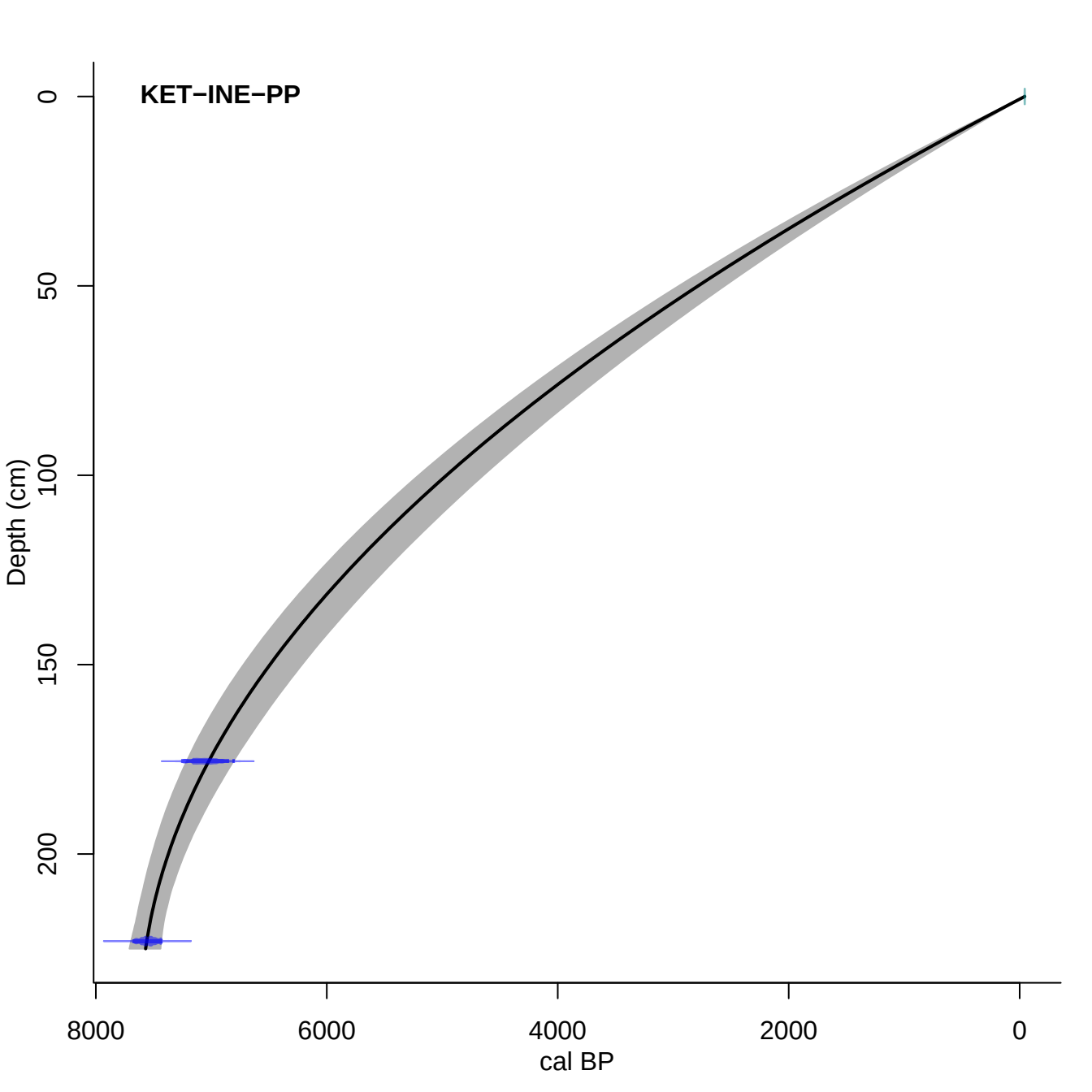
600
Depth (cm)

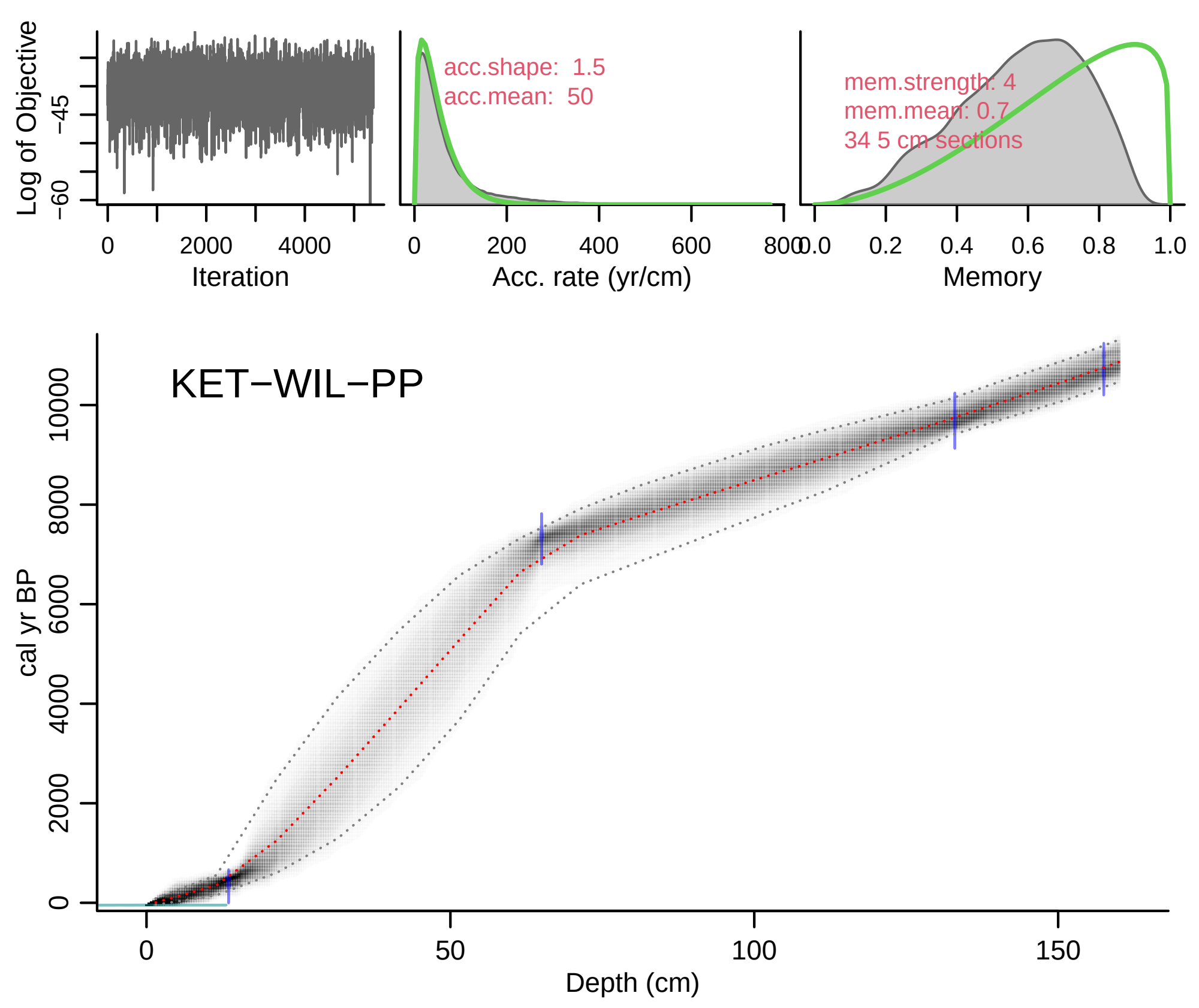

Log of Objective
−60
−75
−90
0
2000
4000
6000
Iteration
acc.shape: 1.5
acc.mean: 20
0
50
100
150
200
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
83 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
HUG−SEI−SE8
cal yr BP
0
2000
4000
6000
0
100
200
300
400
Depth (cm)

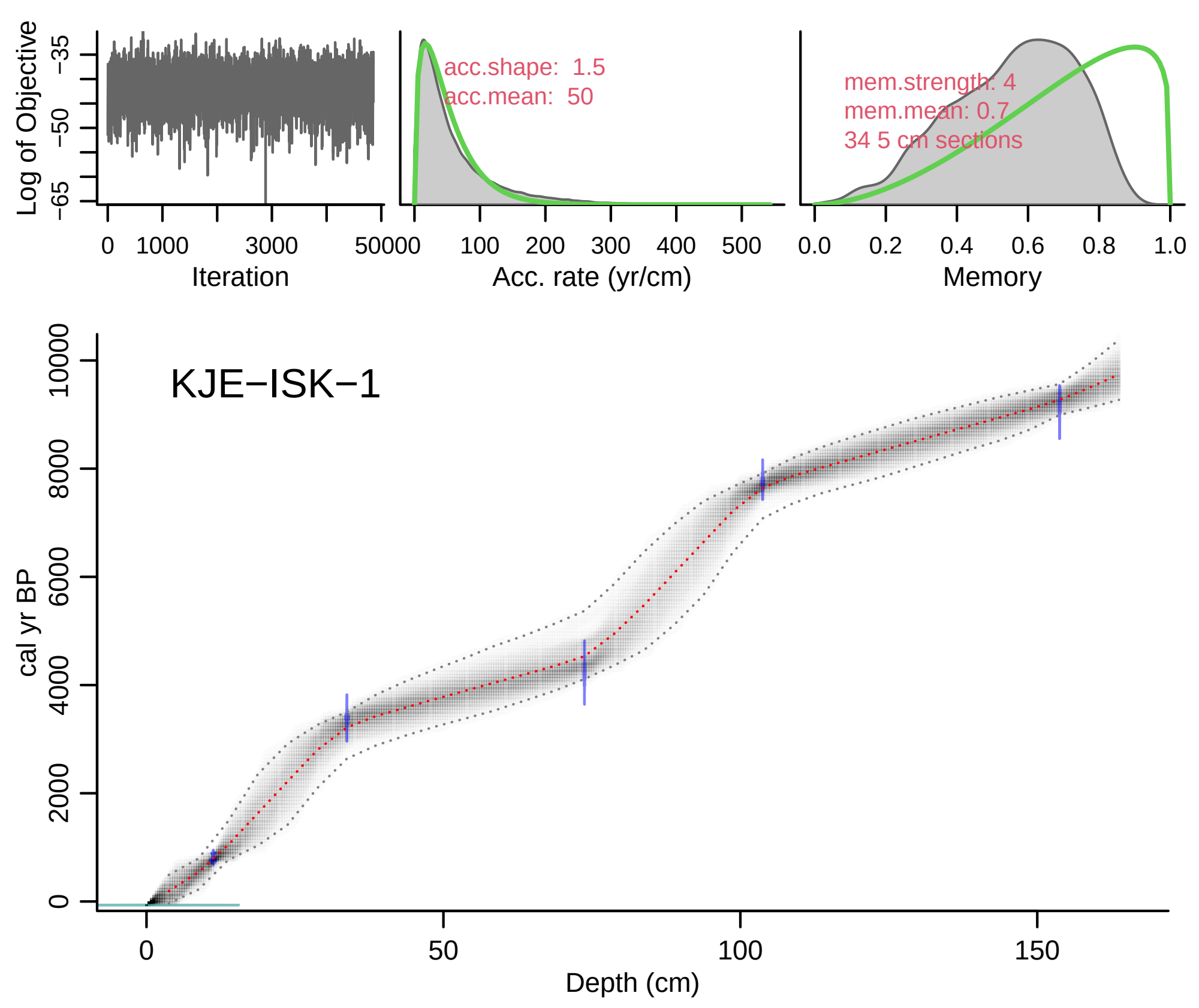

Log of Objective
−40
−50
−60
0
500
1000
1500
Iteration
acc.shape: 1.5
acc.mean: 50
0
50
150
250
350
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
53 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
HUN−N10−2
cal yr BP
0
2000
6000
10000
0
50
100
150
200
250
Depth (cm)

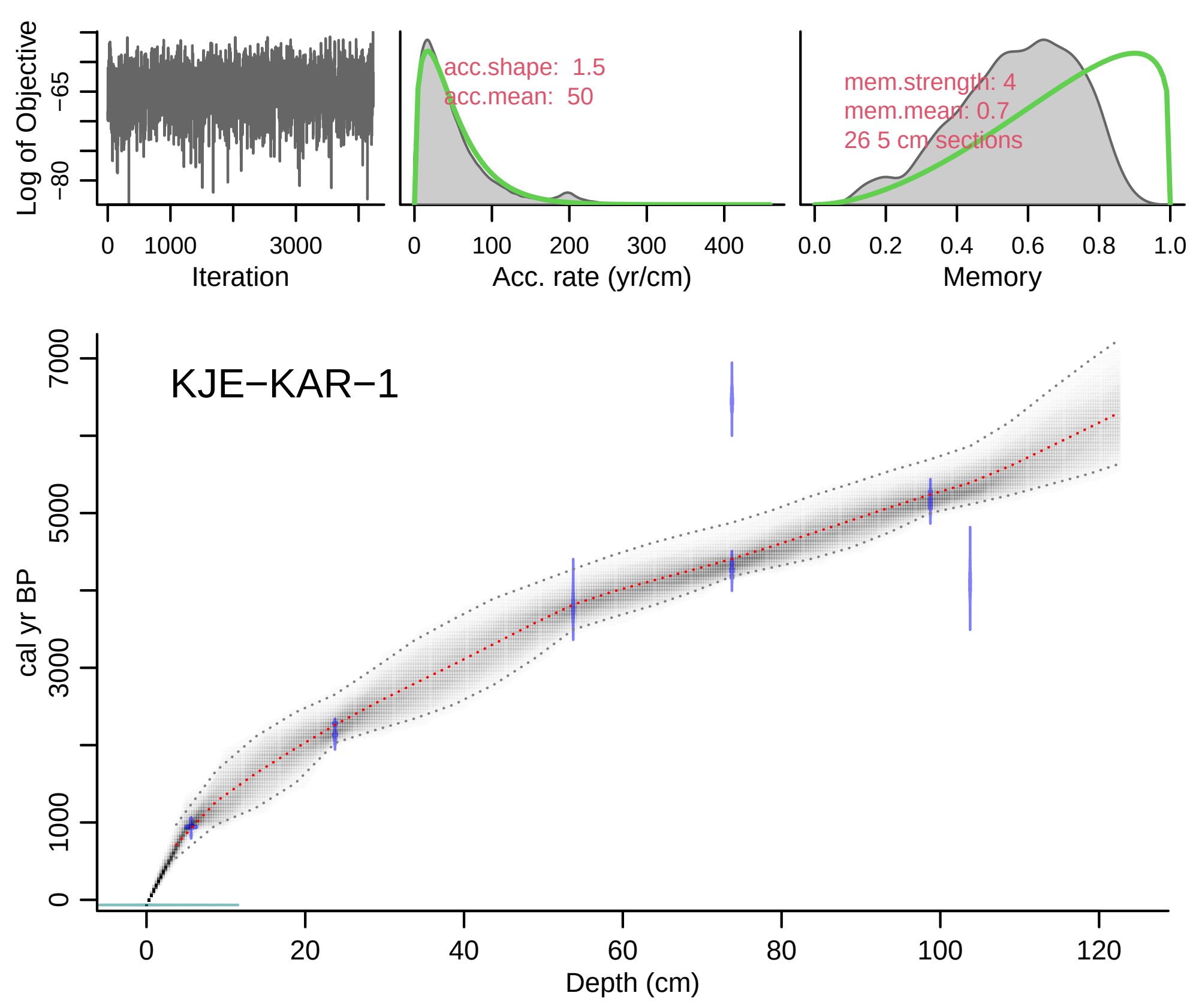

KET−3DL−PP
Depth (cm)
0
50
100
150
200
250
5000
4000
3000
2000
1000
0
cal BP

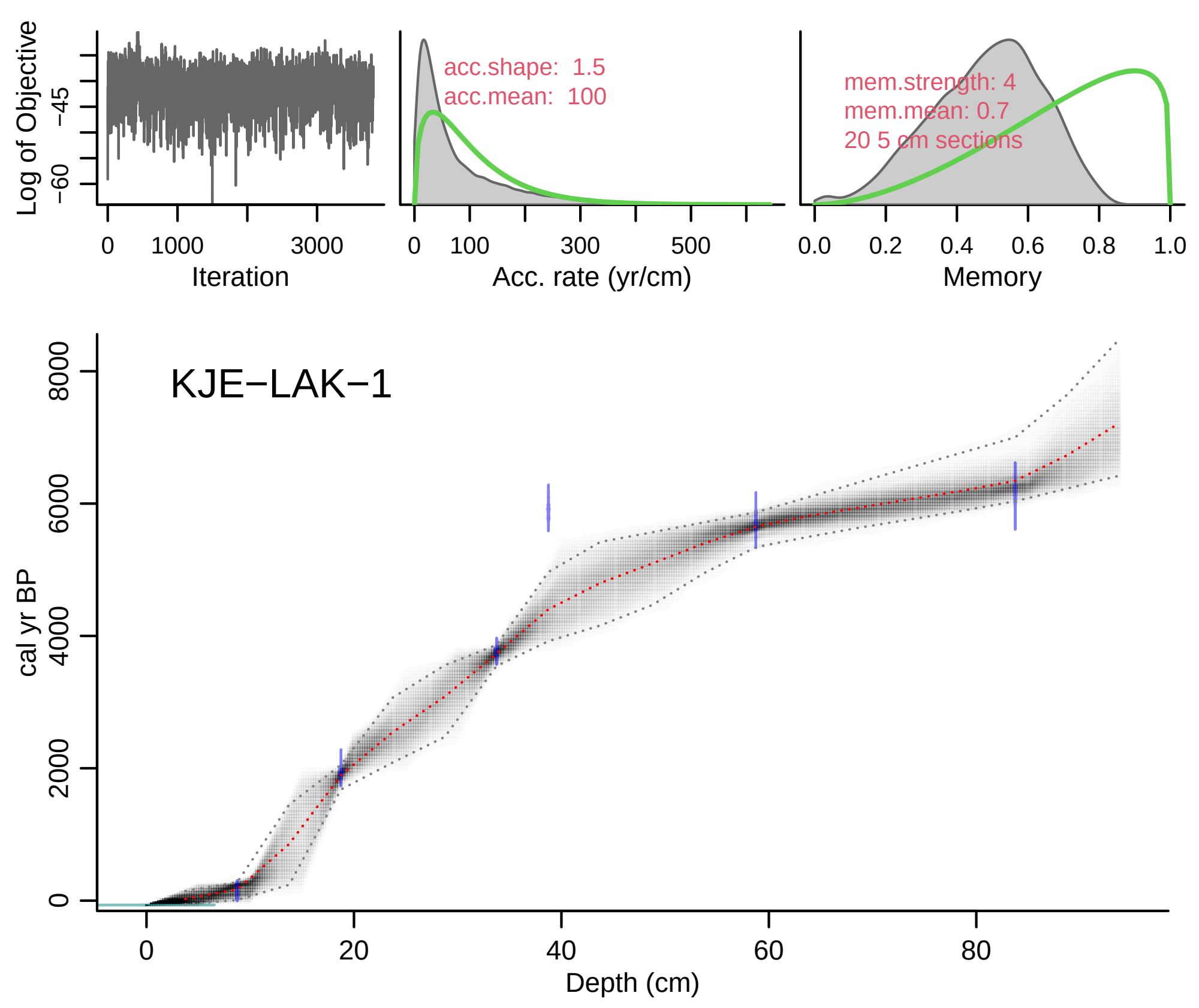

Log of Objective
−35
−50
0
2000
4000
6000
Iteration
acc.shape: 1.5
acc.mean: 50
0
100
200
300
400
500
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
53 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
KET−GRR−PP
cal yr BP
0
2000
4000
6000
8000
12000
0
50
100
150
200
250
Depth (cm)

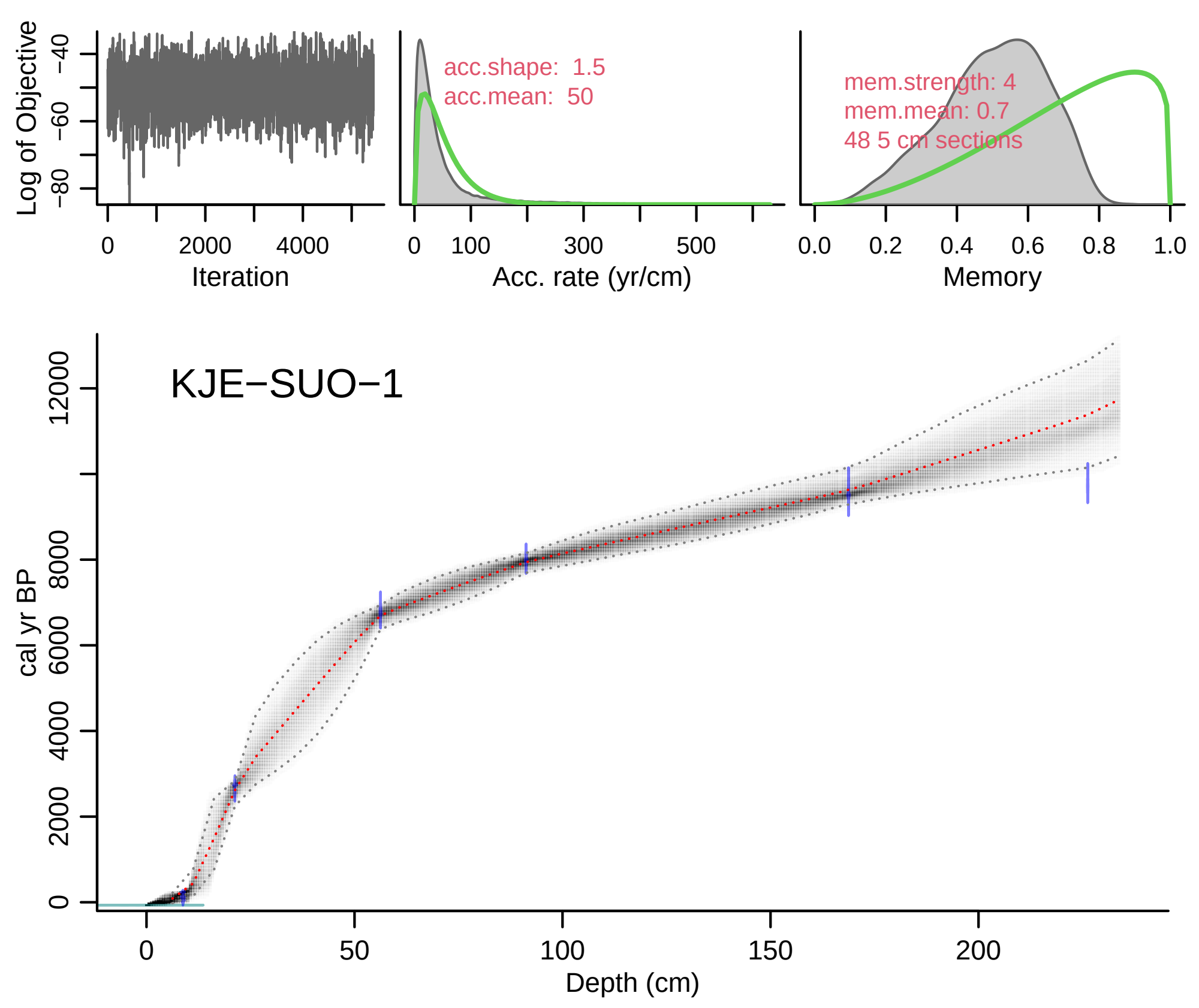

KET−INE−PP
Depth (cm)
0
50
100
150
200
8000
6000
4000
2000
0
cal BP

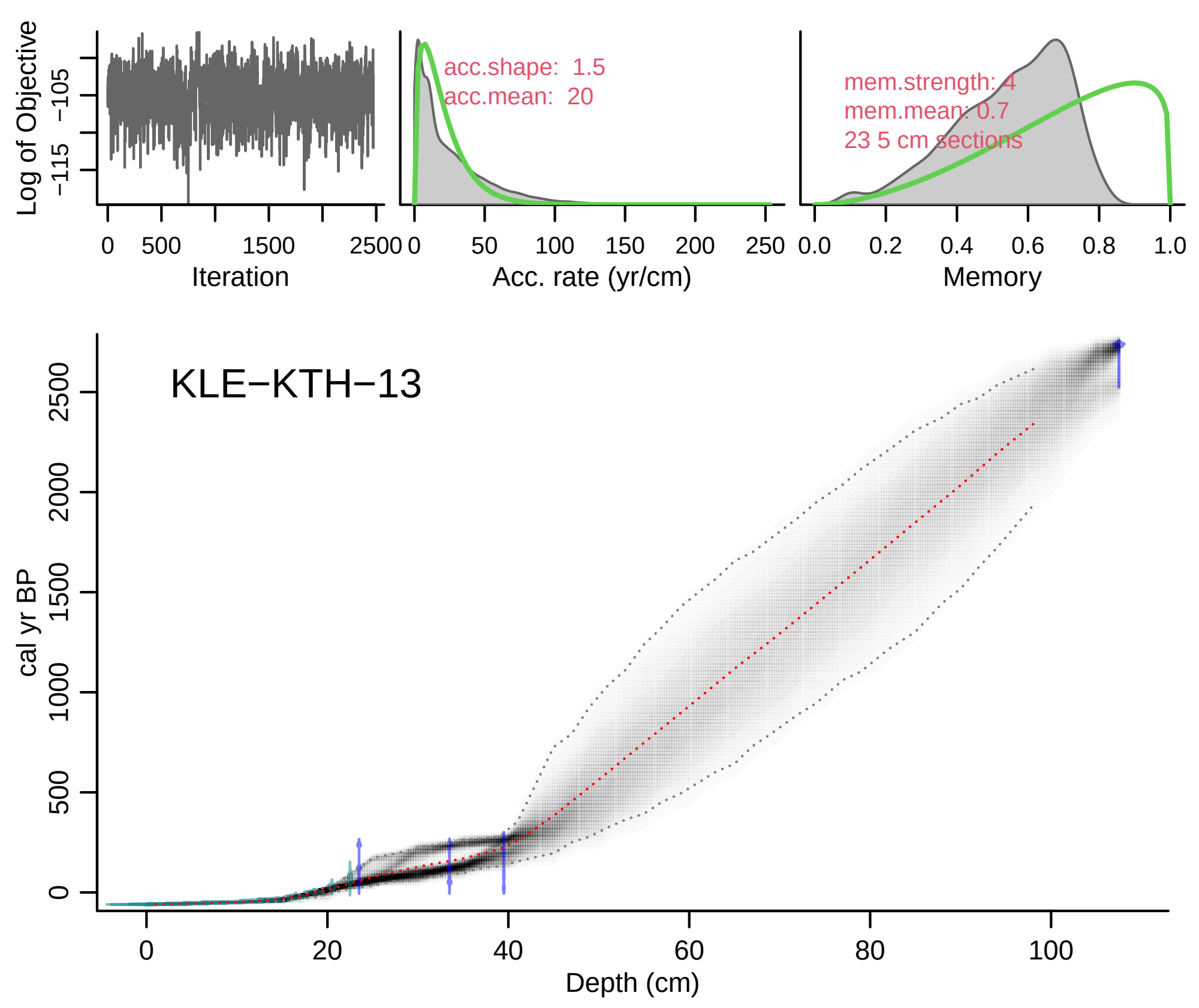

Log of Objective
−60
−45
0
2000
4000
Iteration
acc.shape: 1.5
acc.mean: 50
0
200
400
600
800
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
34 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
KET−WIL−PP
cal yr BP
0
2000
4000
6000
8000
10000
0
50
100
150
Depth (cm)

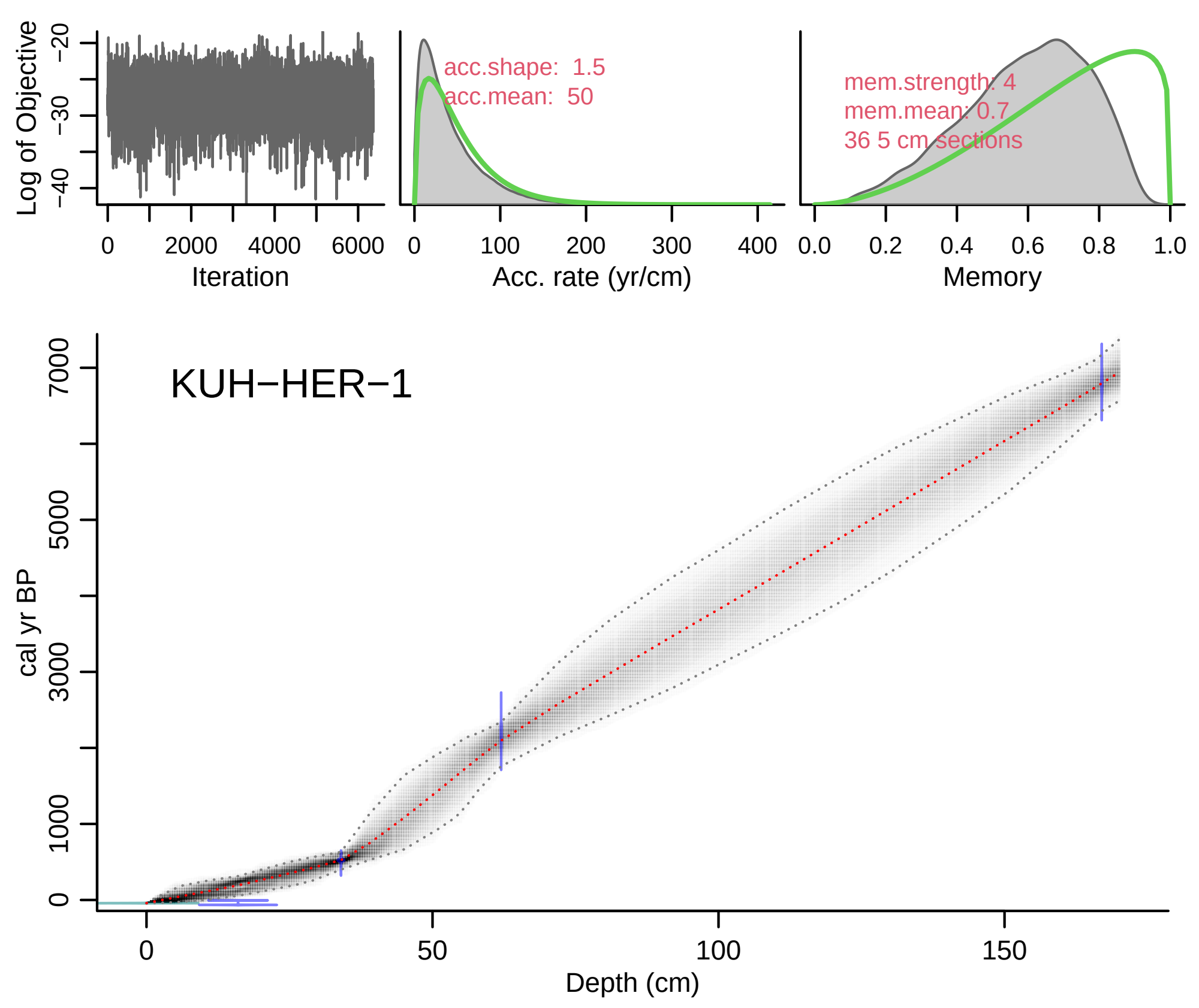

Log of Objective
−35
−50
−65
0
1000
3000
50000
Iteration
acc.shape: 1.5
acc.mean: 50
100
200
300
400
500
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
34 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
KJE−ISK−1
cal yr BP
0
2000
4000
6000
8000
10000
0
50
100
150
Depth (cm)

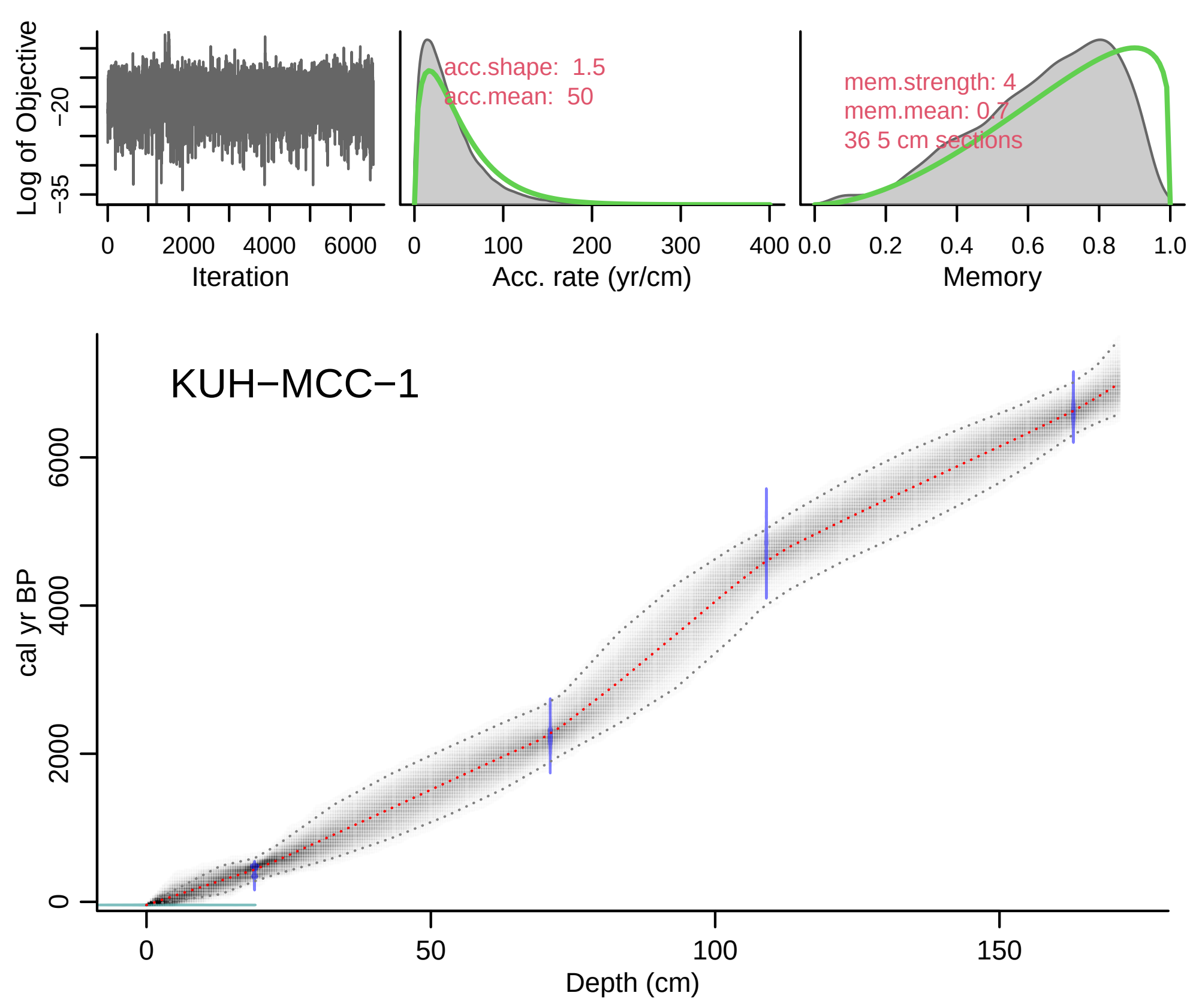

Log of Objective
−65
−80
0
1000
3000
Iteration
acc.shape: 1.5
acc.mean: 50
0
100
200
300
400
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
26 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
KJE−KAR−1
cal yr BP
0
1000
3000
5000
7000
0
20
40
60
80
100
120
Depth (cm)

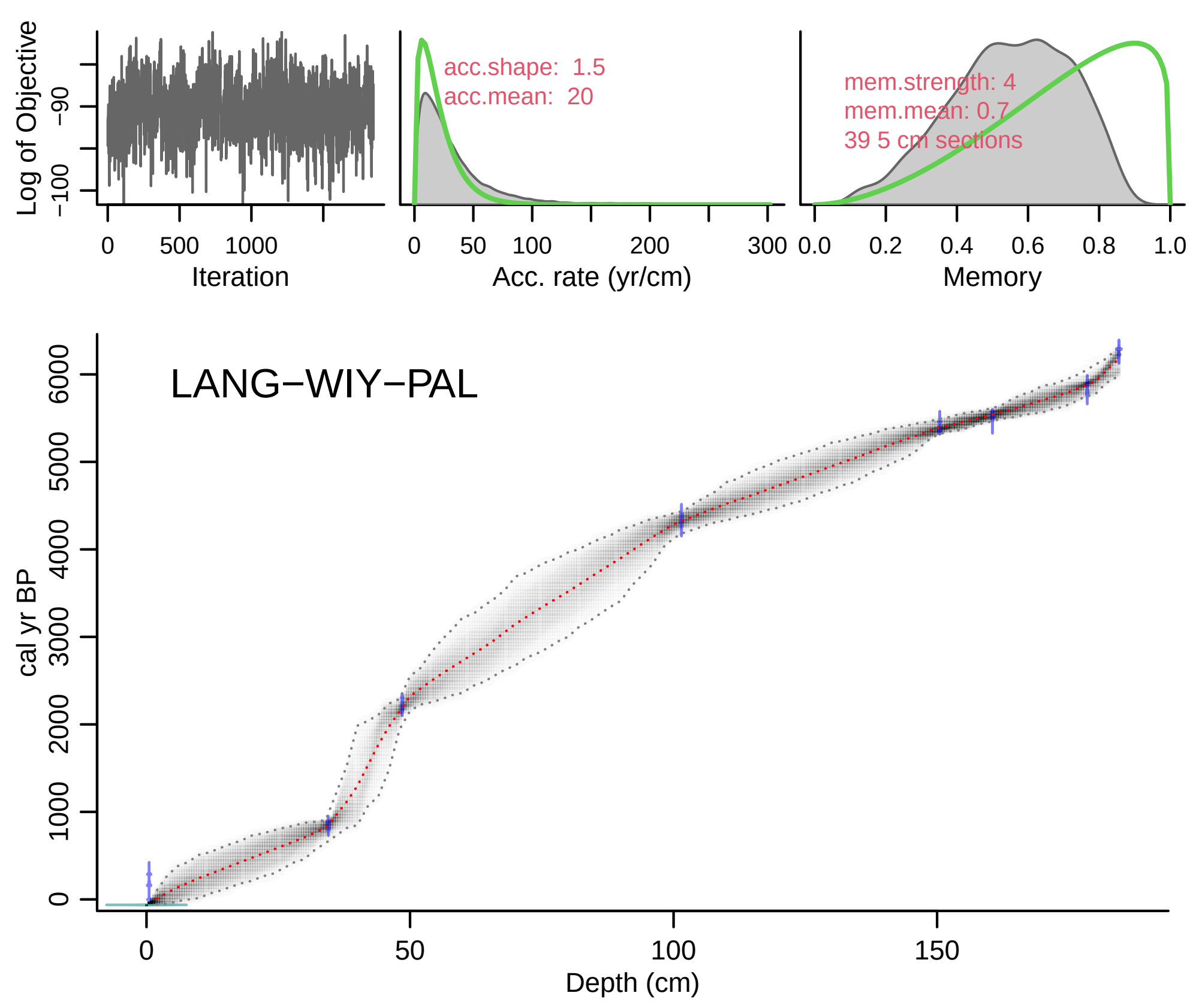

Log of Objective
−45
−60
0
1000
3000
Iteration
acc.shape: 1.5
acc.mean: 100
0
100
300
500
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
20 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
KJE−LAK−1
cal yr BP
0
2000
4000
6000
8000
0
20
40
60
80
Depth (cm)

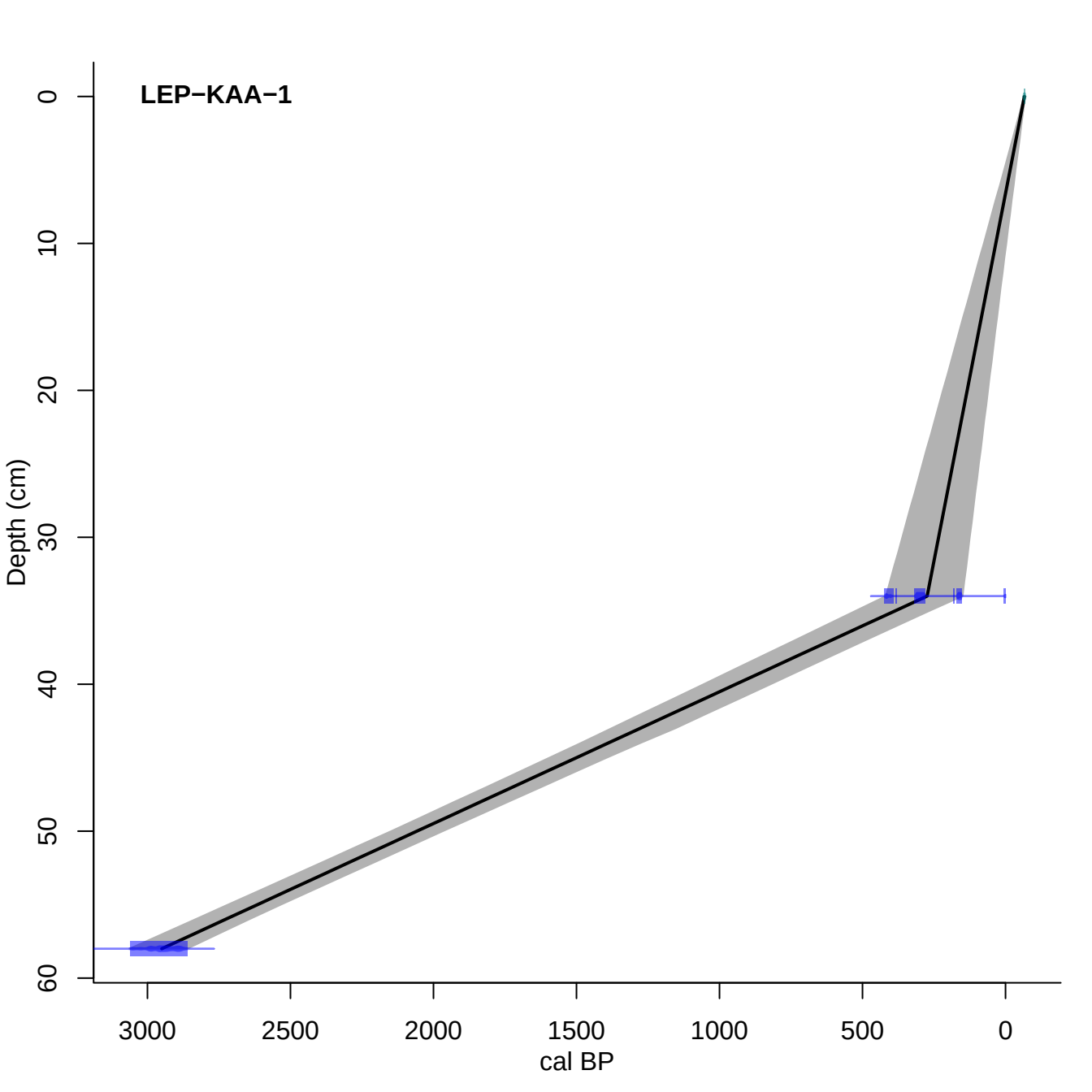

Log of Objective
−40
−60
−80
0
2000
4000
Iteration
acc.shape: 1.5
acc.mean: 50
0
100
300
500
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
48 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
KJE−SUO−1
cal yr BP
0
2000
4000
6000
8000
12000
0
50
100
150
200
Depth (cm)

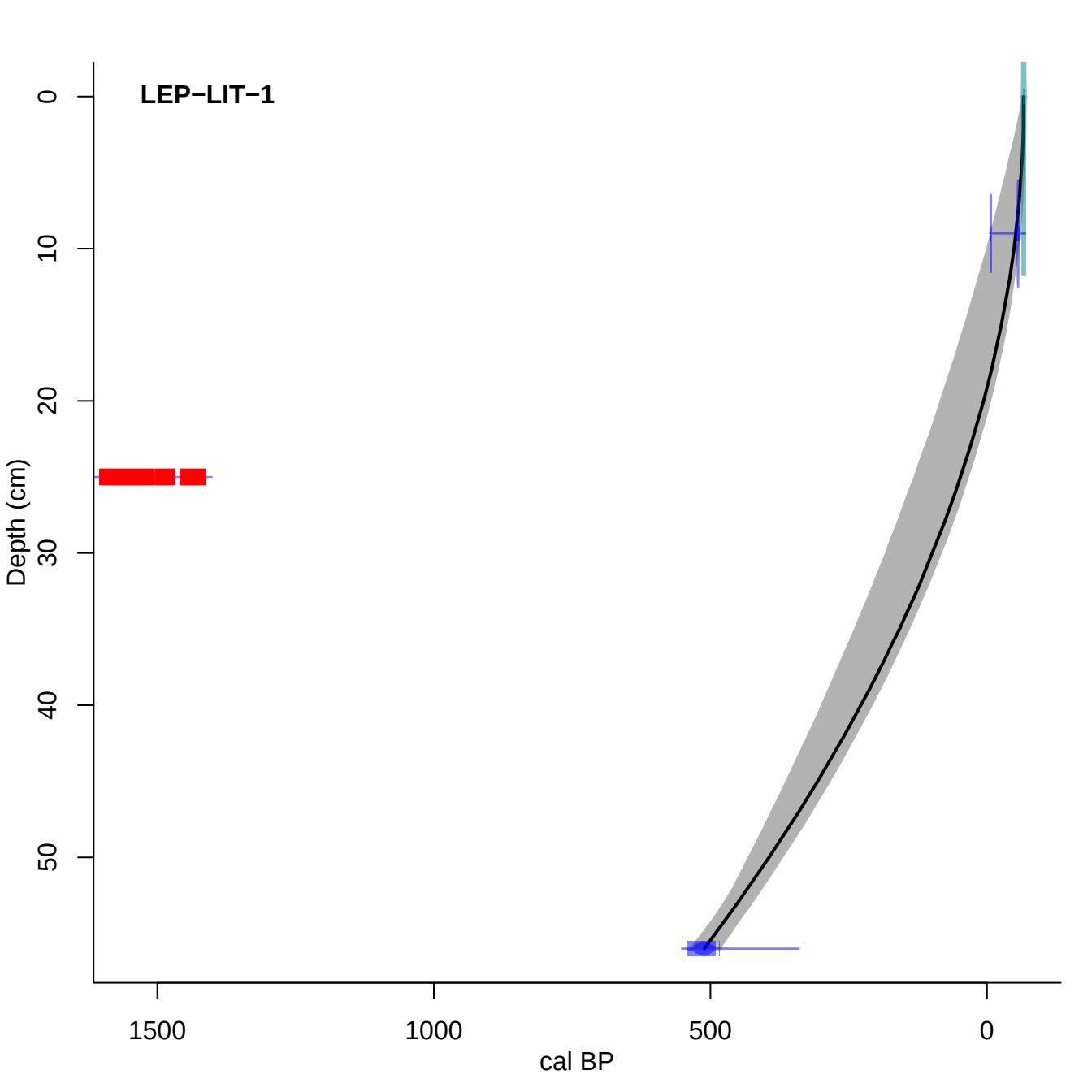

Log of Objective
−115
−105
0
500
1500
2500
Iteration
acc.shape: 1.5
acc.mean: 20
0
50
100
150
200
250
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
23 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
KLE−KTH−13
cal yr BP
0
500
1000
1500
2000
2500
0
20
40
60
80
100
Depth (cm)

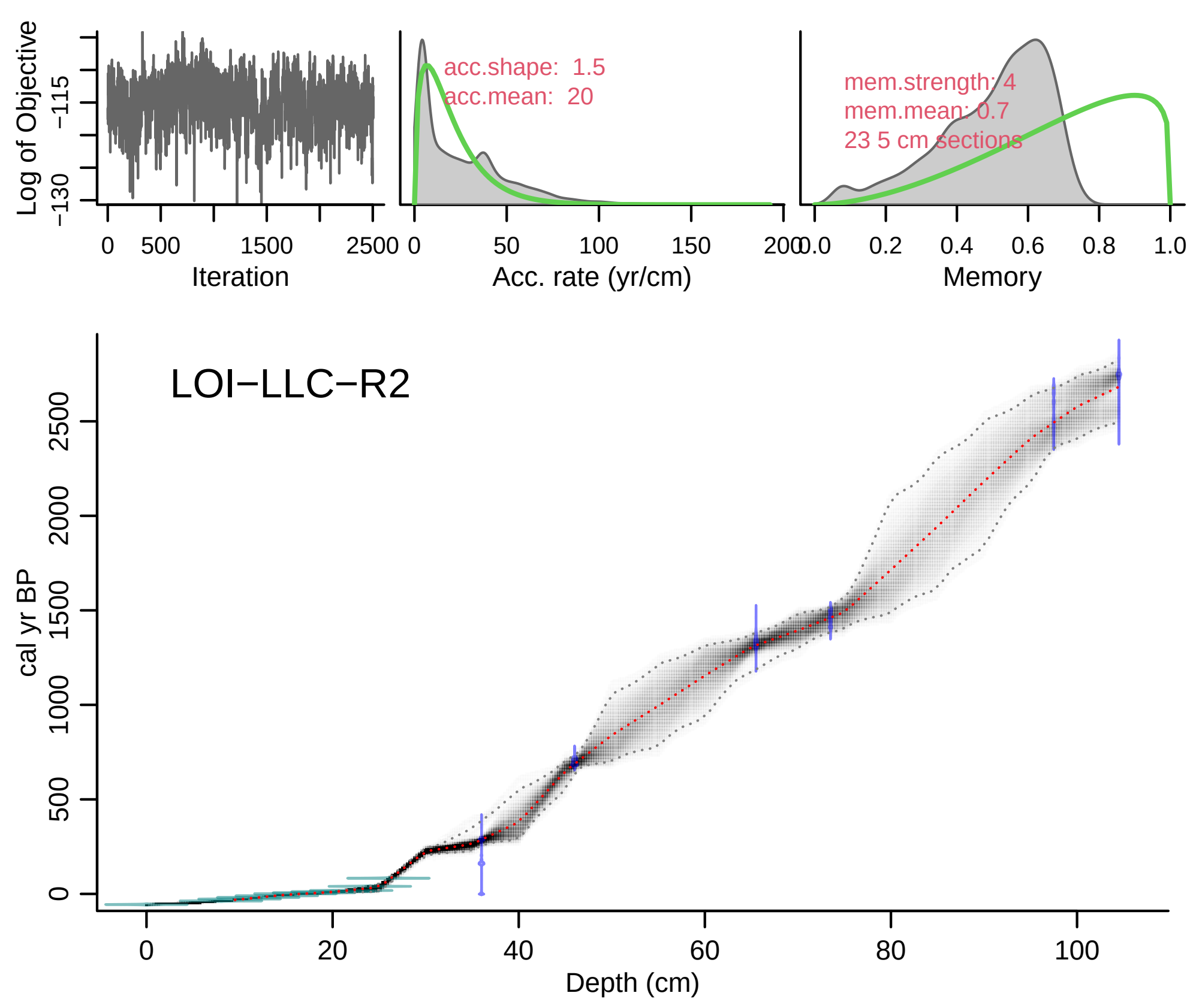

Log of Objective
−20
−30
−40
0
2000
4000
6000
Iteration
acc.shape: 1.5
acc.mean: 50
0
100
200
300
400
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
36 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
KUH−HER−1
cal yr BP
0
1000
3000
5000
7000
0
50
100
150
Depth (cm)

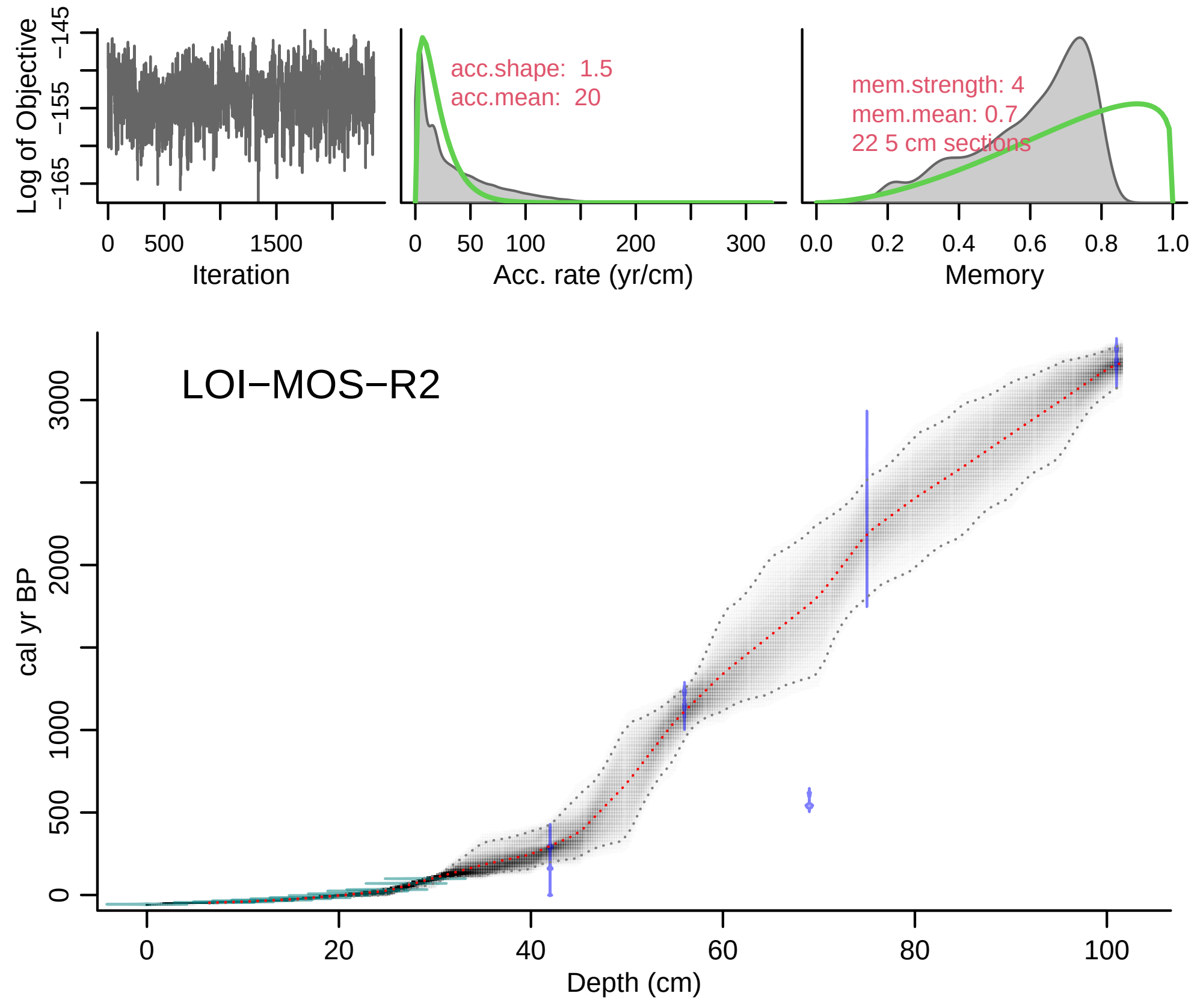

Log of Objective
−20
−35
0
2000
4000
6000
Iteration
acc.shape: 1.5
acc.mean: 50
0
100
200
300
400
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
36 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
KUH−MCC−1
cal yr BP
0
2000
4000
6000
0
50
100
150
Depth (cm)

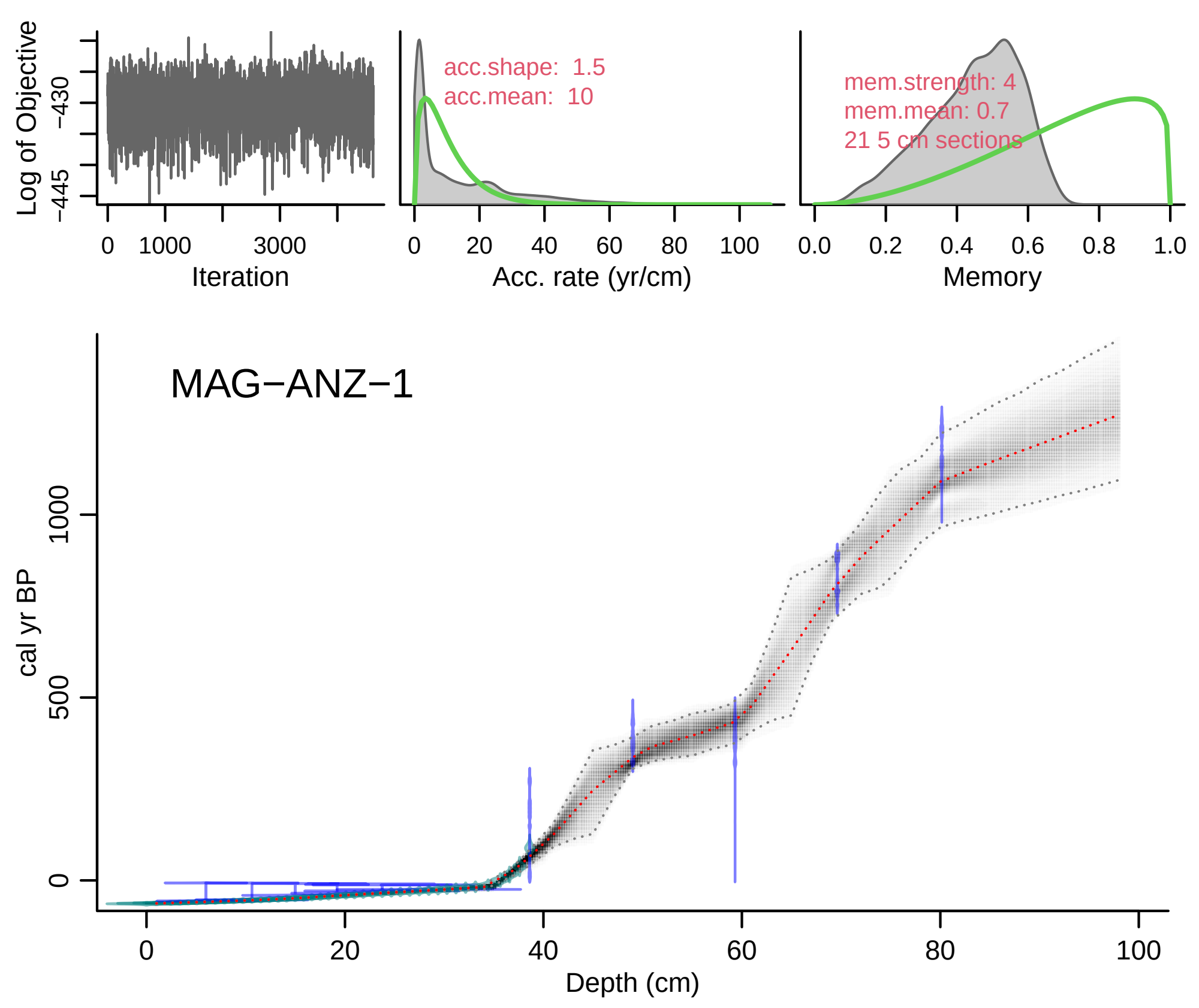

Log of Objective
−90
−100
0
500
1000
Iteration
acc.shape: 1.5
acc.mean: 20
0
50
100
200
300
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
39 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
LANG−WIY−PAL
cal yr BP
0
1000
2000
3000
4000
5000
6000
0
50
100
150
Depth (cm)

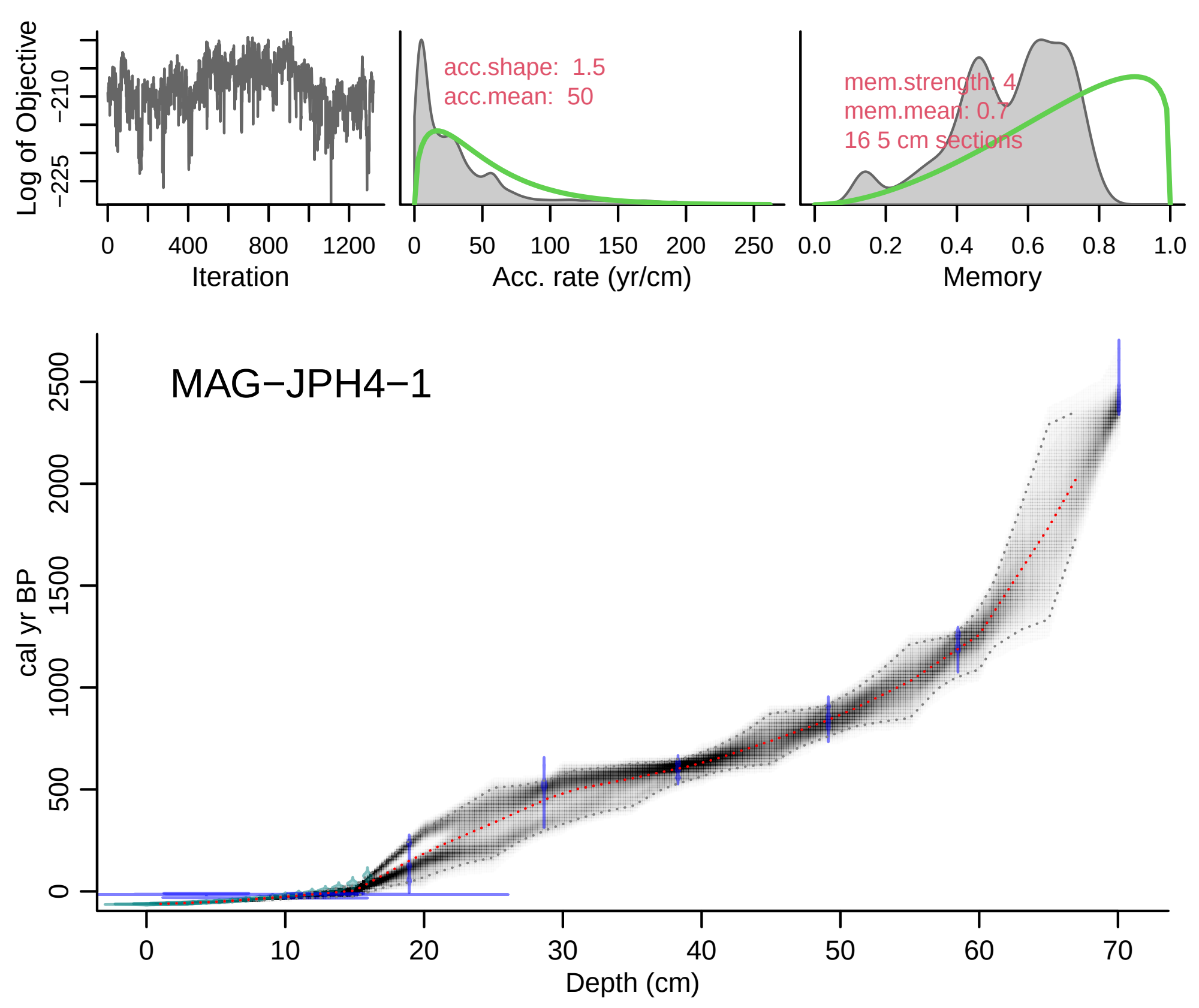

LEP−KAA−1
Depth (cm)
0
10
20
30
40
50
60
3000
2500
2000
1500
1000
500
0
cal BP

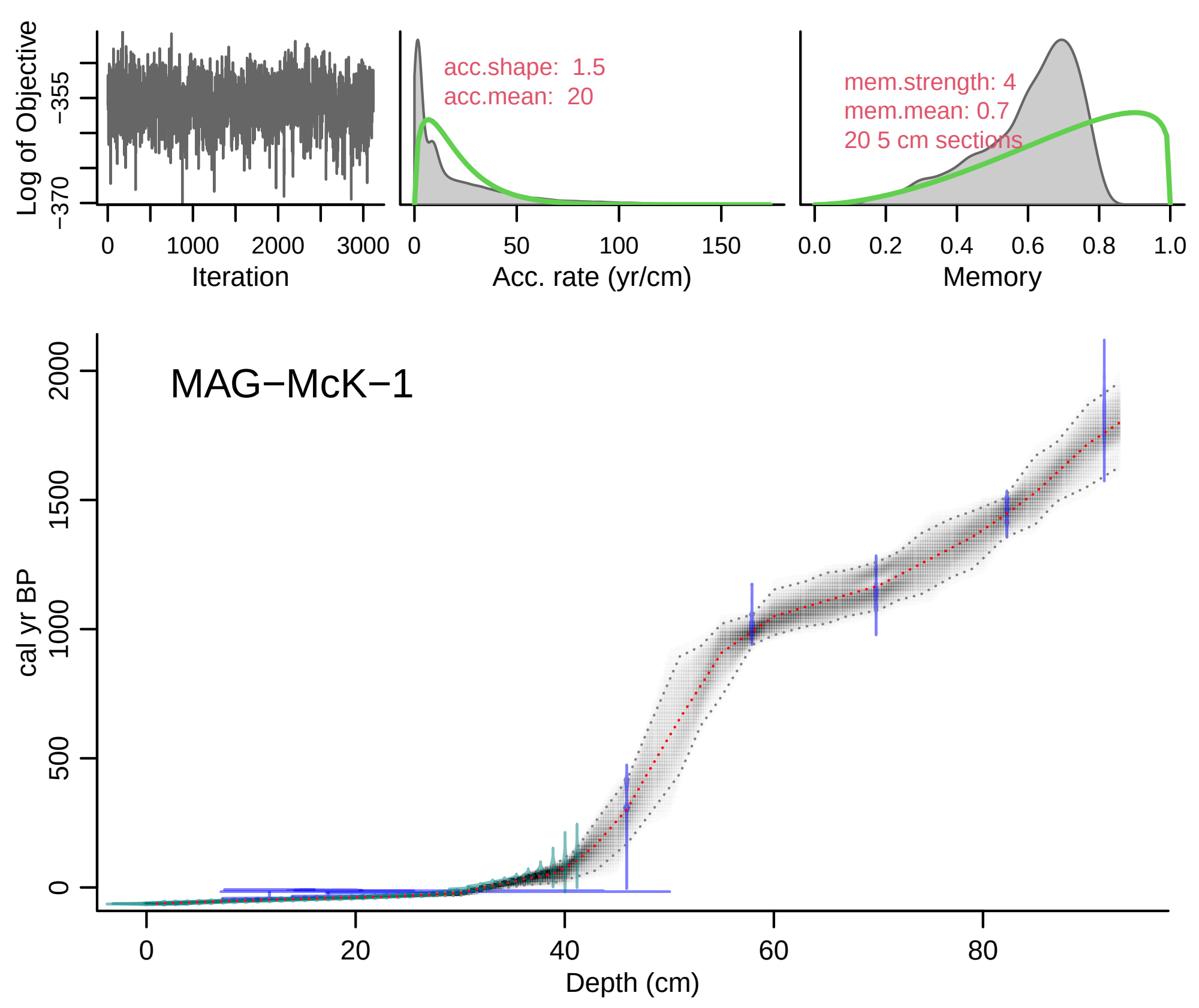

LEP−LIT−1
Depth (cm)
0
10
20
30
40
50
1500
1000
500
0
cal BP

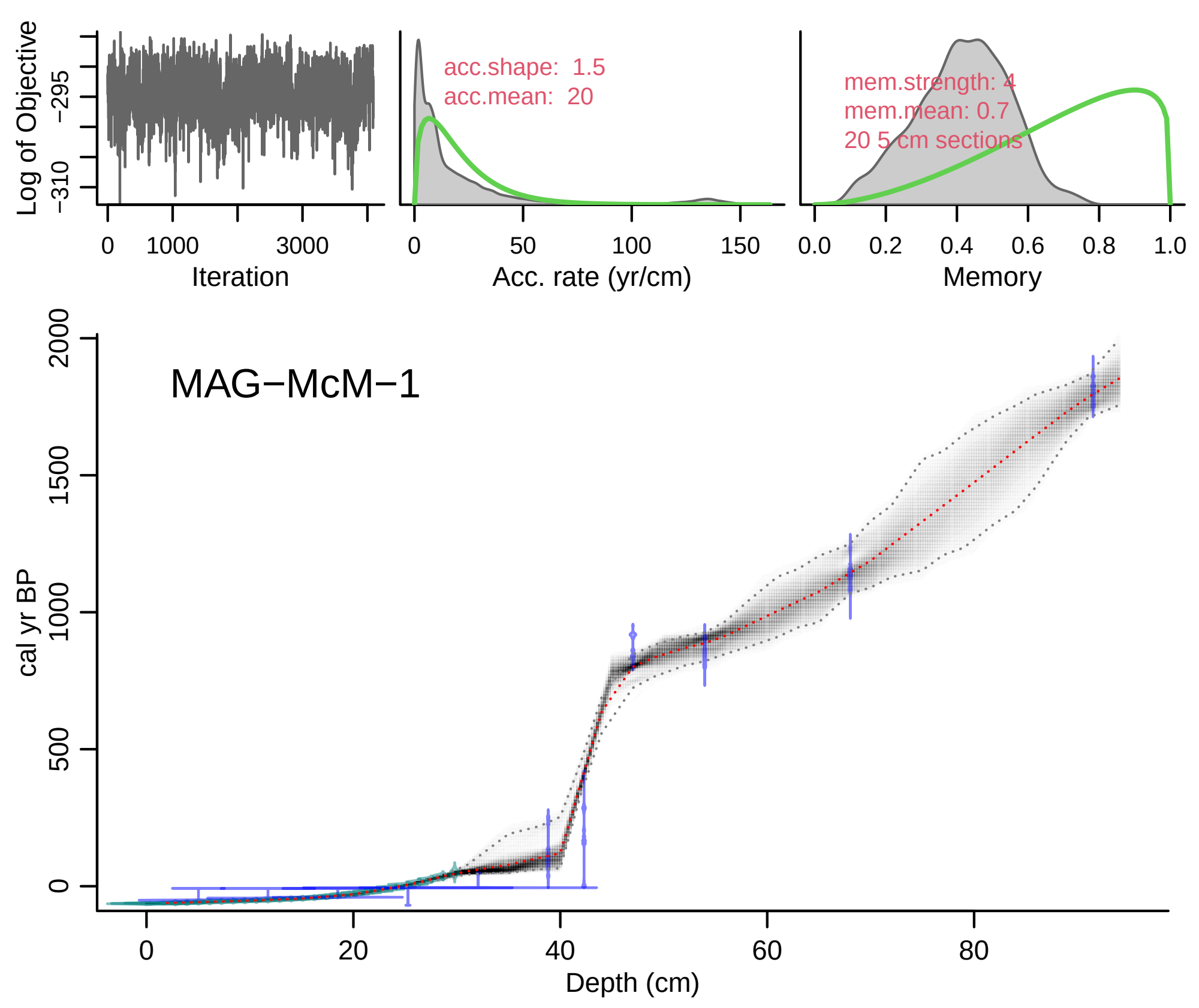

Log of Objective
−115
−130
0
500
1500
2500
Iteration
acc.shape: 1.5
acc.mean: 20
0
50
100
150
200
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
23 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
LOI−LLC−R2
cal yr BP
0
500
1000
1500
2000
2500
0
20
40
60
80
100
Depth (cm)

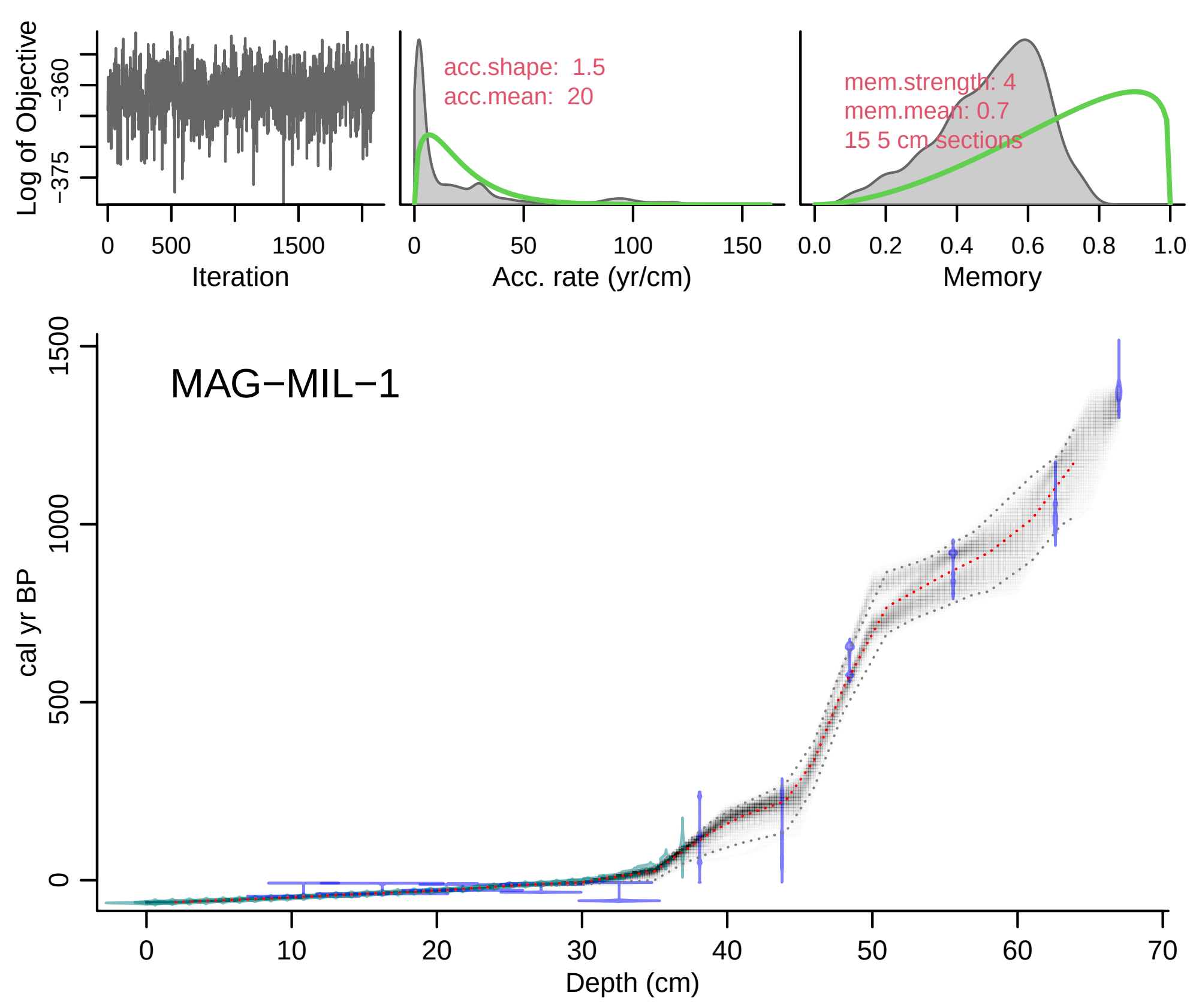

Log of Objective
−145
−155
−165
0
500
1500
Iteration
acc.shape: 1.5
acc.mean: 20
0
50
100
200
300
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
22 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
LOI−MOS−R2
cal yr BP
0
500
1000
2000
3000
0
20
40
60
80
100
Depth (cm)

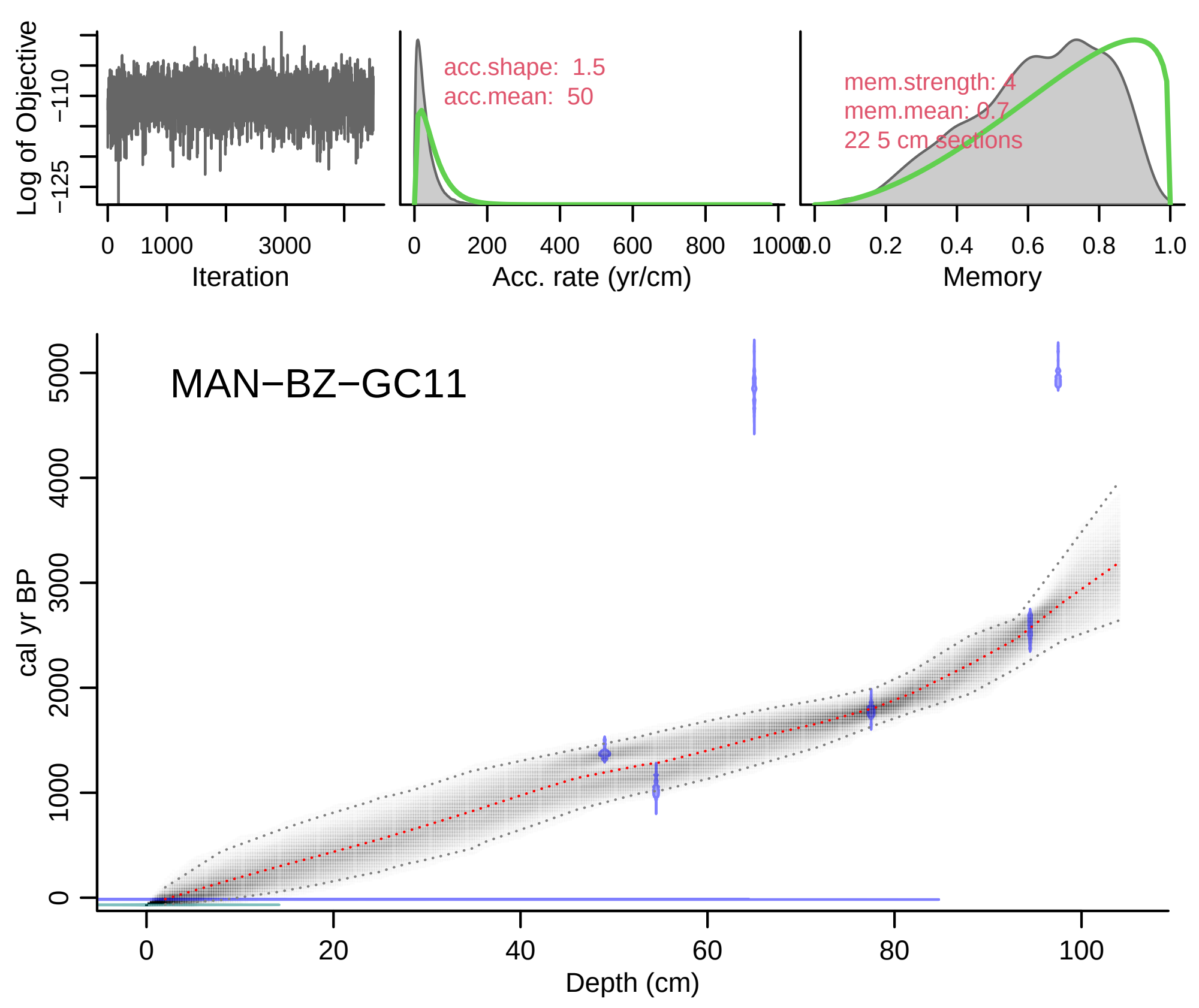

Log of Objective
−430
−445
0
1000
3000
Iteration
acc.shape: 1.5
acc.mean: 10
0
20
40
60
80
100
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
21 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
MAG−ANZ−1
cal yr BP
0
500
1000
0
20
40
60
80
100
Depth (cm)

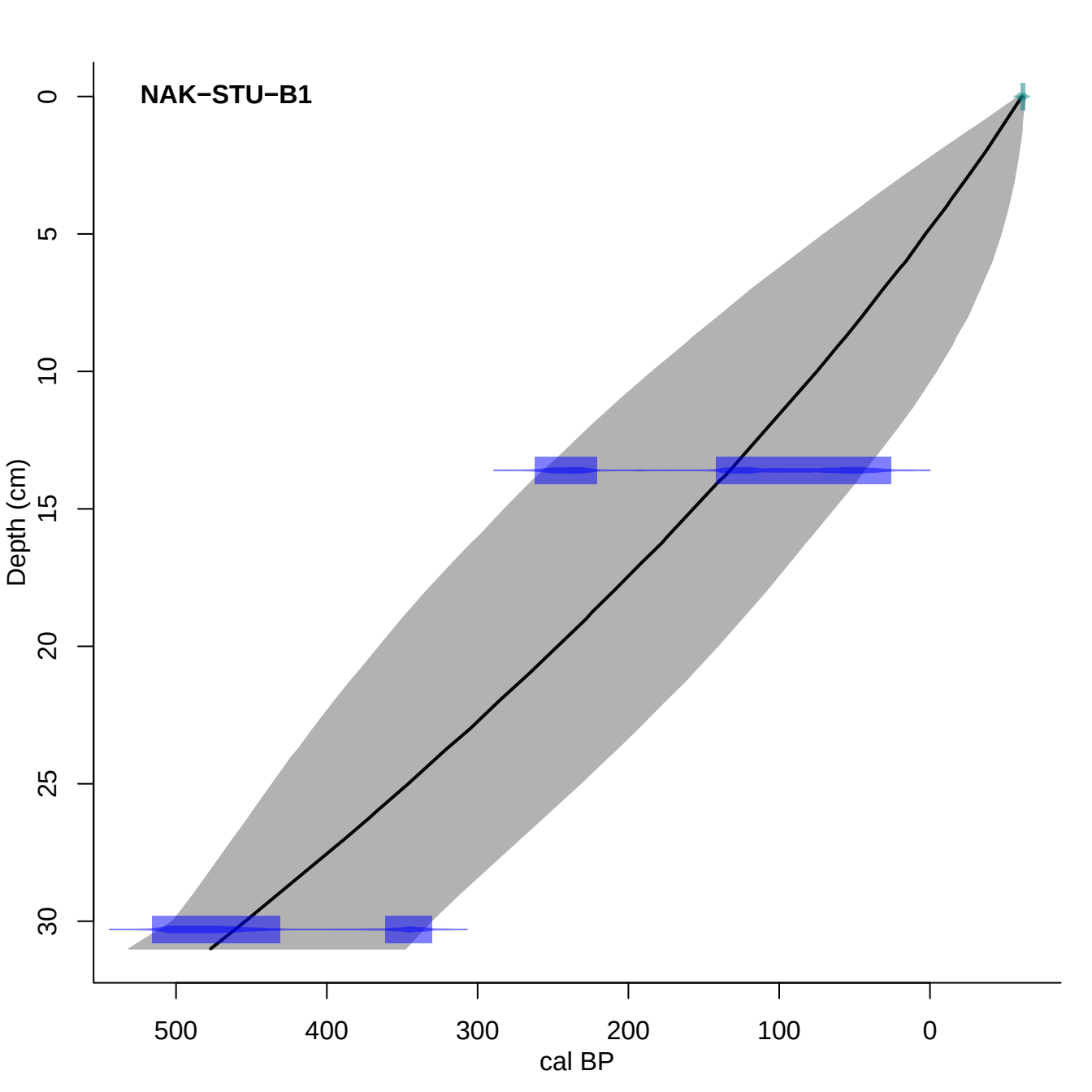

Log of Objective
−210
−225
0
400
800
1200
Iteration
acc.shape: 1.5
acc.mean: 50
0
50
100
150
200
250
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
16 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
MAG−JPH4−1
cal yr BP
0
500
1000
1500
2000
2500
0
10
20
30
40
50
60
70
Depth (cm)

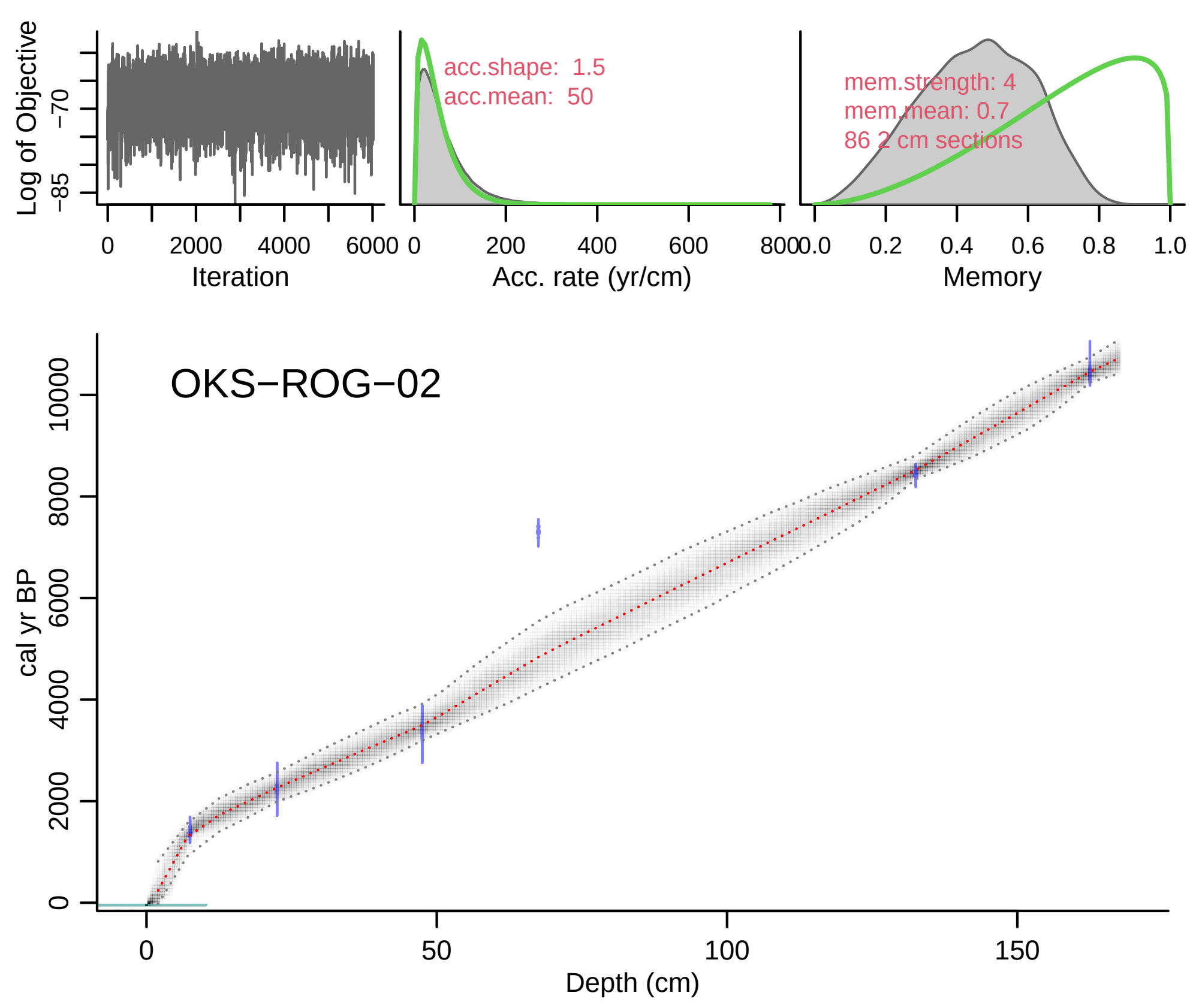

Log of Objective
−355
−370
0
1000
2000
3000
Iteration
acc.shape: 1.5
acc.mean: 20
0
50
100
150
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
20 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
MAG−McK−1
cal yr BP
0
500
1000
1500
2000
0
20
40
60
80
Depth (cm)

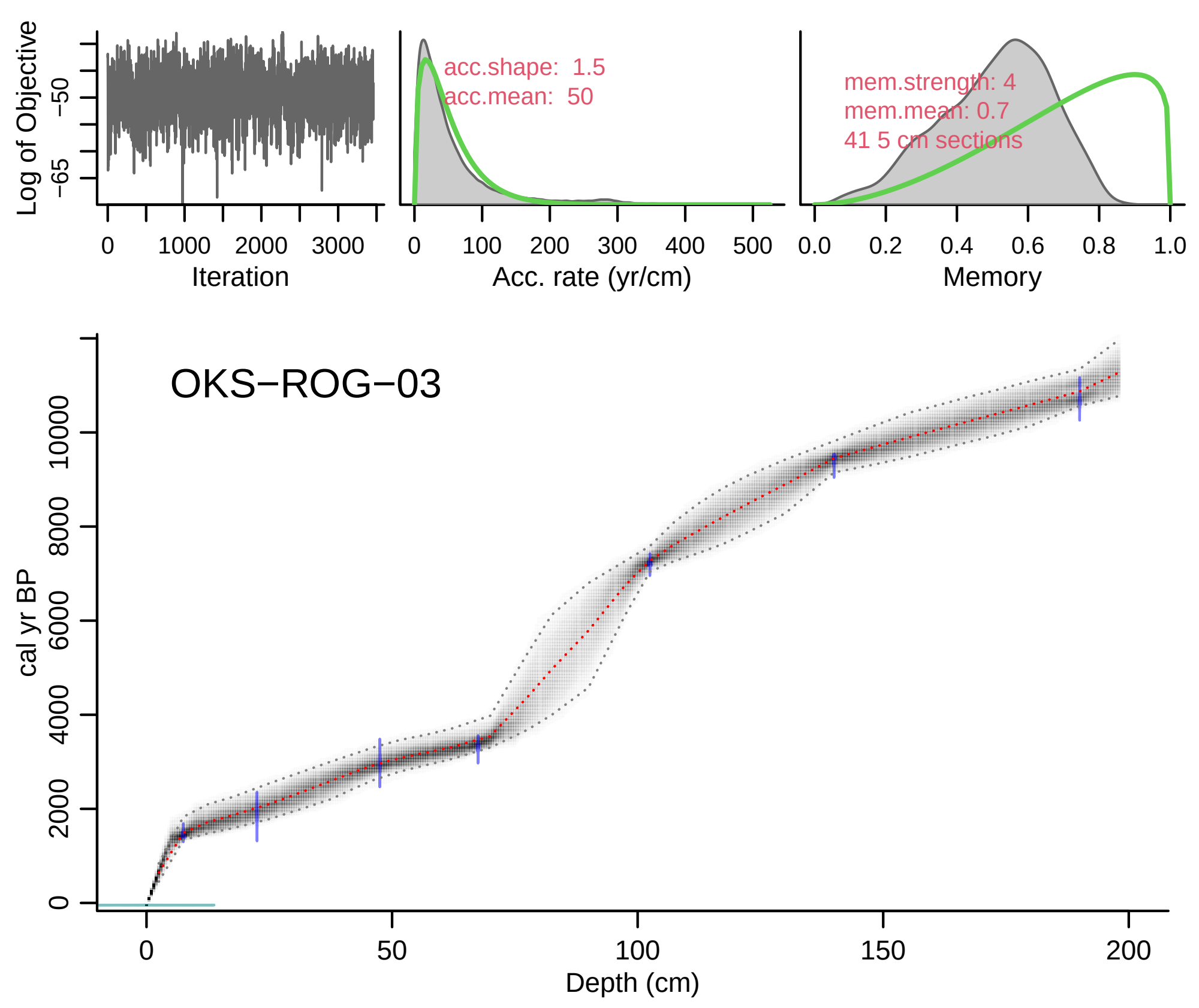

Log of Objective
−295
−310
0
1000
3000
Iteration
acc.shape: 1.5
acc.mean: 20
0
50
100
150
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
20 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
MAG−McM−1
cal yr BP
0
500
1000
1500
2000
0
20
40
60
80
Depth (cm)

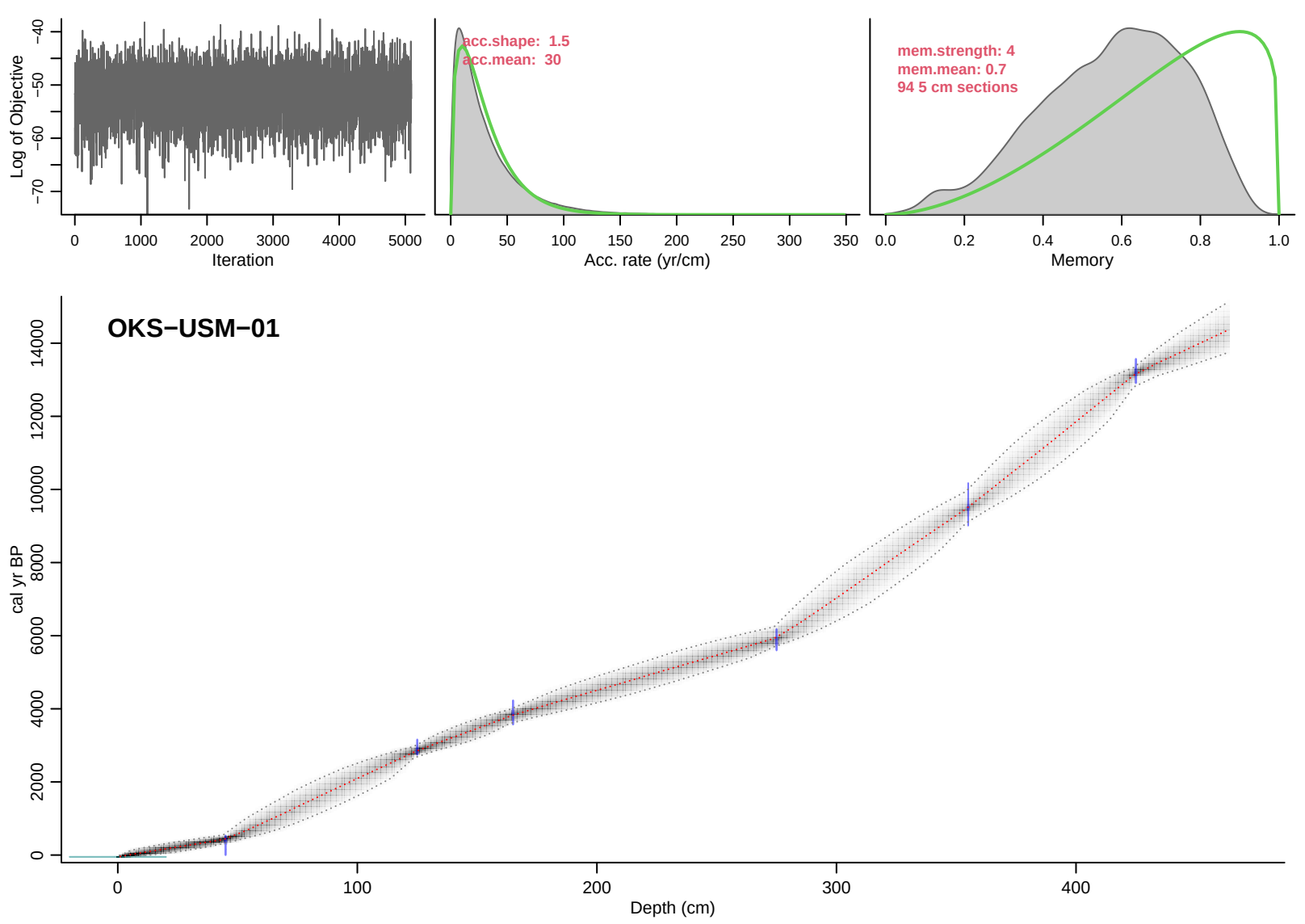

Log of Objective
−360
−375
0
500
1500
Iteration
acc.shape: 1.5
acc.mean: 20
0
50
100
150
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
15 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
MAG−MIL−1
cal yr BP
0
500
1000
1500
0
10
20
30
40
50
60
70
Depth (cm)

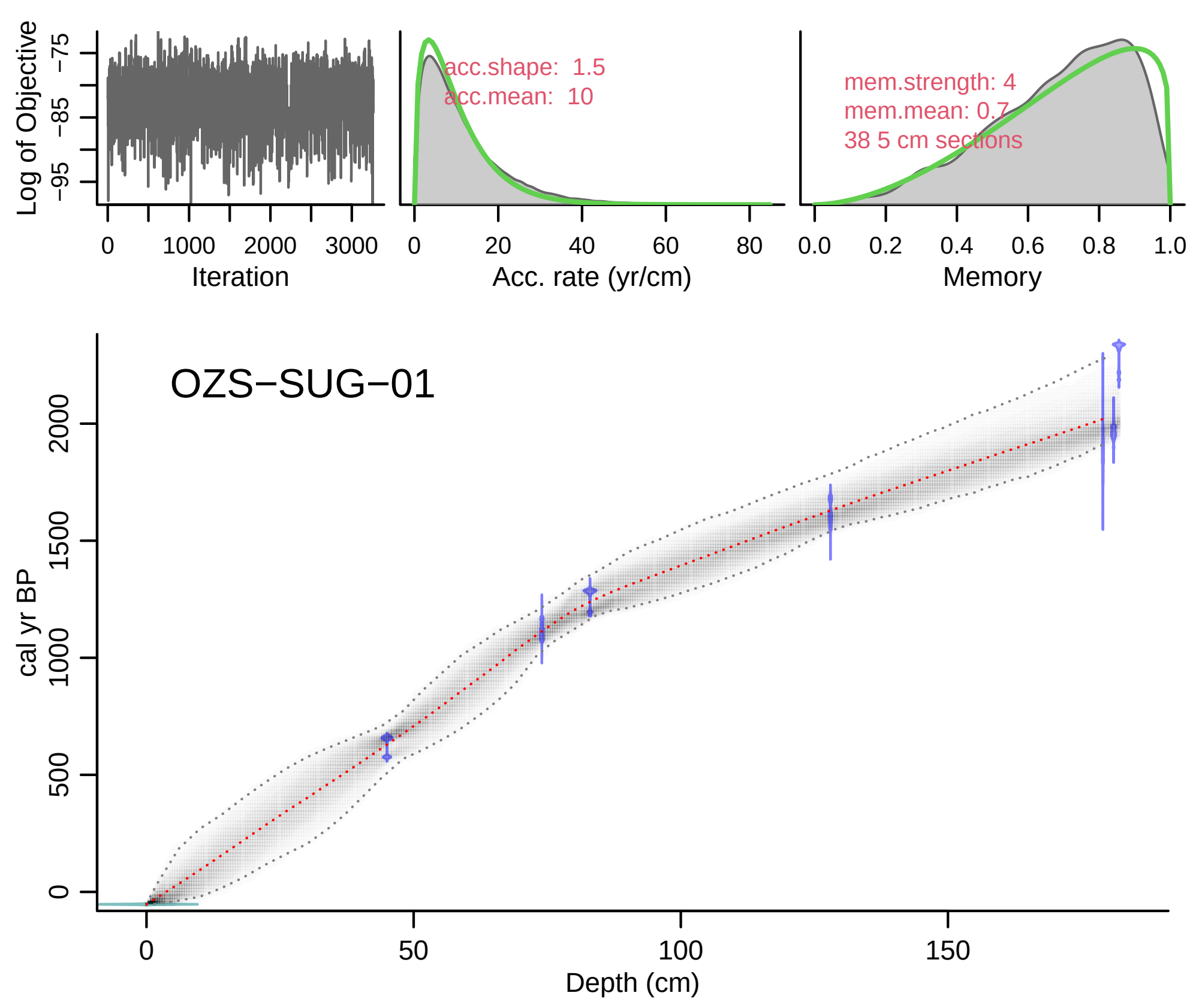

Log of Objective
−110
−125
0
1000
3000
Iteration
acc.shape: 1.5
acc.mean: 50
0
200
400
600
800
1000
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
22 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
MAN−BZ−GC11
cal yr BP
0
1000
2000
3000
4000
5000
0
20
40
60
80
100
Depth (cm)

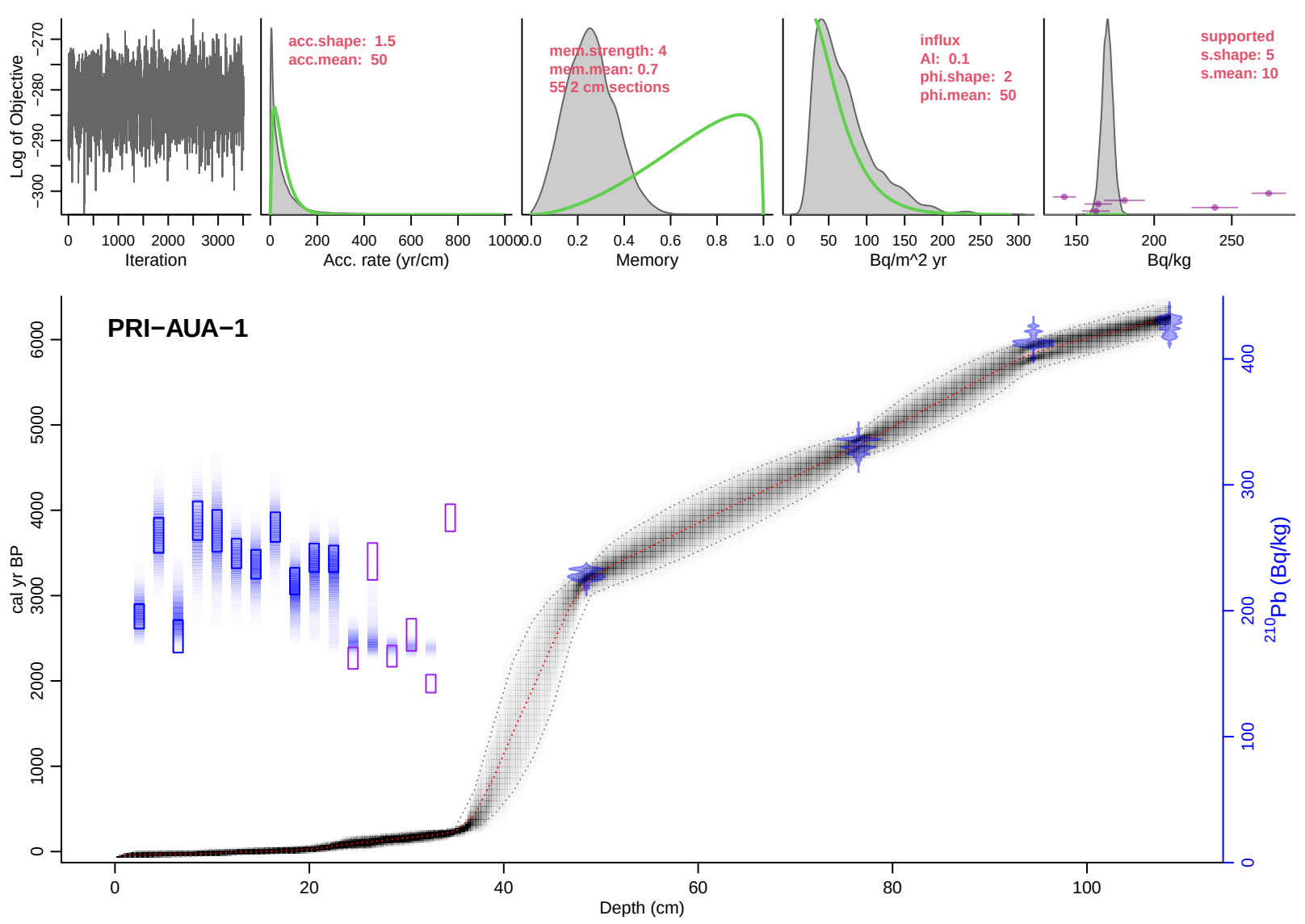

NAK−STU−B1
Depth (cm)
0
5
10
15
20
25
30
500
400
300
200
100
0
cal BP

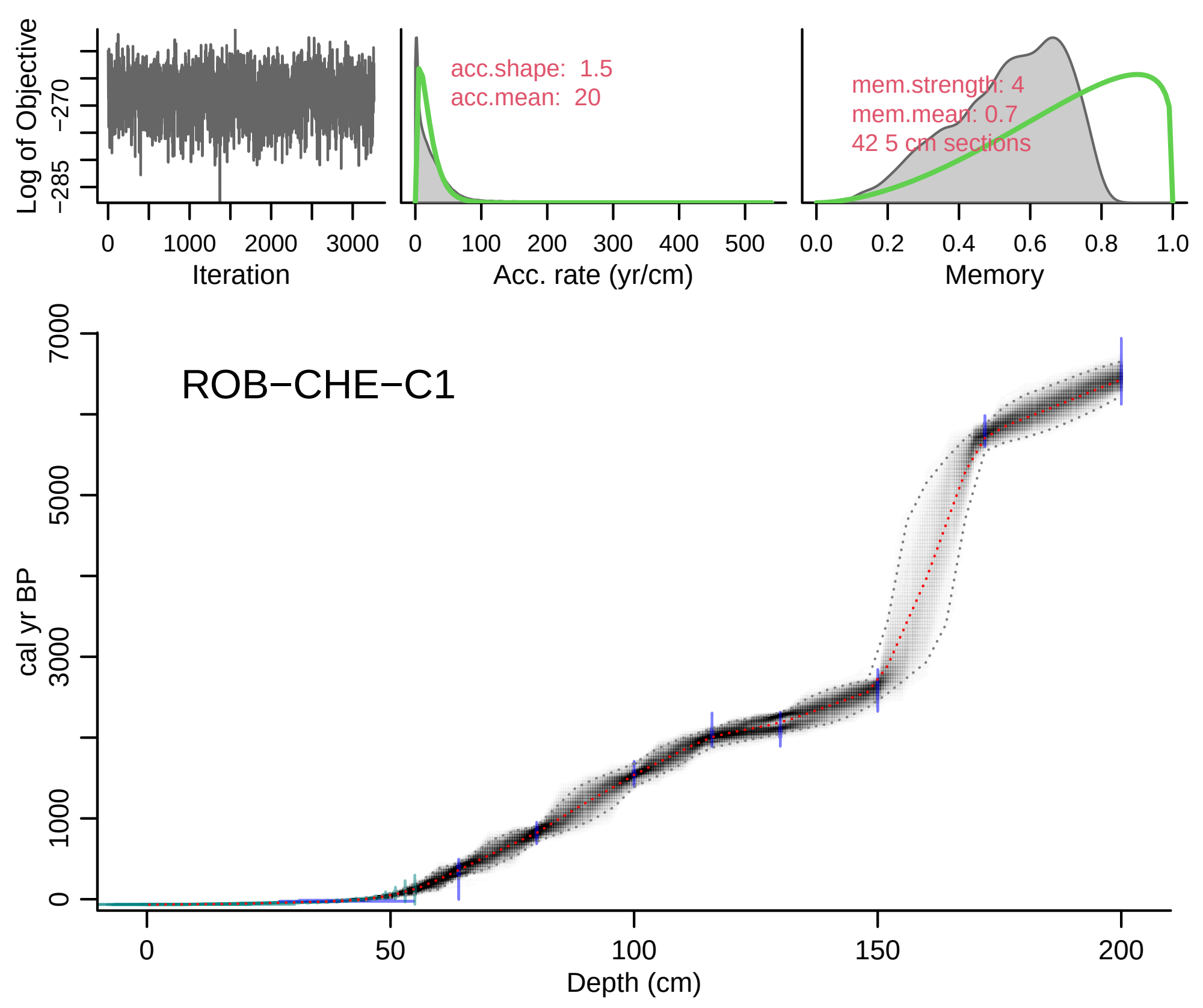

Log of Objective
−85
−70
0
2000
4000
6000
Iteration
acc.shape: 1.5
acc.mean: 50
0
200
400
600
800
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
86 2 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
OKS−ROG−02
cal yr BP
0
2000
4000
6000
8000
10000
0
50
100
150
Depth (cm)

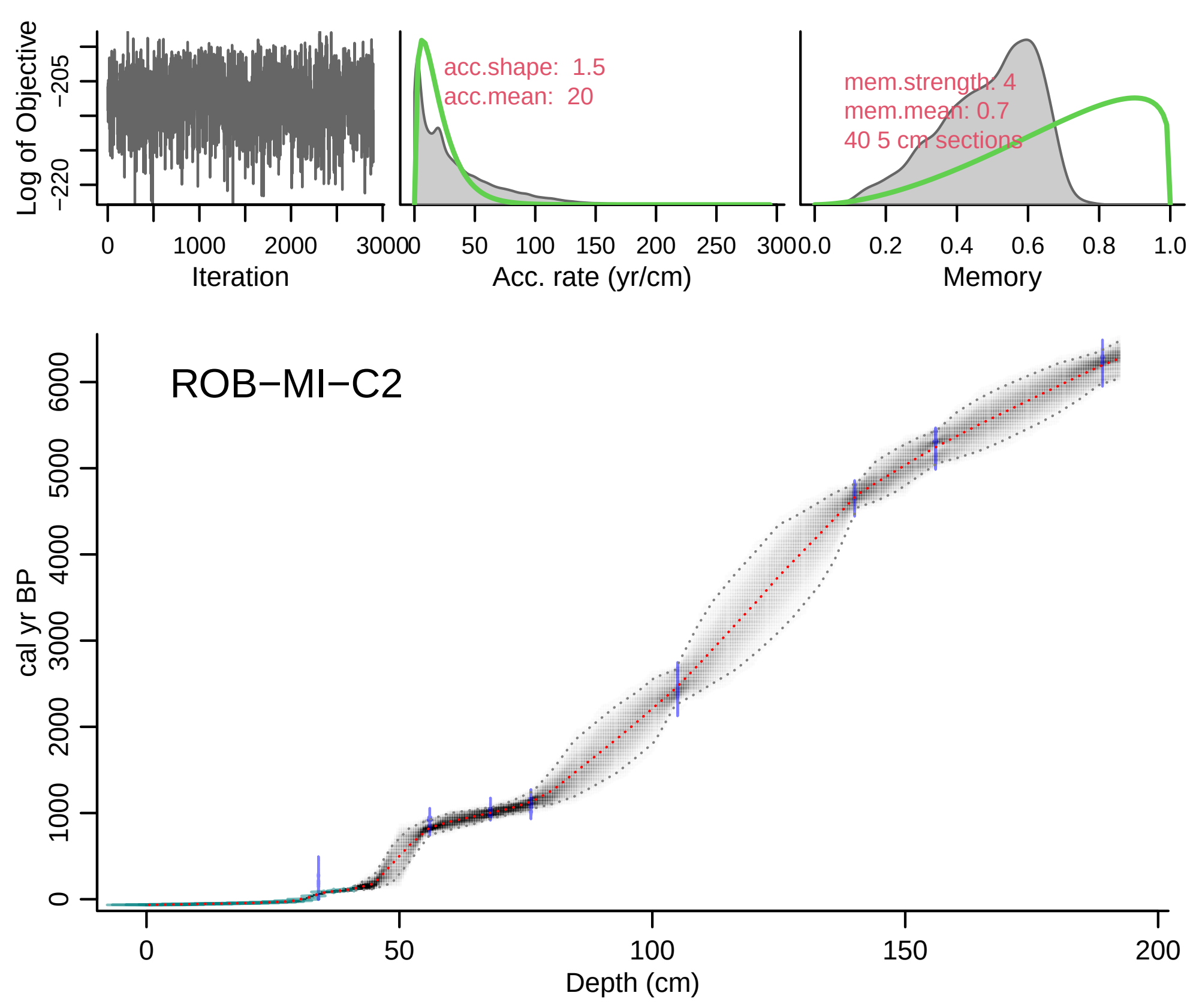

Log of Objective
−50
−65
0
1000
2000
3000
Iteration
acc.shape: 1.5
acc.mean: 50
0
100
200
300
400
500
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
41 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
OKS−ROG−03
cal yr BP
0
2000
4000
6000
8000
10000
0
50
100
150
200
Depth (cm)

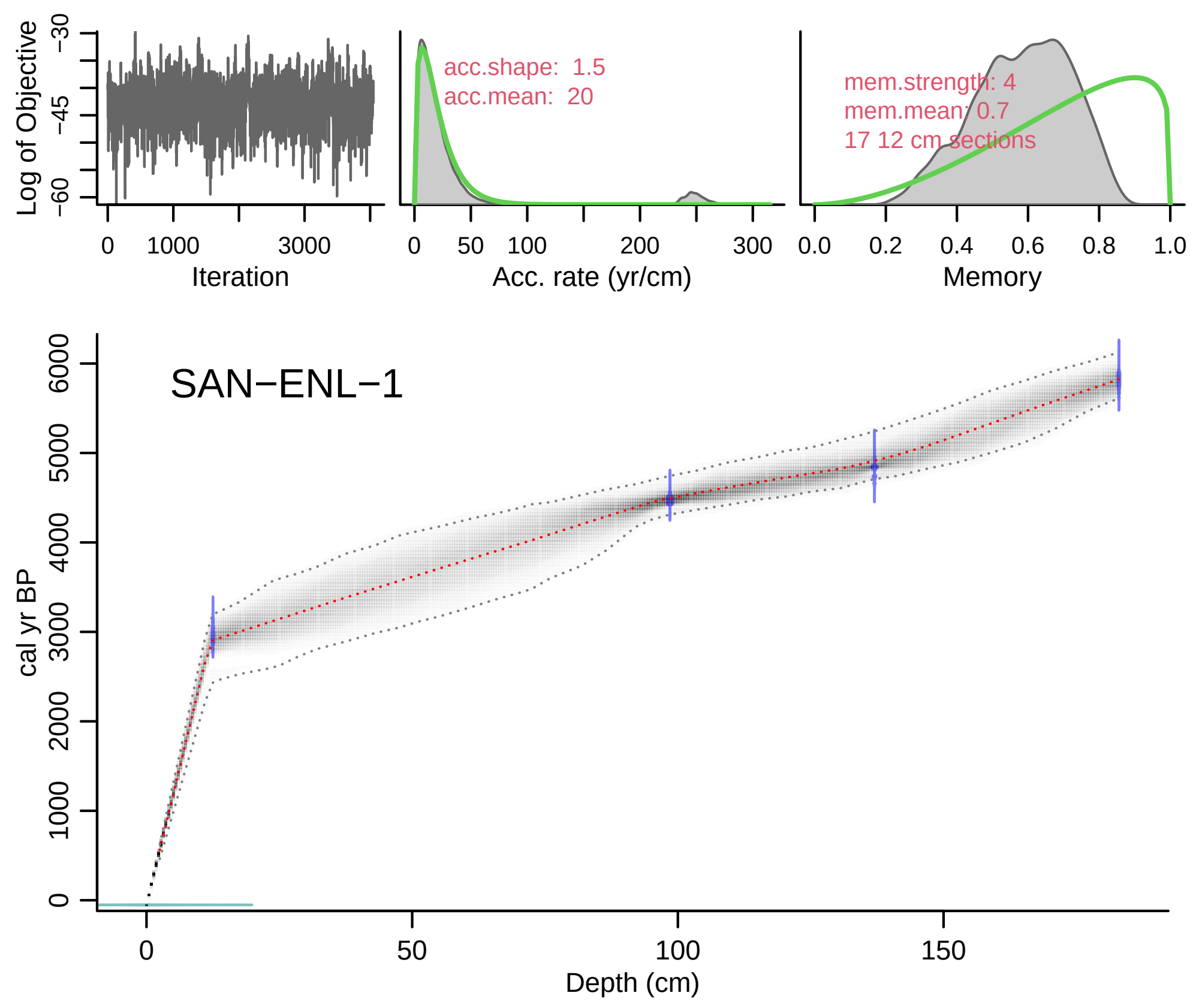

Log of Objective
−40
−50
−60
−70
0
1000
2000
3000
4000
5000
Iteration
acc.shape: 1.5
acc.mean: 30
0
50
100
150
200
250
300
350
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
94 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
OKS−USM−01
cal yr BP
0
2000
4000
6000
8000
10000
12000
14000
0
100
200
300
400
Depth (cm)

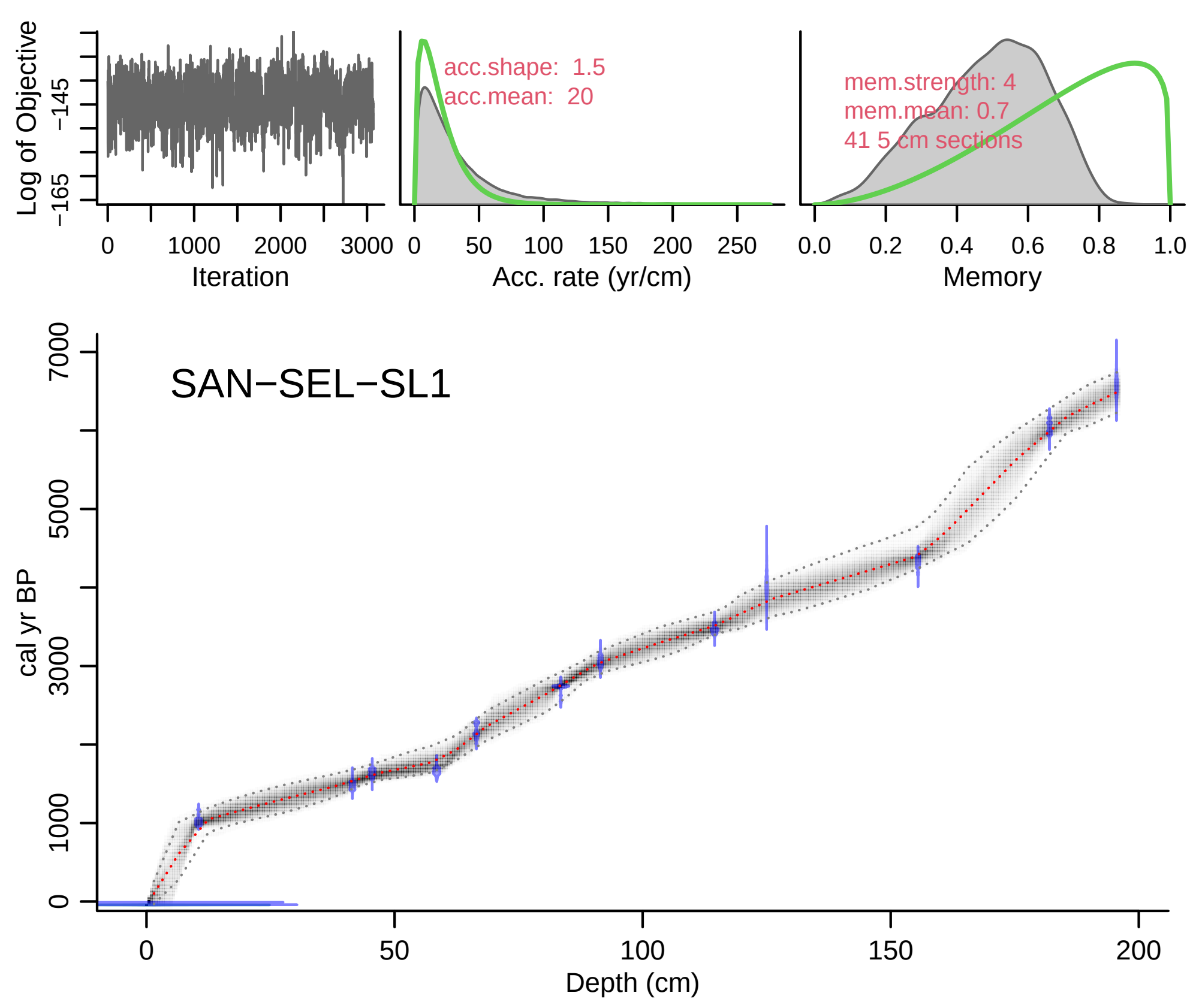

Log of Objective
−75
−85
−95
0
1000
2000
3000
Iteration
acc.shape: 1.5
acc.mean: 10
0
20
40
60
80
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
38 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
OZS−SUG−01
cal yr BP
0
500
1000
1500
2000
0
50
100
150
Depth (cm)

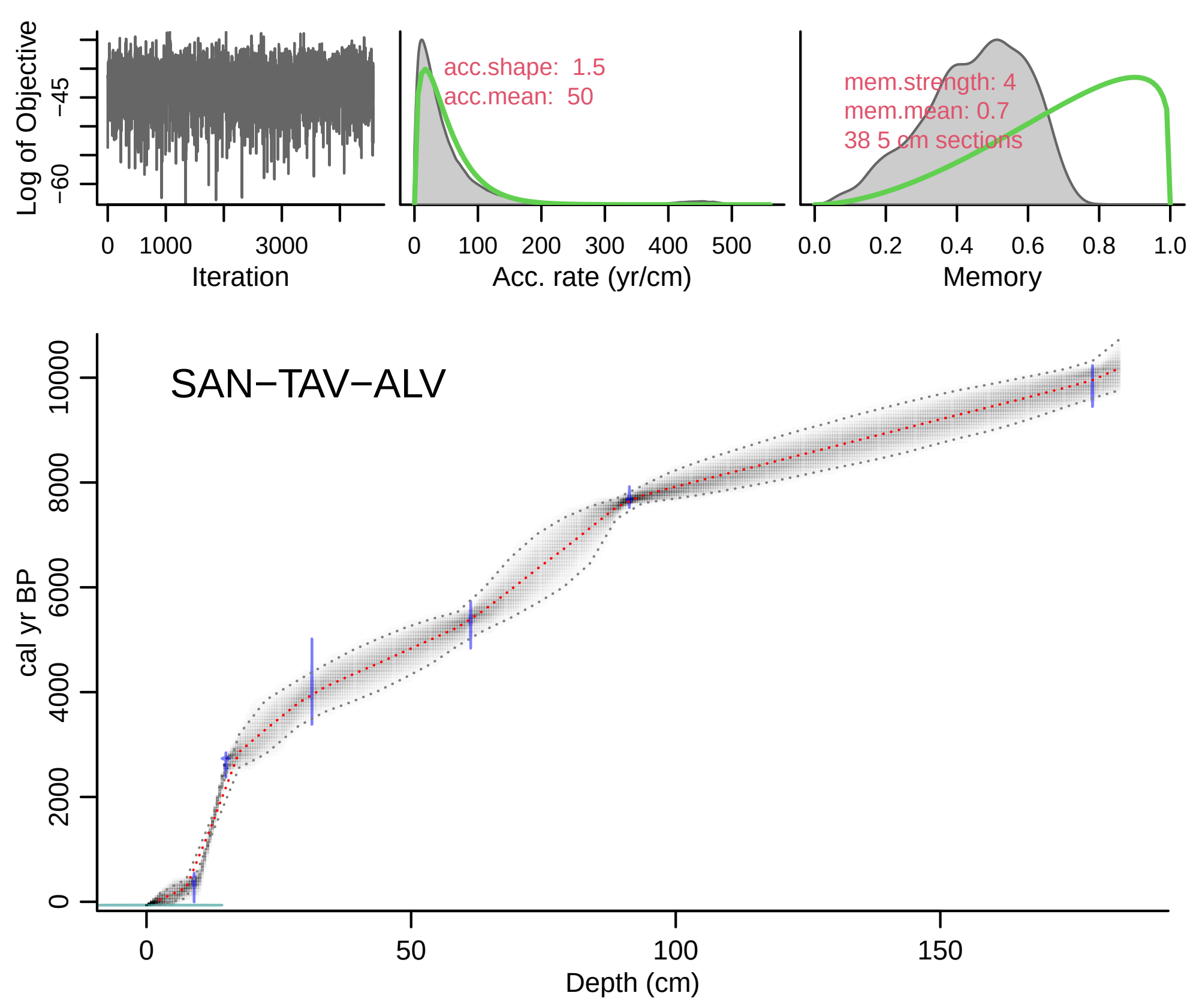

Log of Objective
−270
−280
−290
−300
0
1000
2000
3000
Iteration
acc.shape: 1.5
acc.mean: 50
0
200
400
600
800
1000
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
55 2 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
influx
AI: 0.1
phi.shape: 2
phi.mean: 50
0
50
100
150
200
250
300
Bq/m^2 yr
supported
s.shape: 5
s.mean: 10
150
200
250
Bq/kg
PRI−AUA−1
cal yr BP
0
1000
2000
3000
4000
5000
6000
Depth (cm)
0
20
40
60
80
100
210Pb (Bq/kg)
0
100
200
300
400

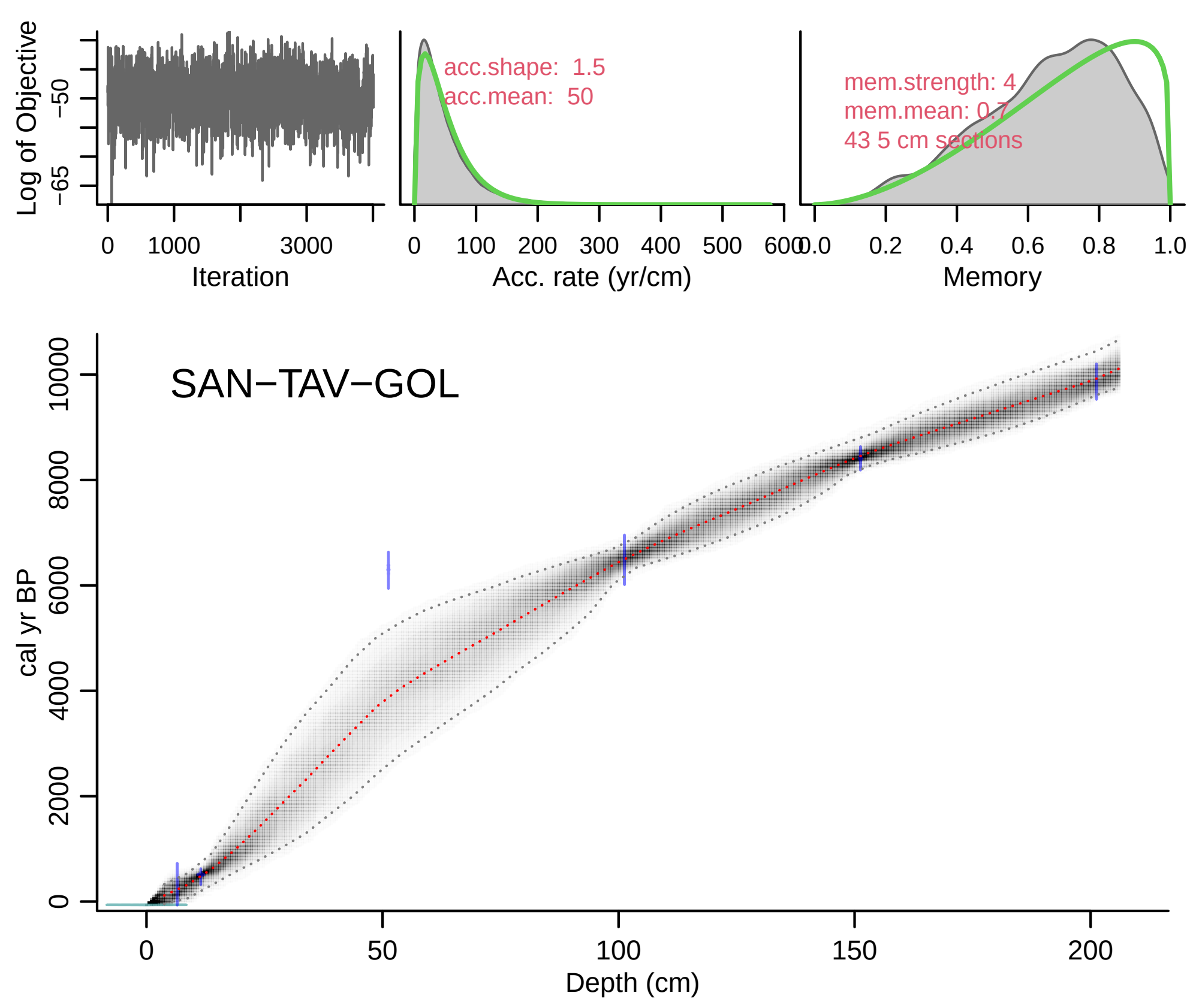

Log of Objective
−285
−270
0
1000
2000
3000
Iteration
acc.shape: 1.5
acc.mean: 20
0
100
200
300
400
500
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
42 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
ROB−CHE−C1
cal yr BP
0
1000
3000
5000
7000
0
50
100
150
200
Depth (cm)

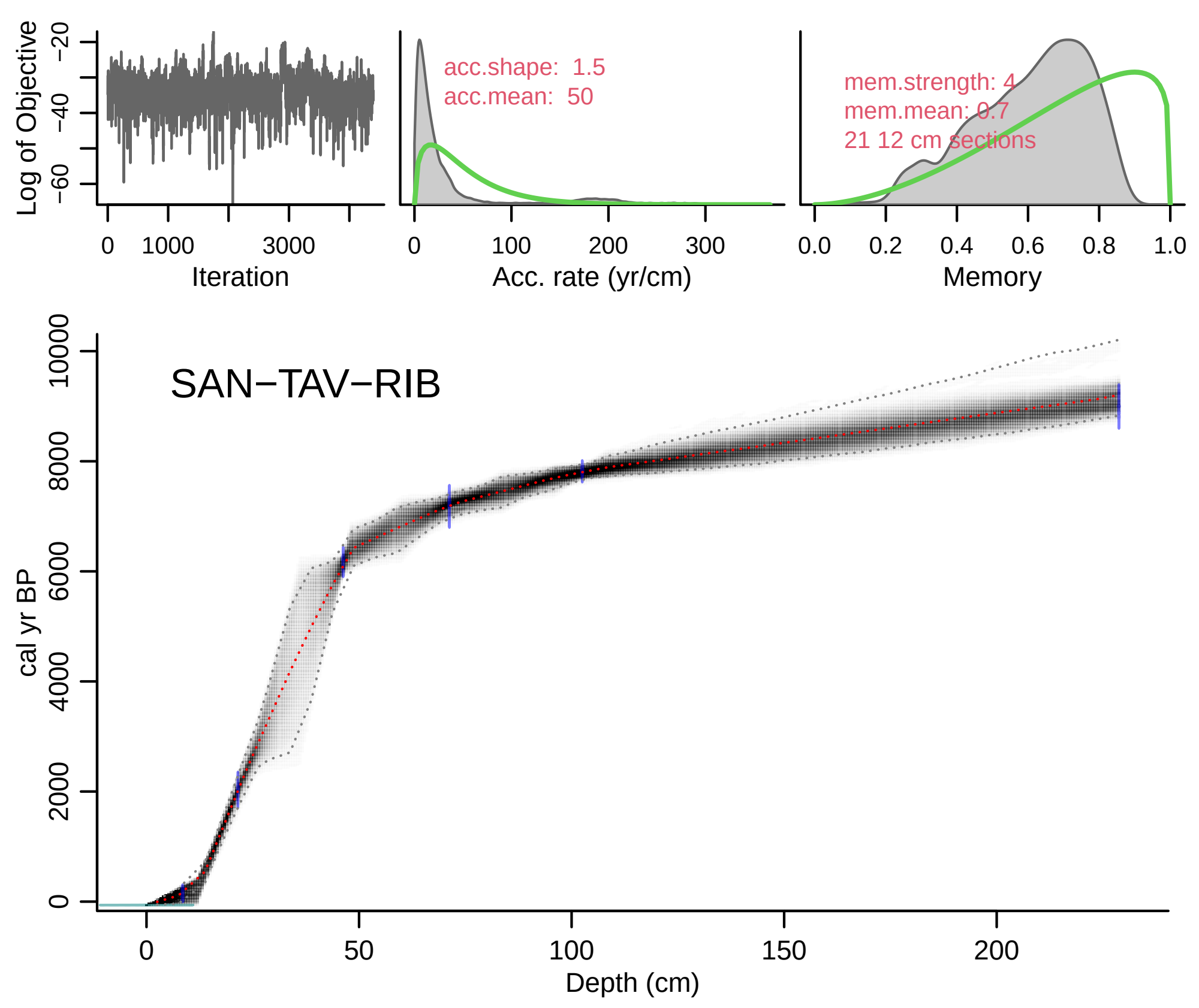

Log of Objective
−205
−220
0
1000
2000
3000
Iteration
acc.shape: 1.5
acc.mean: 20
50
100
150
200
250
300
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
40 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
ROB−MI−C2
cal yr BP
0
1000
2000
3000
4000
5000
6000
0
50
100
150
200
Depth (cm)

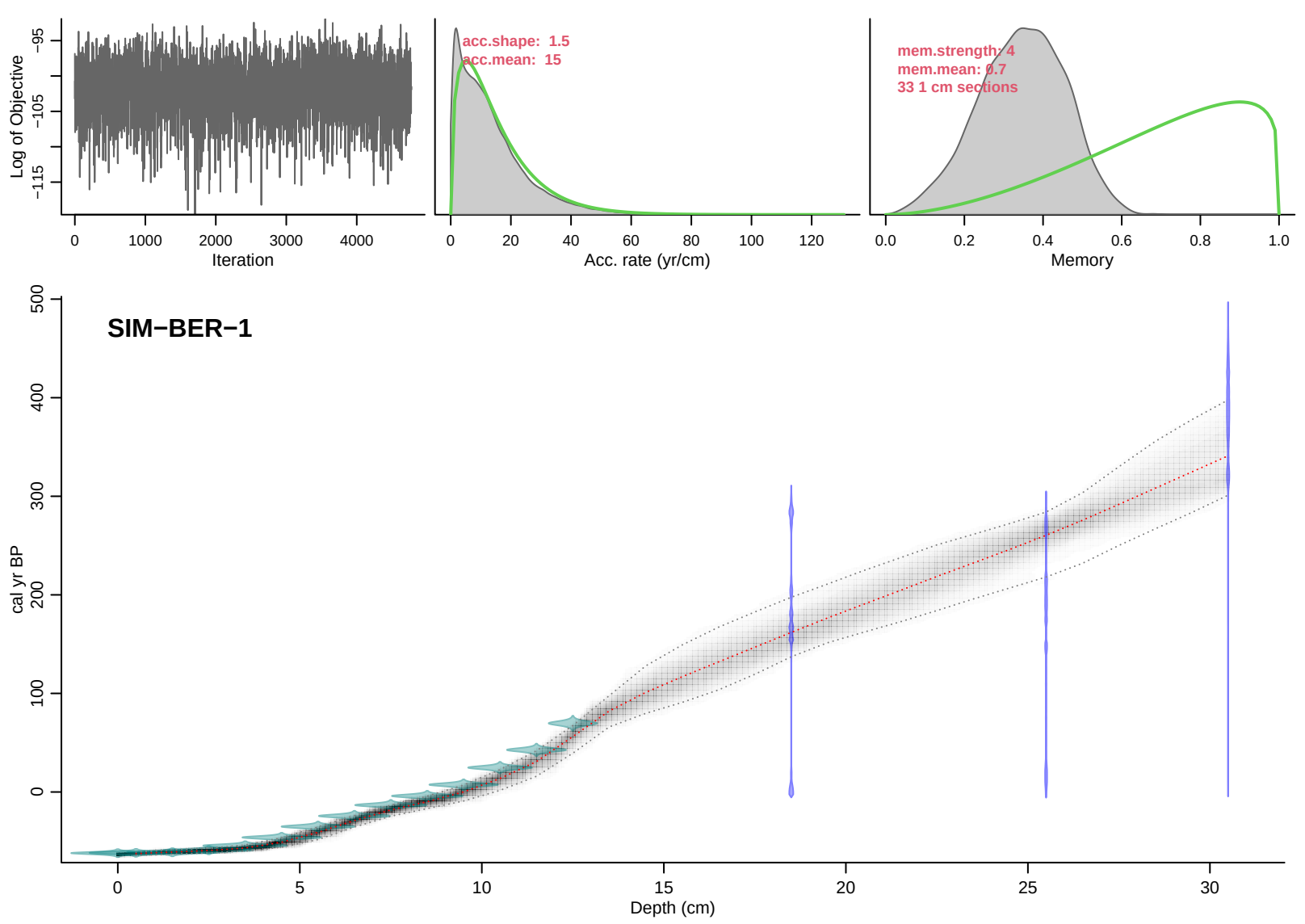

Log of Objective
−30
−45
−60
0
1000
3000
Iteration
acc.shape: 1.5
acc.mean: 20
0
50
100
200
300
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
17 12 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
SAN−ENL−1
cal yr BP
0
1000
2000
3000
4000
5000
6000
0
50
100
150
Depth (cm)

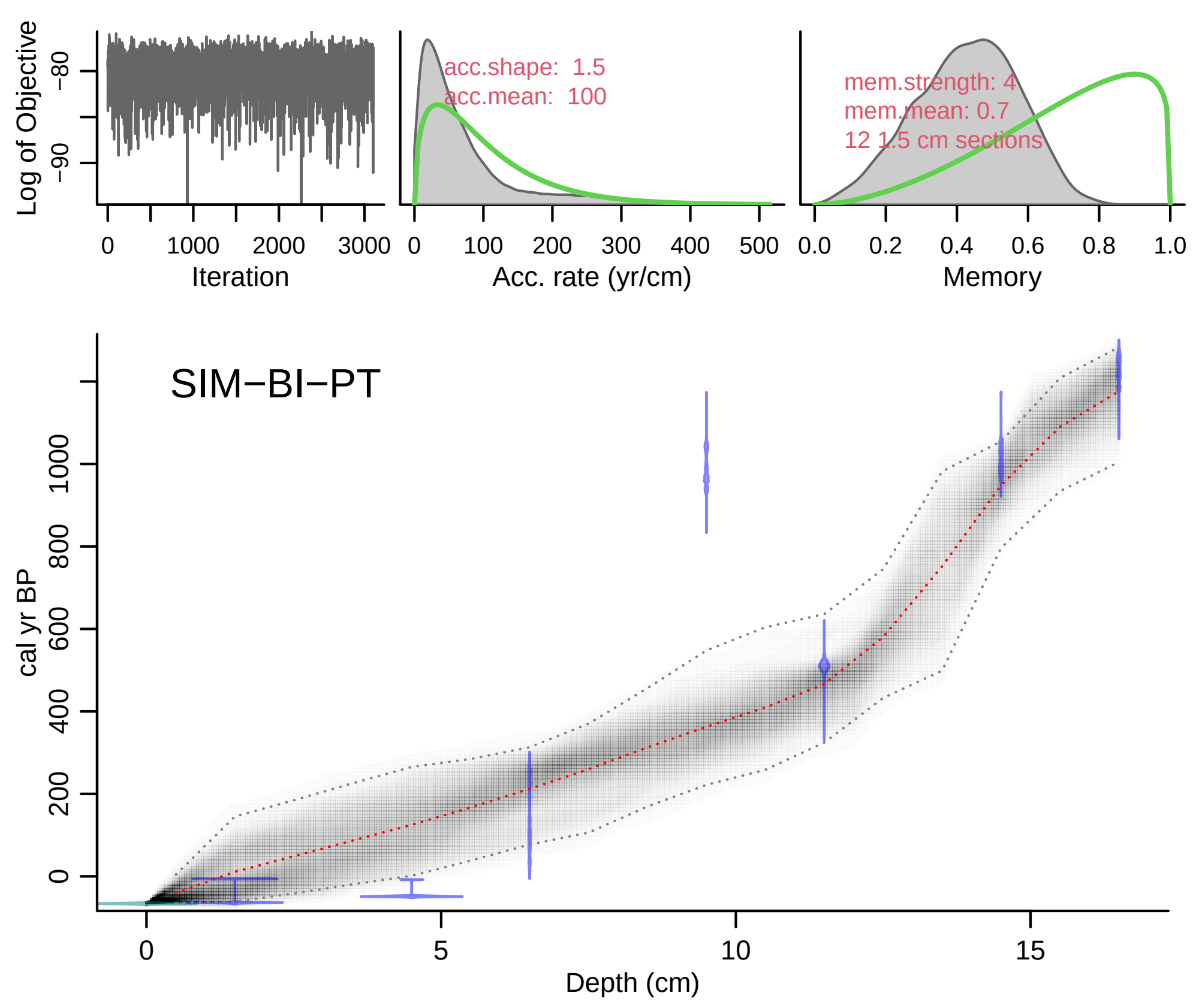

Log of Objective
−145
−165
0
1000
2000
3000
Iteration
acc.shape: 1.5
acc.mean: 20
0
50
100
150
200
250
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
41 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
SAN−SEL−SL1
cal yr BP
0
1000
3000
5000
7000
0
50
100
150
200
Depth (cm)

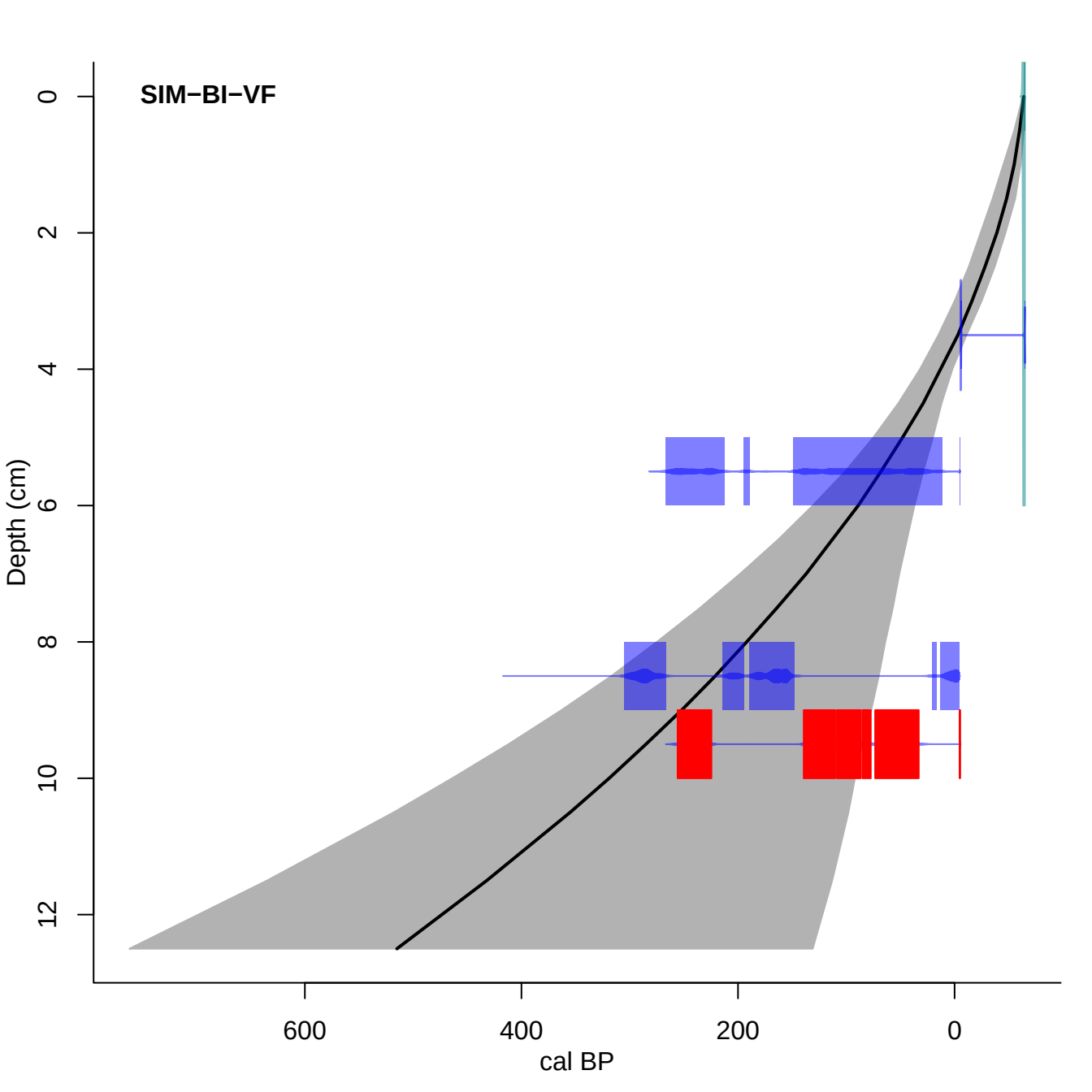

Log of Objective
−45
−60
0
1000
3000
Iteration
acc.shape: 1.5
acc.mean: 50
0
100
200
300
400
500
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
38 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
SAN−TAV−ALV
cal yr BP
0
2000
4000
6000
8000
10000
0
50
100
150
Depth (cm)

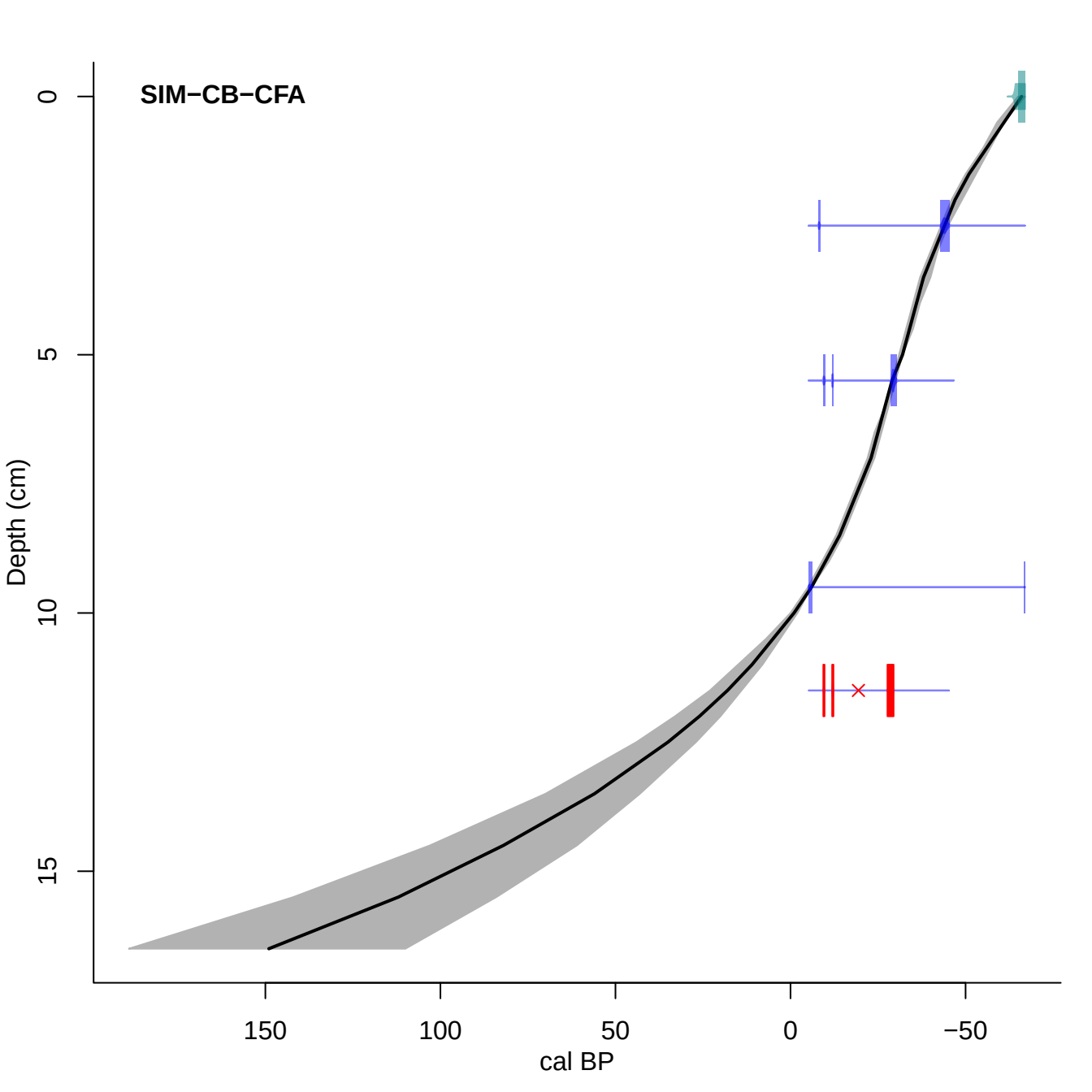

Log of Objective
−50
−65
0
1000
3000
Iteration
acc.shape: 1.5
acc.mean: 50
0
100
200
300
400
500
600
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
43 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
SAN−TAV−GOL
cal yr BP
0
2000
4000
6000
8000
10000
0
50
100
150
200
Depth (cm)

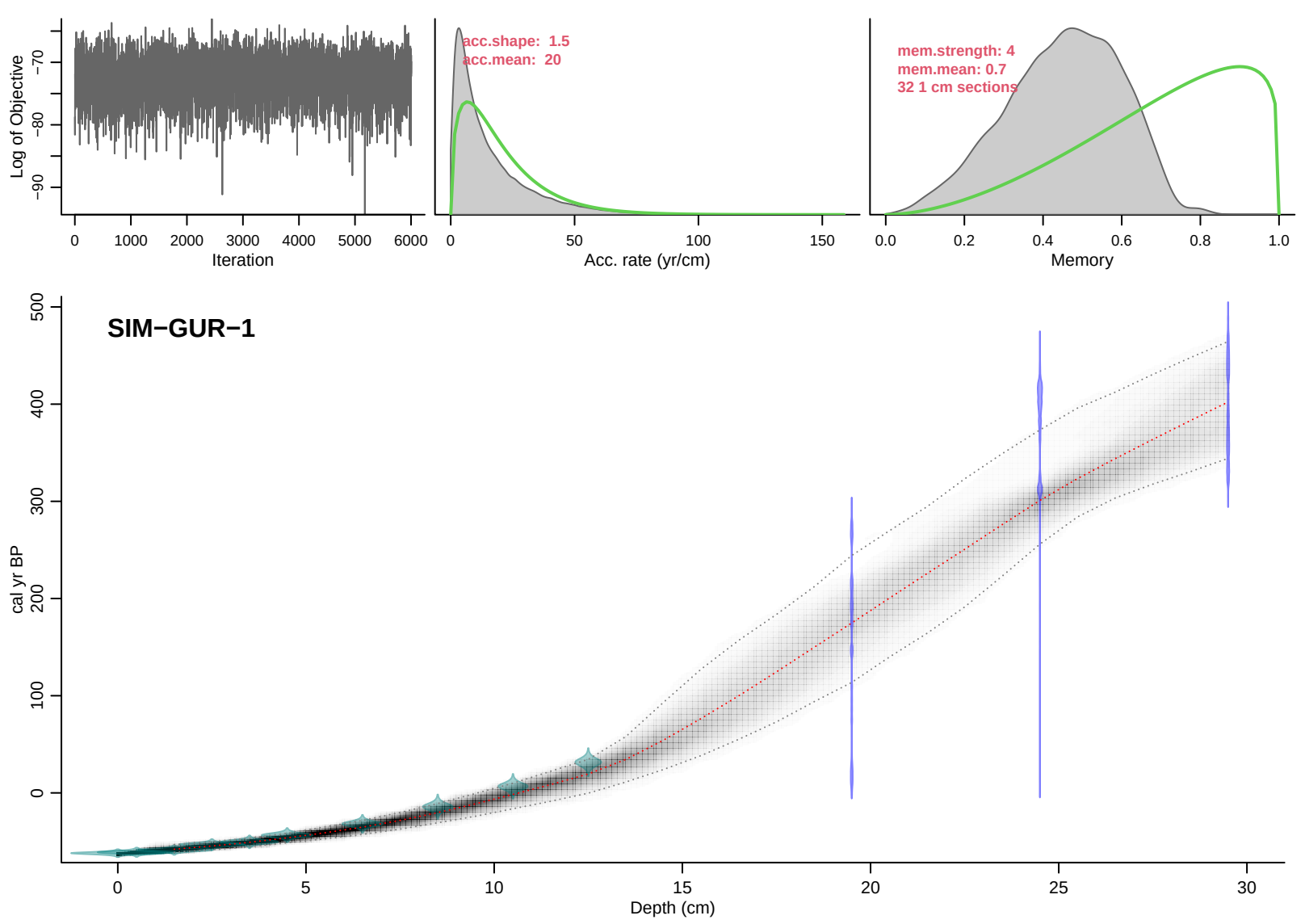

Log of Objective
−20
−40
−60
0
1000
3000
Iteration
acc.shape: 1.5
acc.mean: 50
0
100
200
300
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
21 12 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
SAN−TAV−RIB
cal yr BP
0
2000
4000
6000
8000
10000
0
50
100
150
200
Depth (cm)

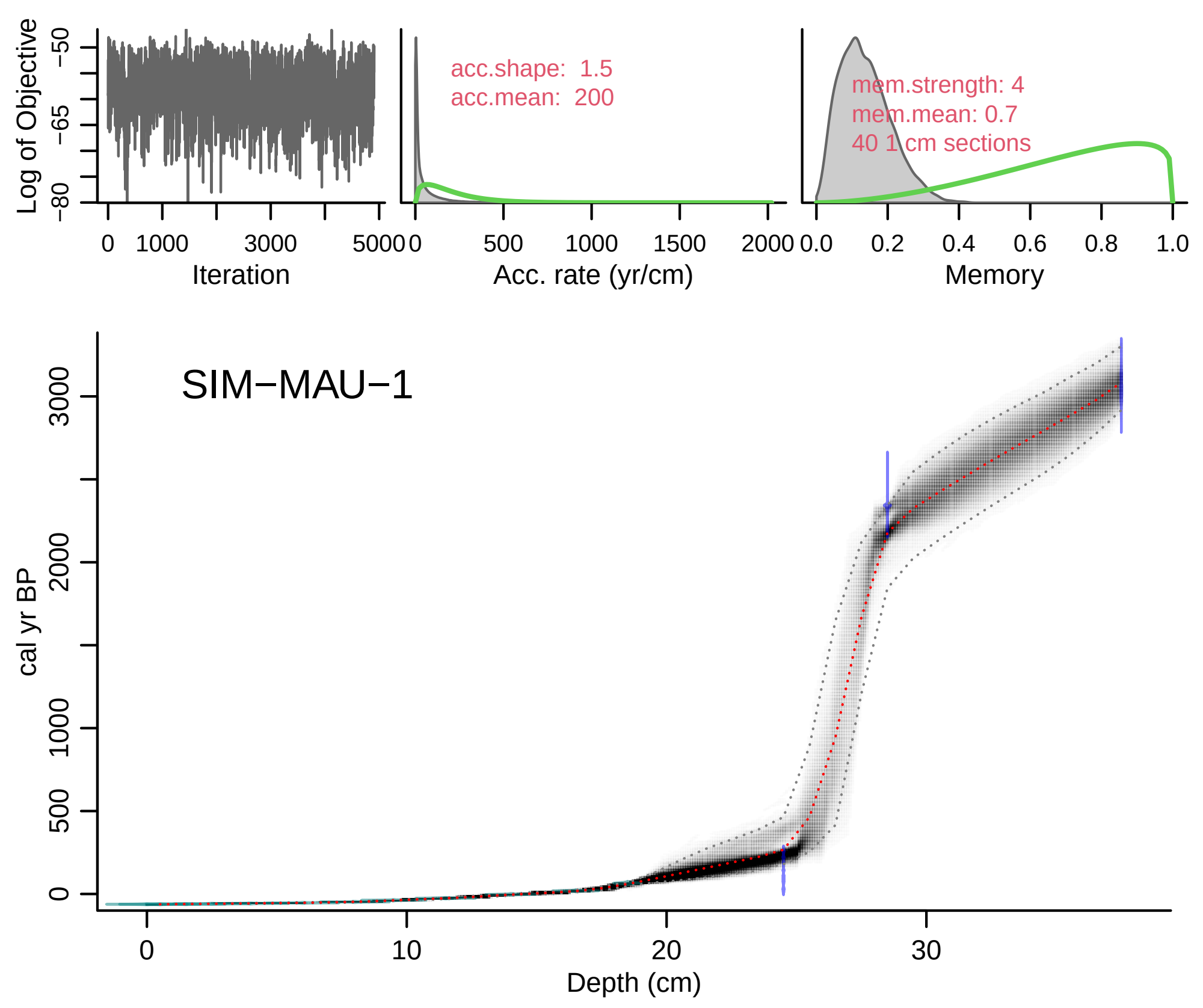

Log of Objective
−95
−105
−115
0
1000
2000
3000
4000
Iteration
acc.shape: 1.5
acc.mean: 15
0
20
40
60
80
100
120
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
33 1 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
SIM−BER−1
cal yr BP
0
100
200
300
400
500
0
5
10
15
20
25
30
Depth (cm)

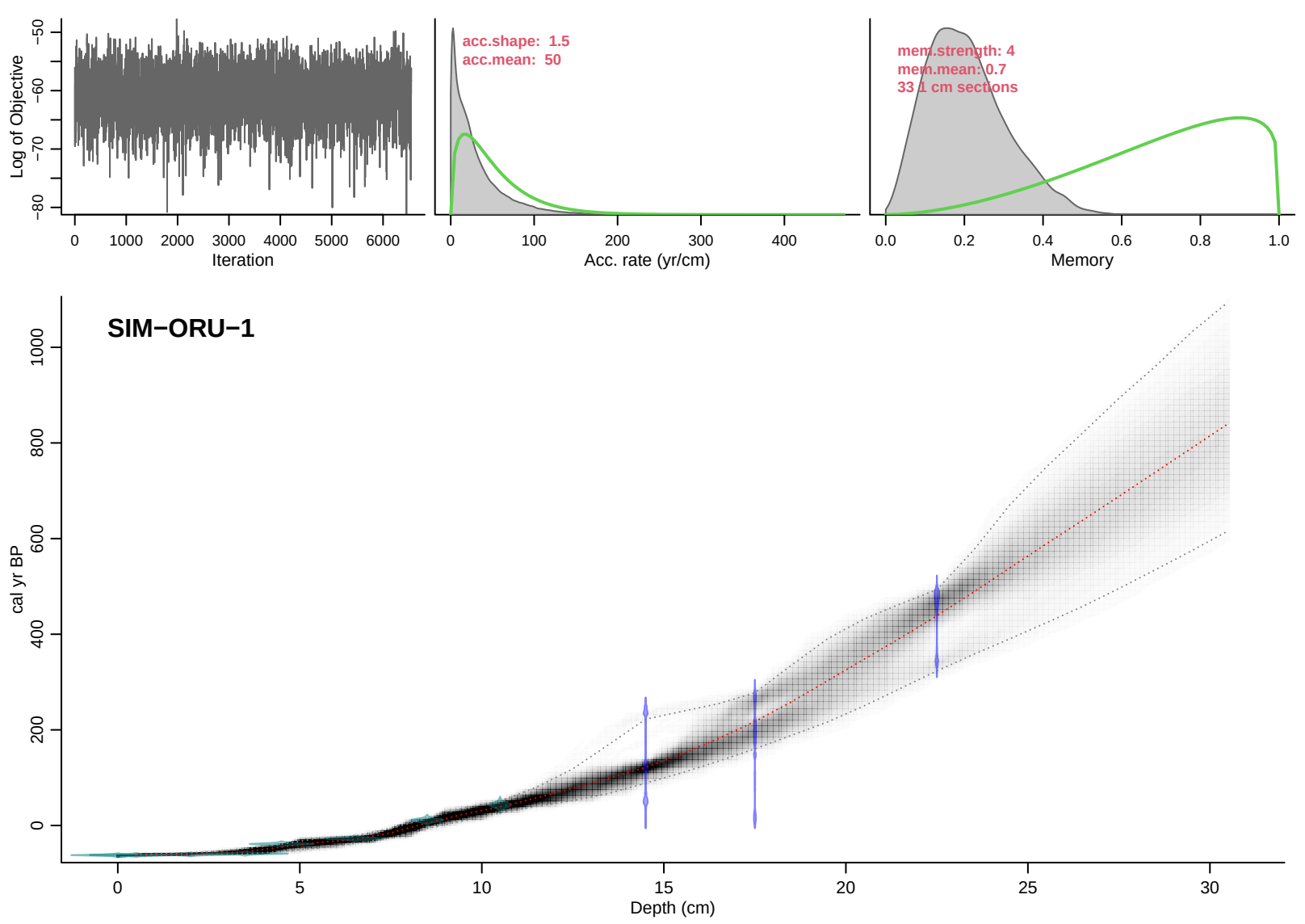

Log of Objective
−80
−90
0
1000
2000
3000
Iteration
acc.shape: 1.5
acc.mean: 100
0
100
200
300
400
500
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
12 1.5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
SIM−BI−PT
cal yr BP
0
200
400
600
800
1000
0
5
10
15
Depth (cm)

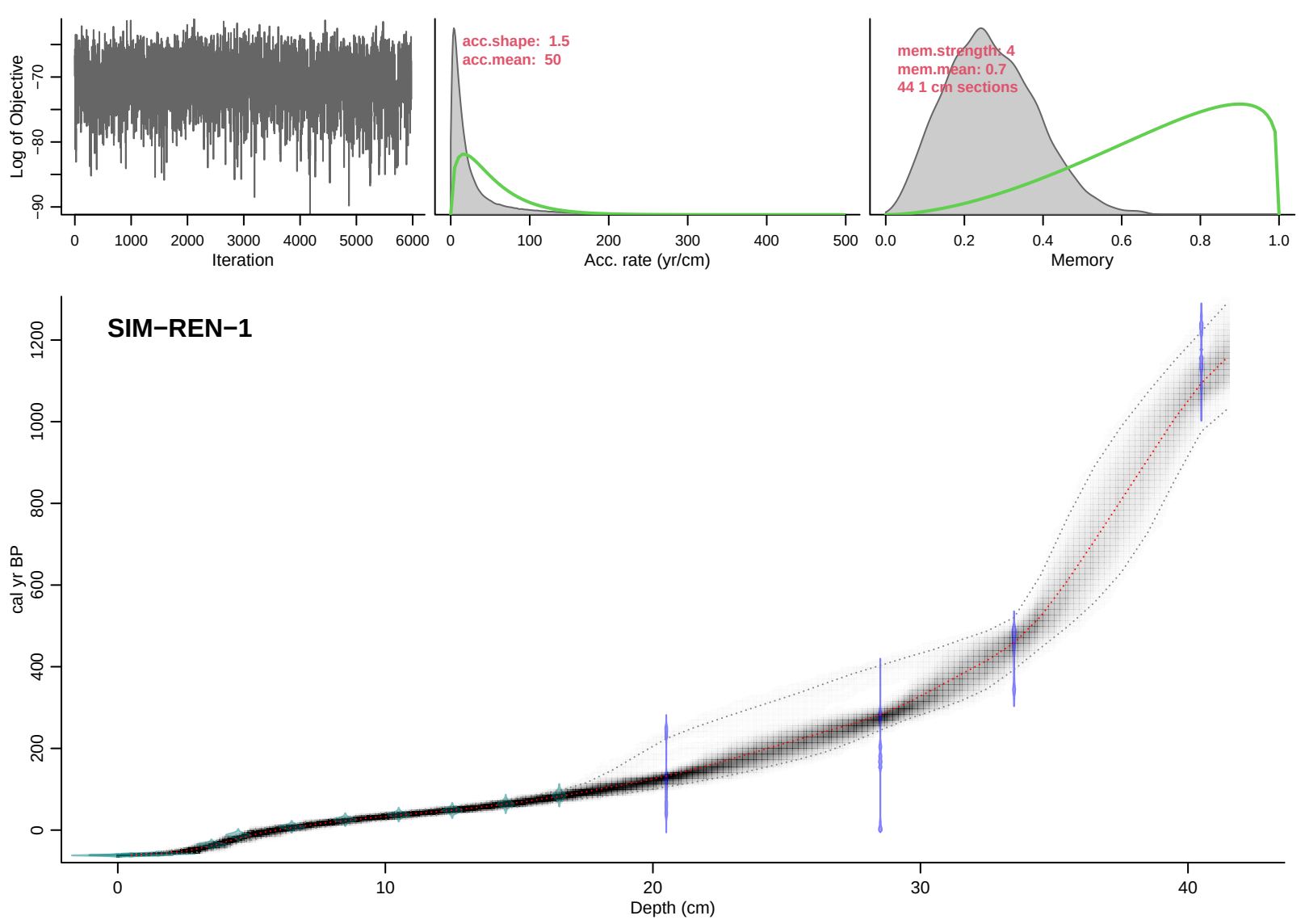

SIM−BI−VF
Depth (cm)
0
2
4
6
8
10
12
600
400
200
0
cal BP

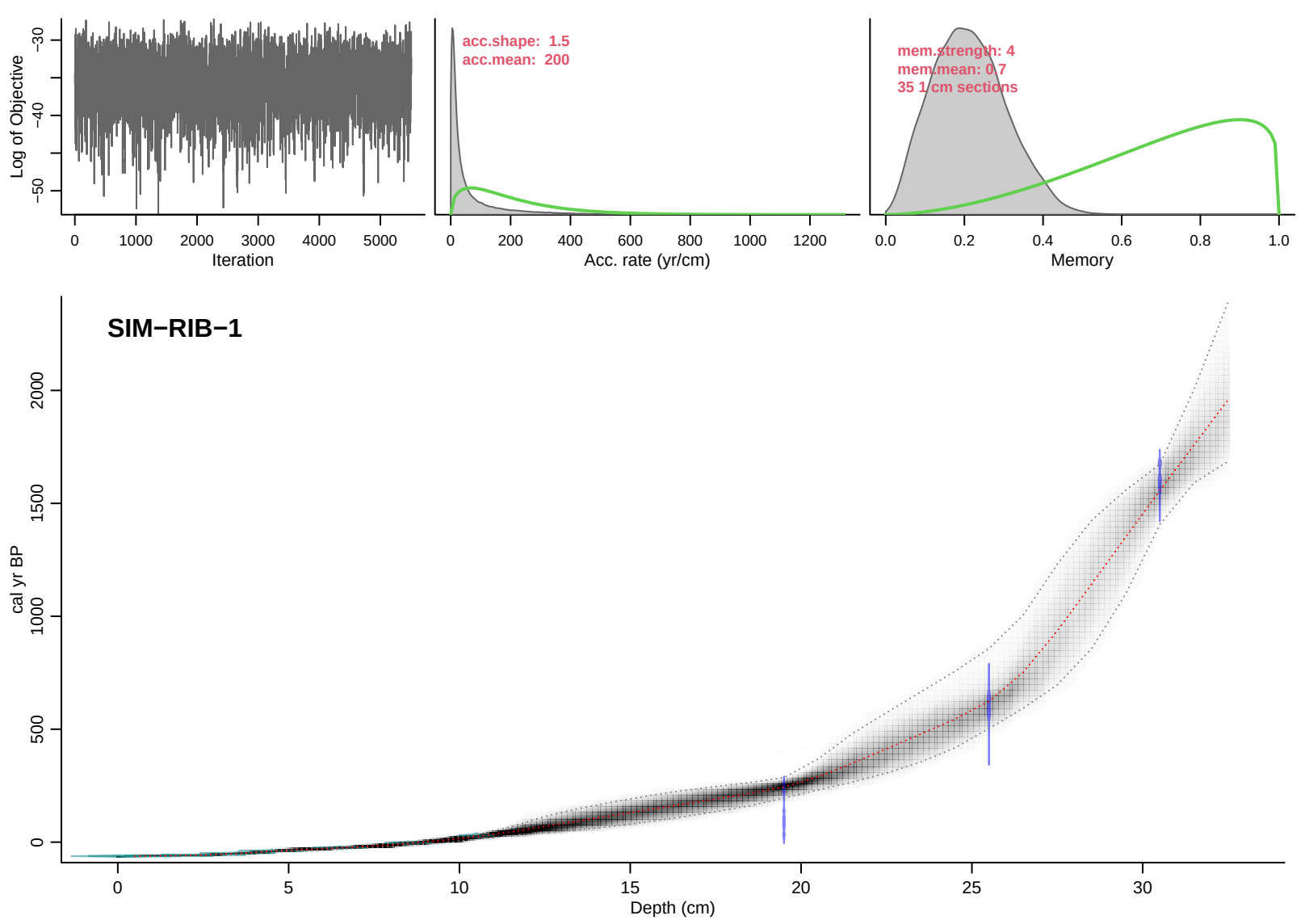

SIM−CB−CFA
Depth (cm)
0
5
10
15
150
100
50
0
−50
cal BP

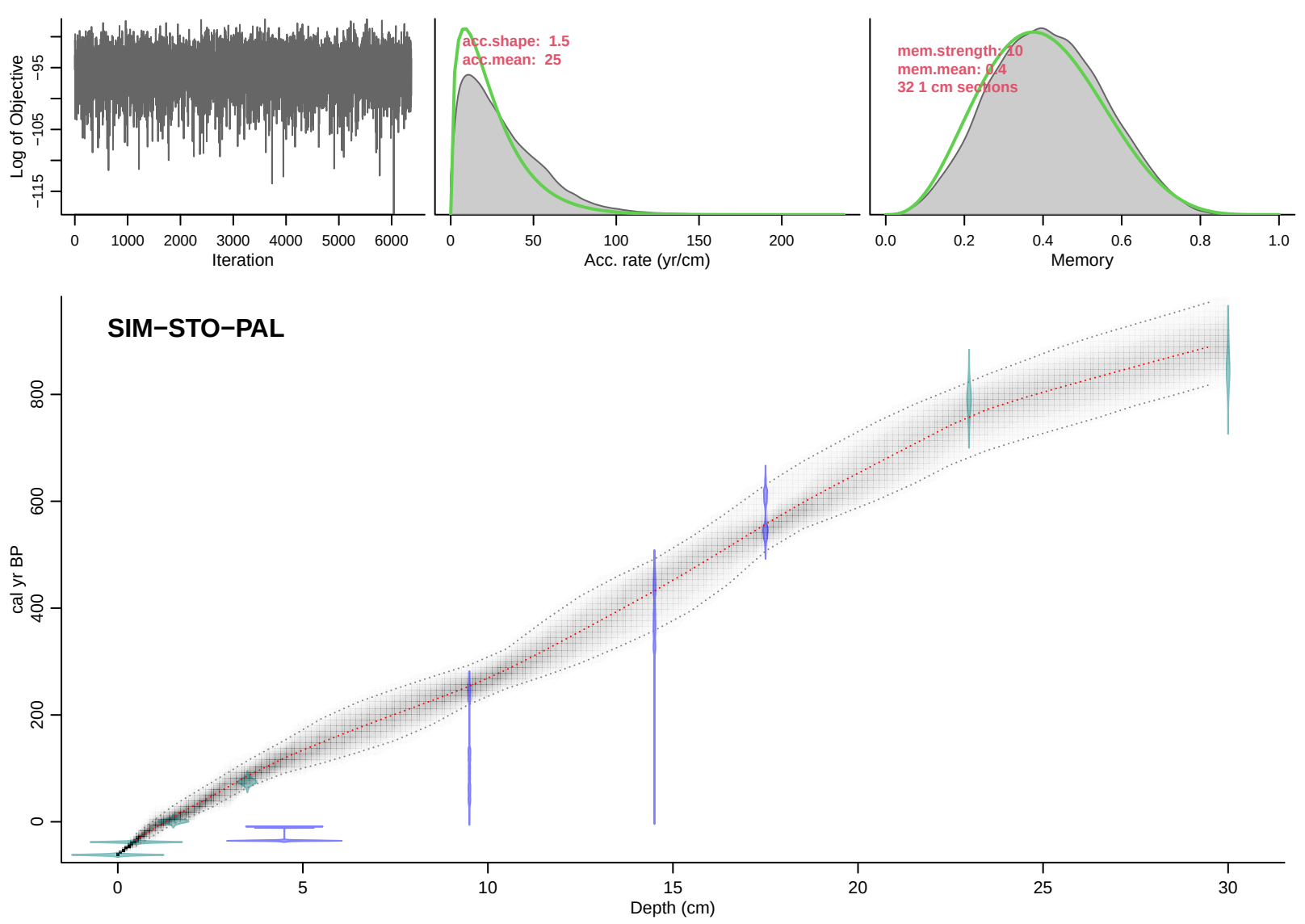

Log of Objective
−70
−80
−90
0
1000
2000
3000
4000
5000
6000
Iteration
acc.shape: 1.5
acc.mean: 20
0
50
100
150
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
32 1 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
SIM−GUR−1
cal yr BP
0
100
200
300
400
500
0
5
10
15
20
25
30
Depth (cm)

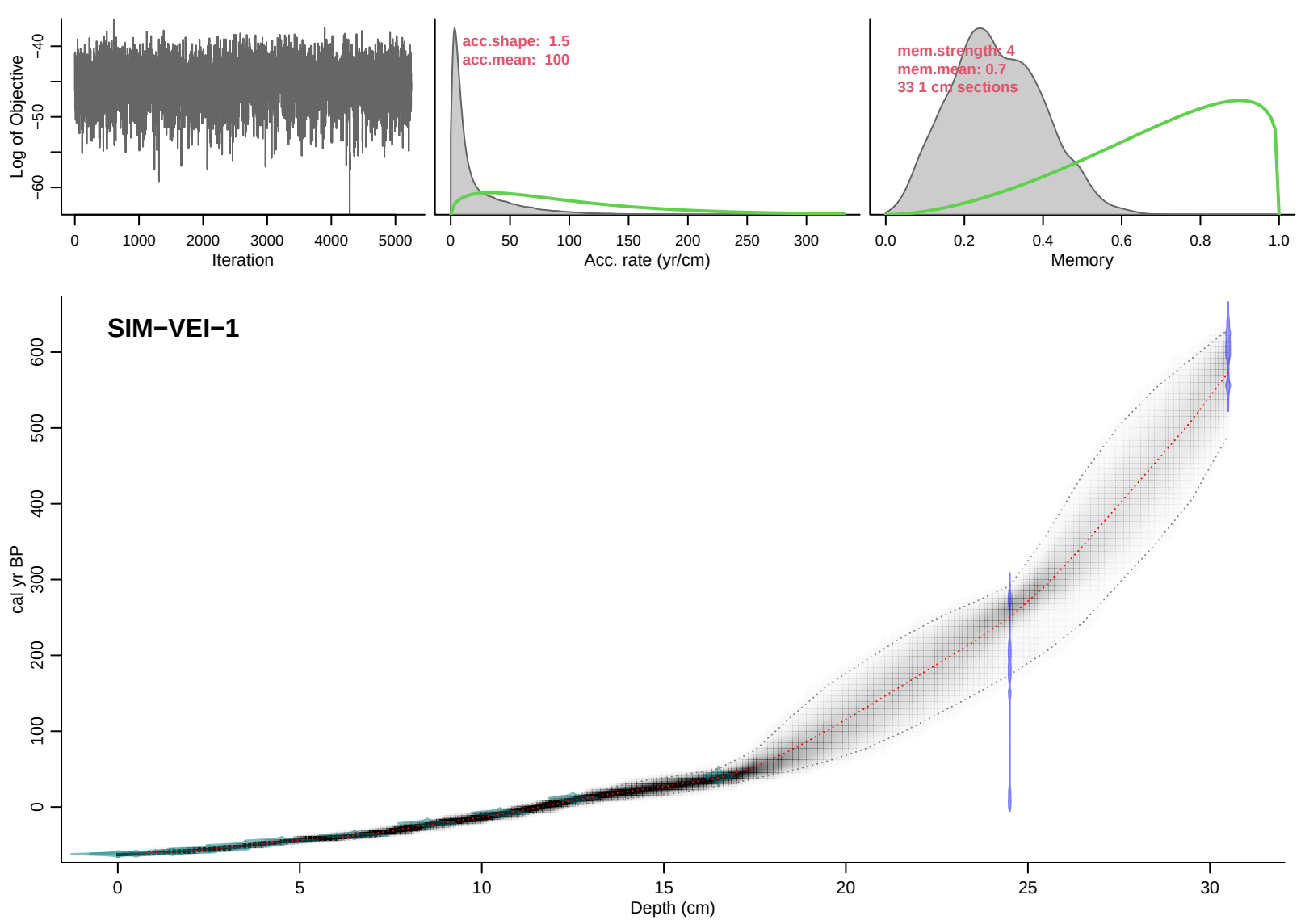

Log of Objective
−50
−65
−80
0
1000
3000
5000
Iteration
acc.shape: 1.5
acc.mean: 200
0
500
1000
1500
2000
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
40 1 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
SIM−MAU−1
cal yr BP
0
500
1000
2000
3000
0
10
20
30
Depth (cm)

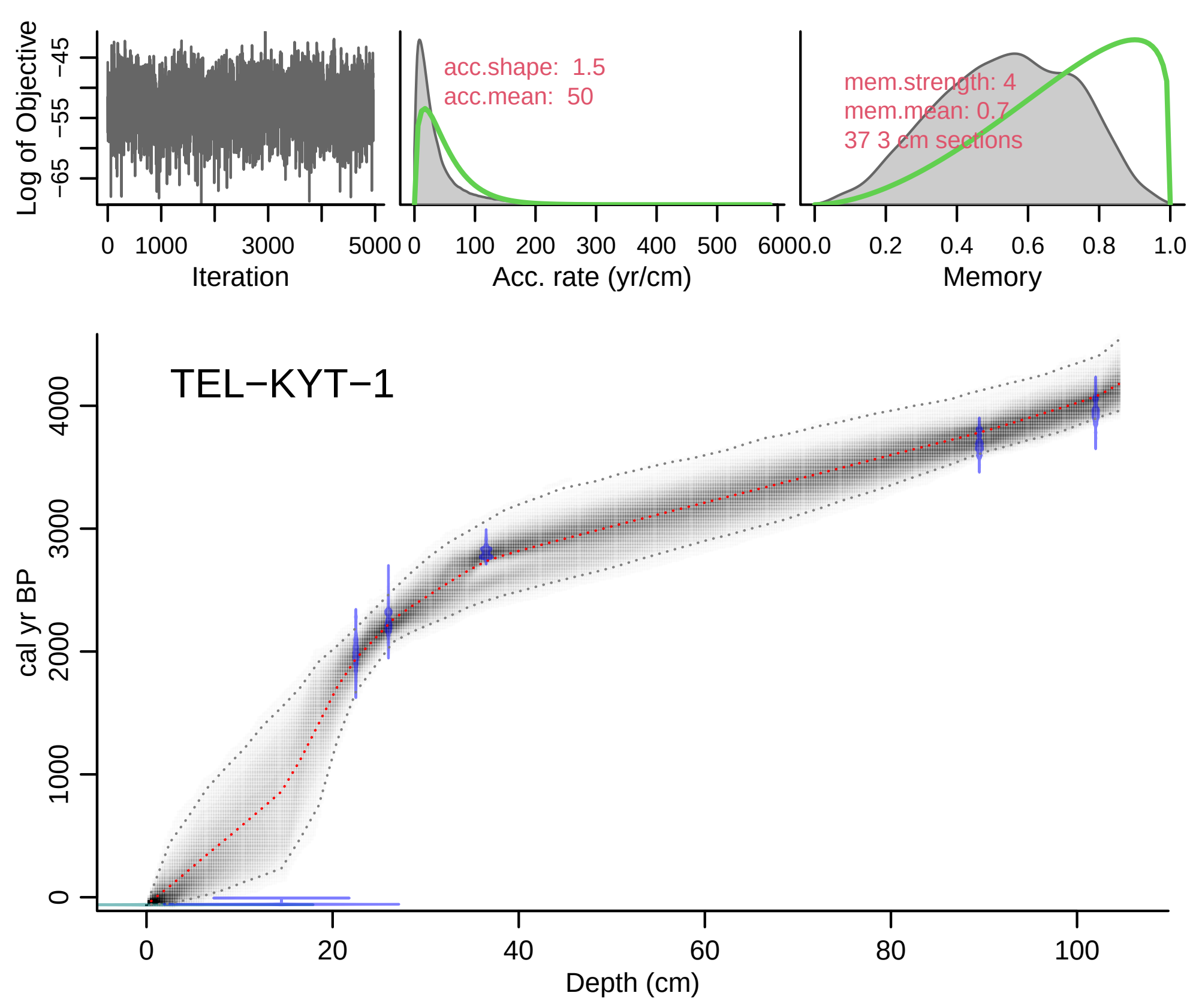

Log of Objective
−50
−60
−70
−80
0
1000
2000
3000
4000
5000
6000
Iteration
acc.shape: 1.5
acc.mean: 50
0
100
200
300
400
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
33 1 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
SIM−ORU−1
cal yr BP
0
200
400
600
800
1000
0
5
10
15
20
25
30
Depth (cm)

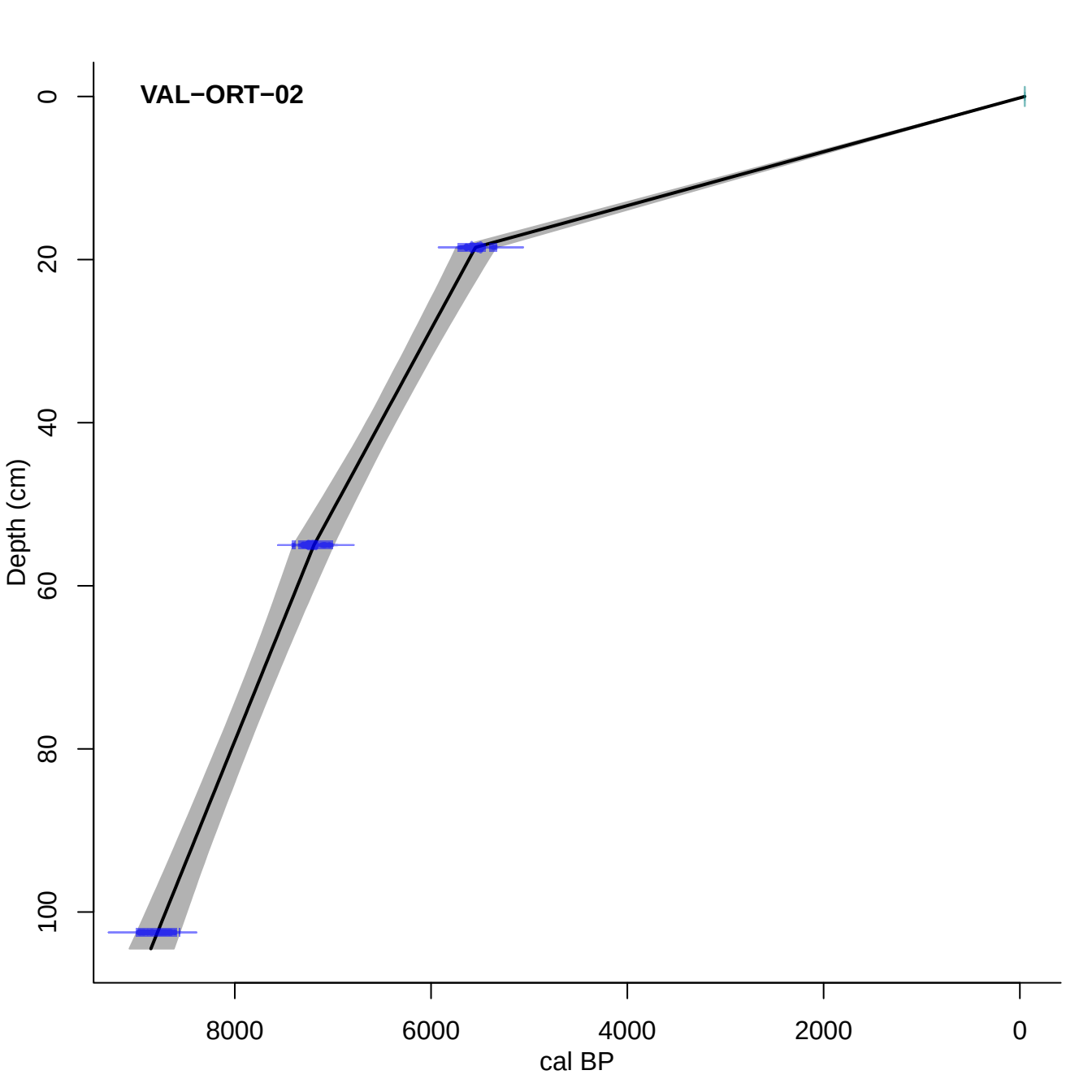

Log of Objective
−70
−80
−90
0
1000
2000
3000
4000
5000
6000
Iteration
acc.shape: 1.5
acc.mean: 50
0
100
200
300
400
500
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
44 1 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
SIM−REN−1
cal yr BP
0
200
400
600
800
1000
1200
0
10
20
30
40
Depth (cm)

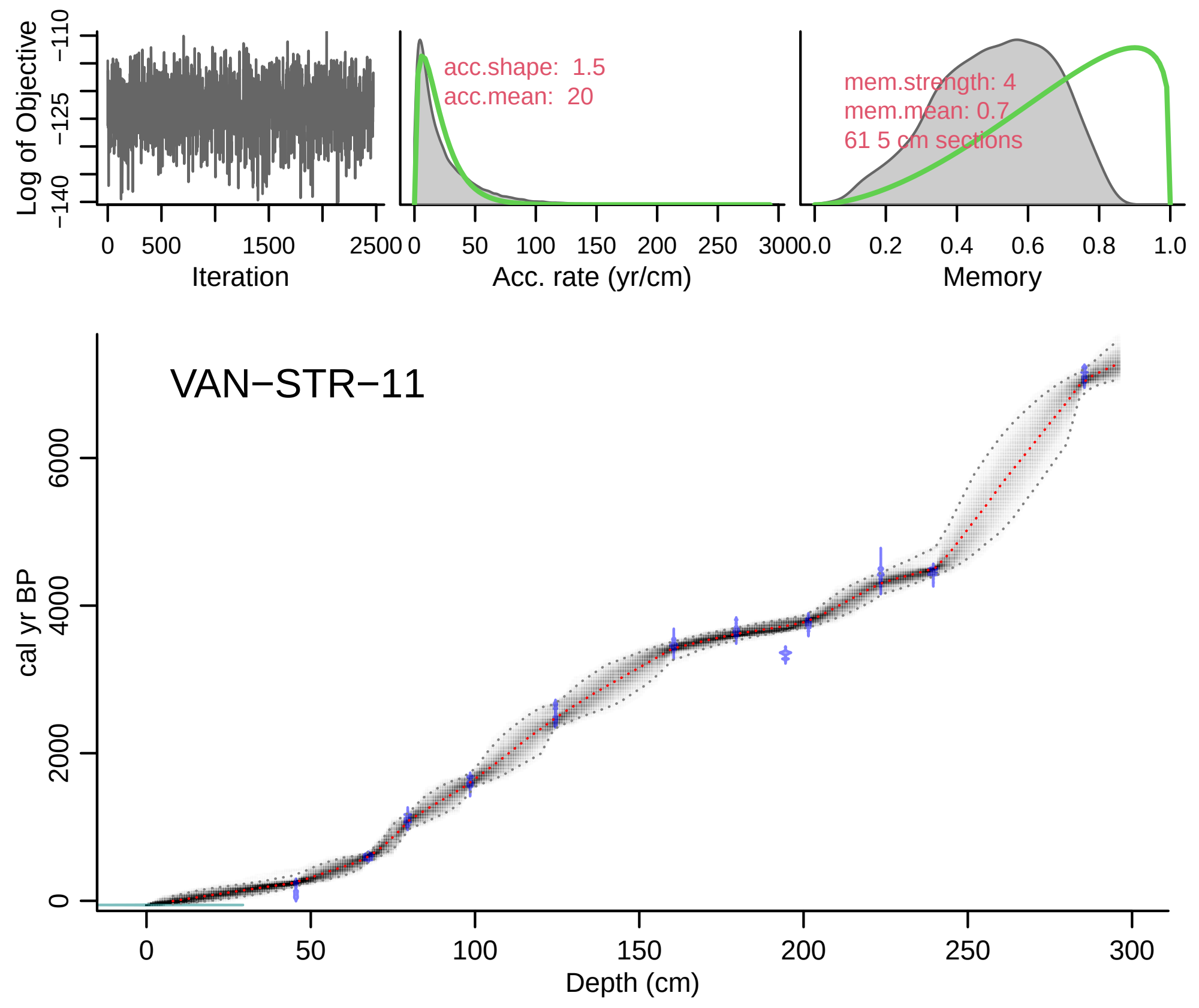

Log of Objective
−30
−40
−50
0
1000
2000
3000
4000
5000
Iteration
acc.shape: 1.5
acc.mean: 200
0
200
400
600
800
1000
1200
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
35 1 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
SIM−RIB−1
cal yr BP
0
500
1000
1500
2000
0
5
10
15
20
25
30
Depth (cm)

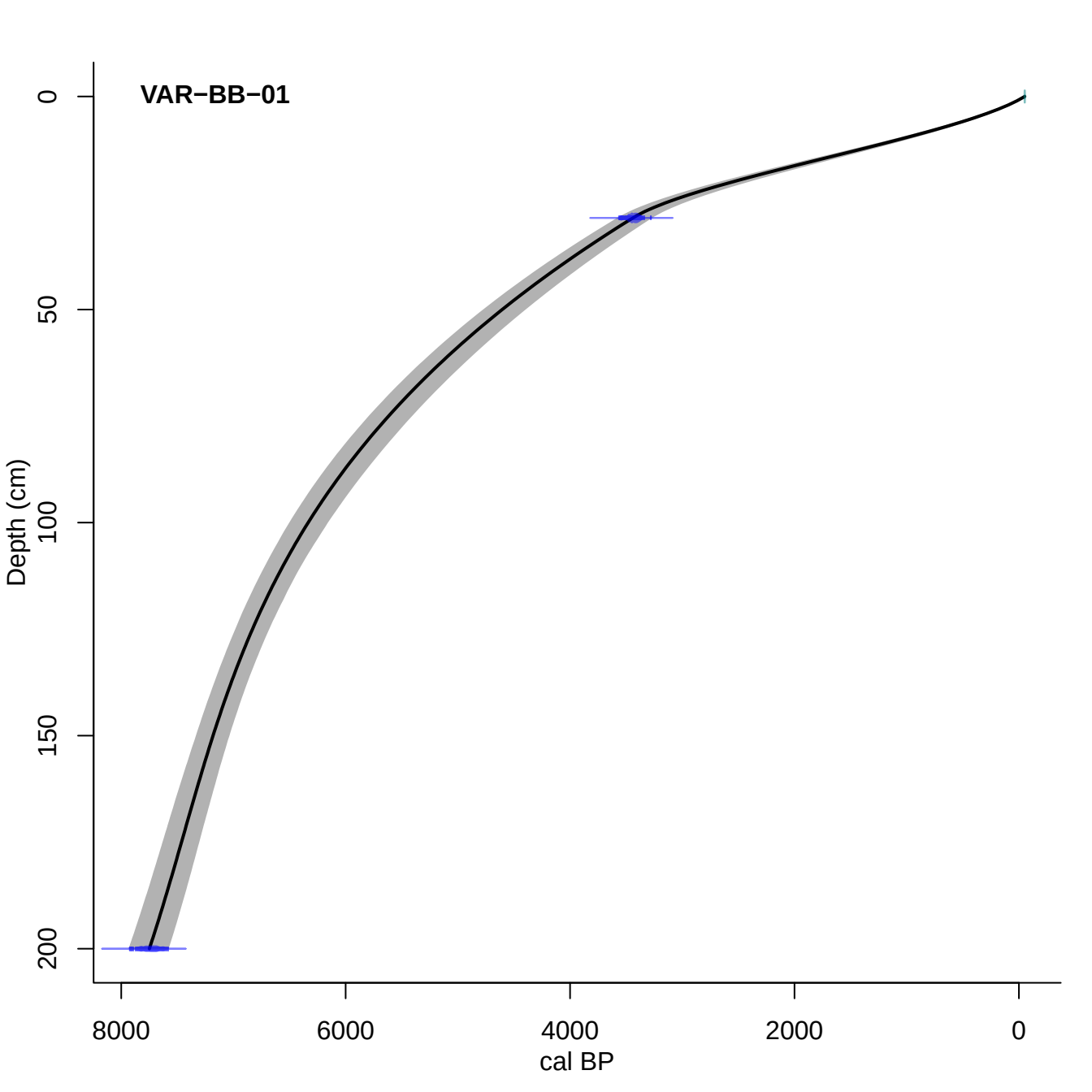

Log of Objective
−95
−105
−115
0
1000
2000
3000
4000
5000
6000
Iteration
acc.shape: 1.5
acc.mean: 25
0
50
100
150
200
Acc. rate (yr/cm)
mem.strength: 10
mem.mean: 0.4
32 1 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
SIM−STO−PAL
cal yr BP
0
200
400
600
800
0
5
10
15
20
25
30
Depth (cm)

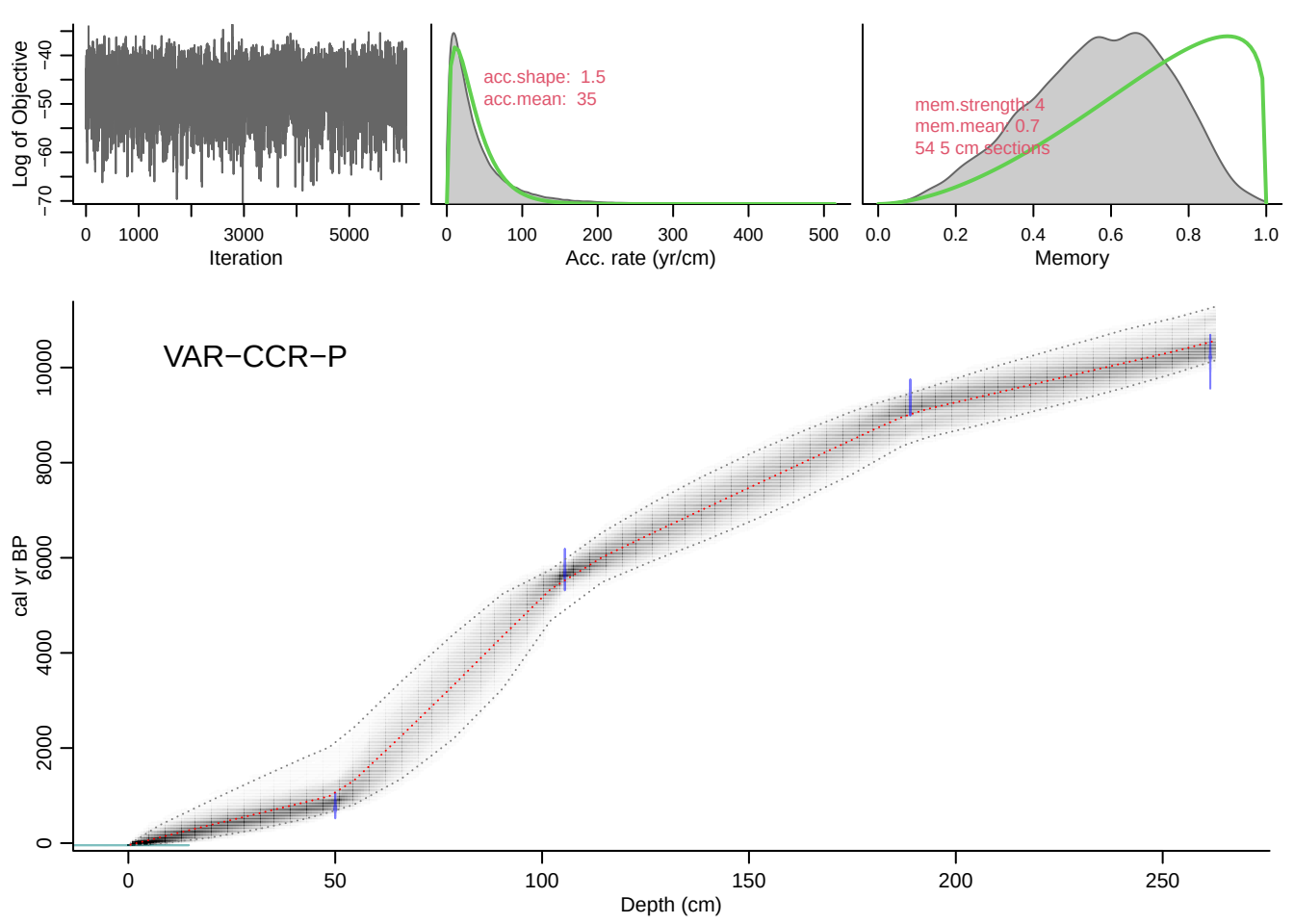

Log of Objective
−40
−50
−60
0
1000
2000
3000
4000
5000
Iteration
acc.shape: 1.5
acc.mean: 100
0
50
100
150
200
250
300
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
33 1 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
SIM−VEI−1
cal yr BP
0
100
200
300
400
500
600
0
5
10
15
20
25
30
Depth (cm)

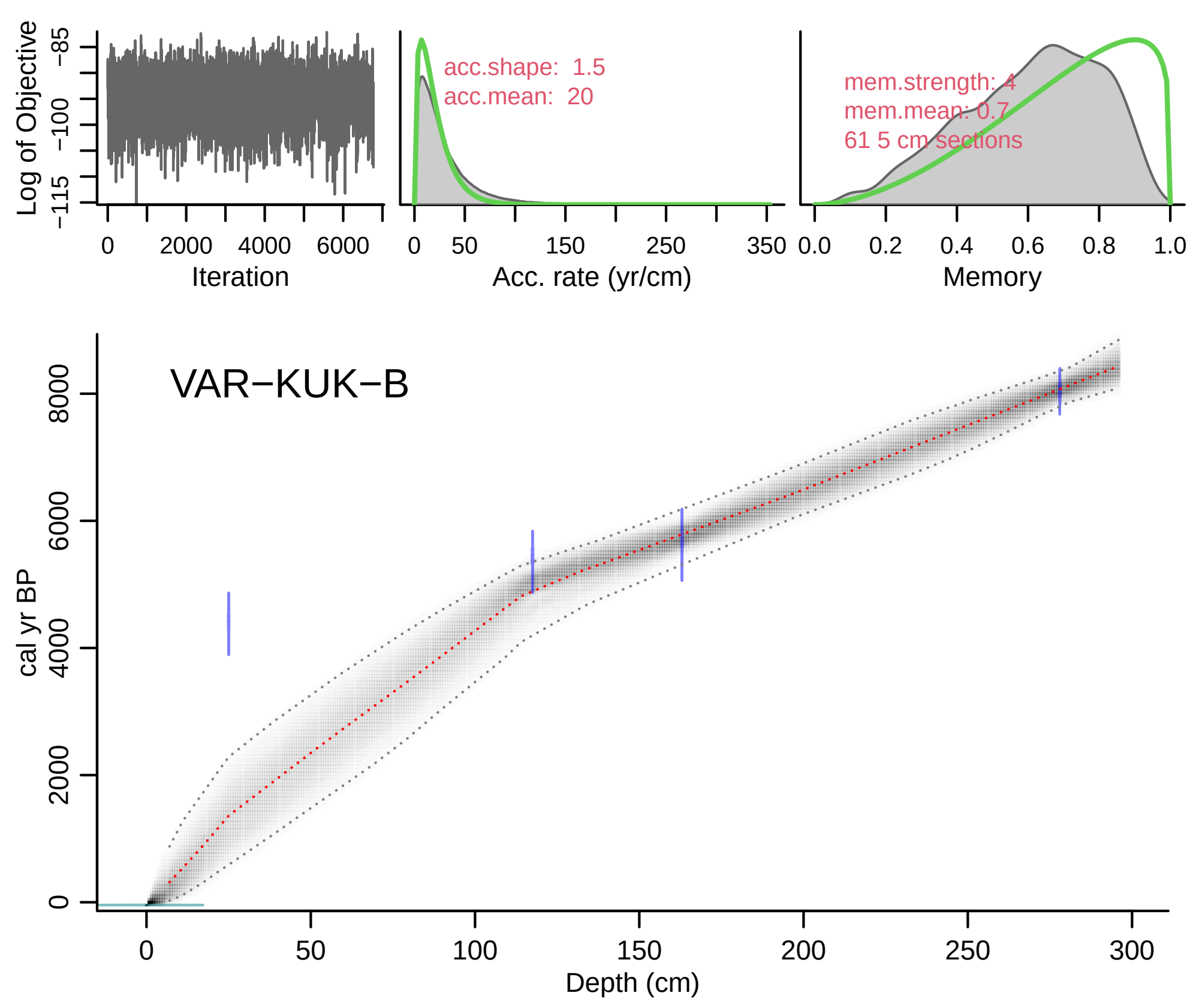

Log of Objective
−45
−55
−65
0
1000
3000
5000
Iteration
acc.shape: 1.5
acc.mean: 50
0
100
200
300
400
500
6000
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
37 3 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
TEL−KYT−1
cal yr BP
0
1000
2000
3000
4000
0
20
40
60
80
100
Depth (cm)

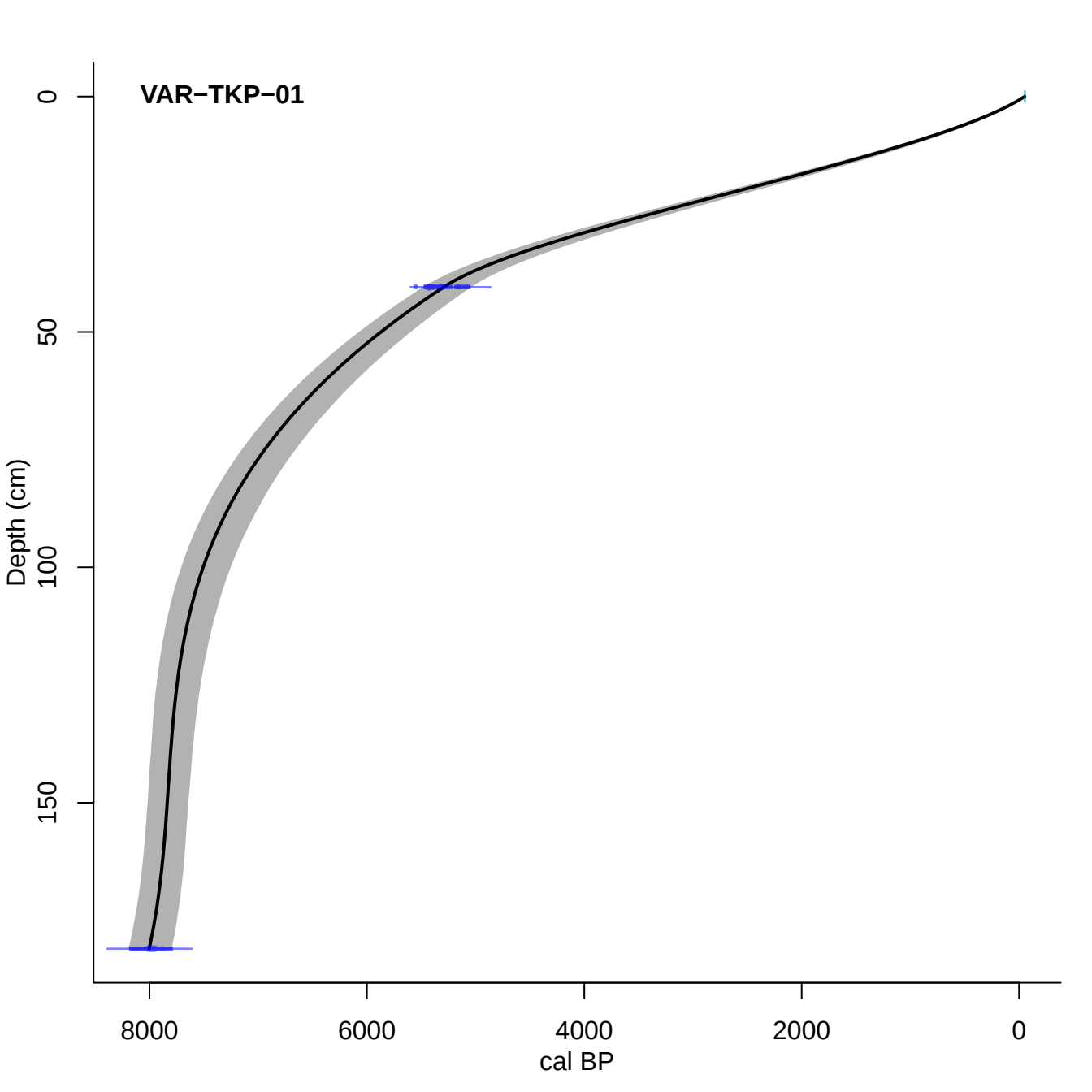

VAL−ORT−02
Depth (cm)
0
20
40
60
80
100
8000
6000
4000
2000
0
cal BP

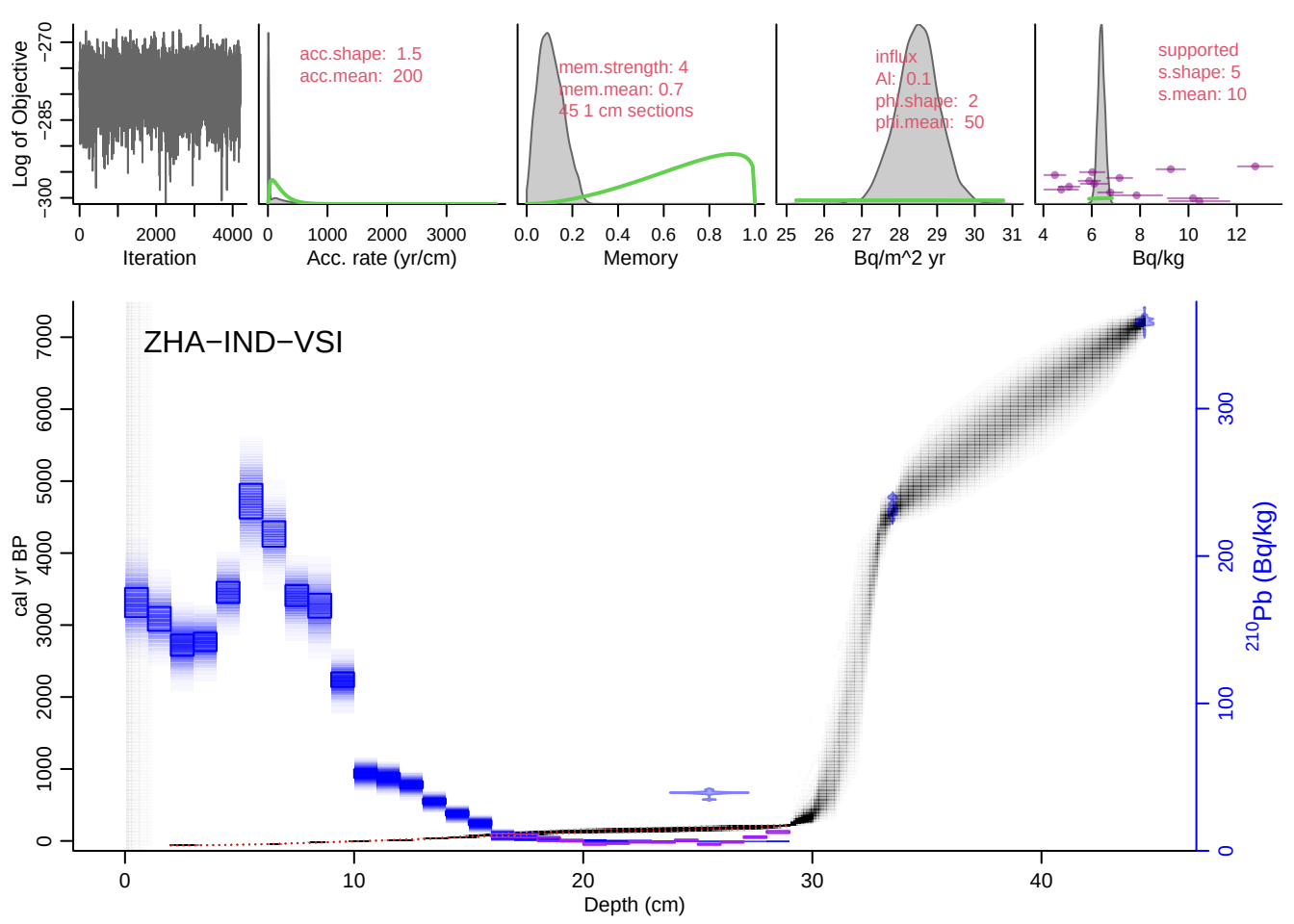

Log of Objective
−110
−125
−140
0
500
1500
2500
Iteration
acc.shape: 1.5
acc.mean: 20
0
50
100
150
200
250
3000
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
61 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
VAN−STR−11
cal yr BP
0
2000
4000
6000
0
50
100
150
200
250
300
Depth (cm)

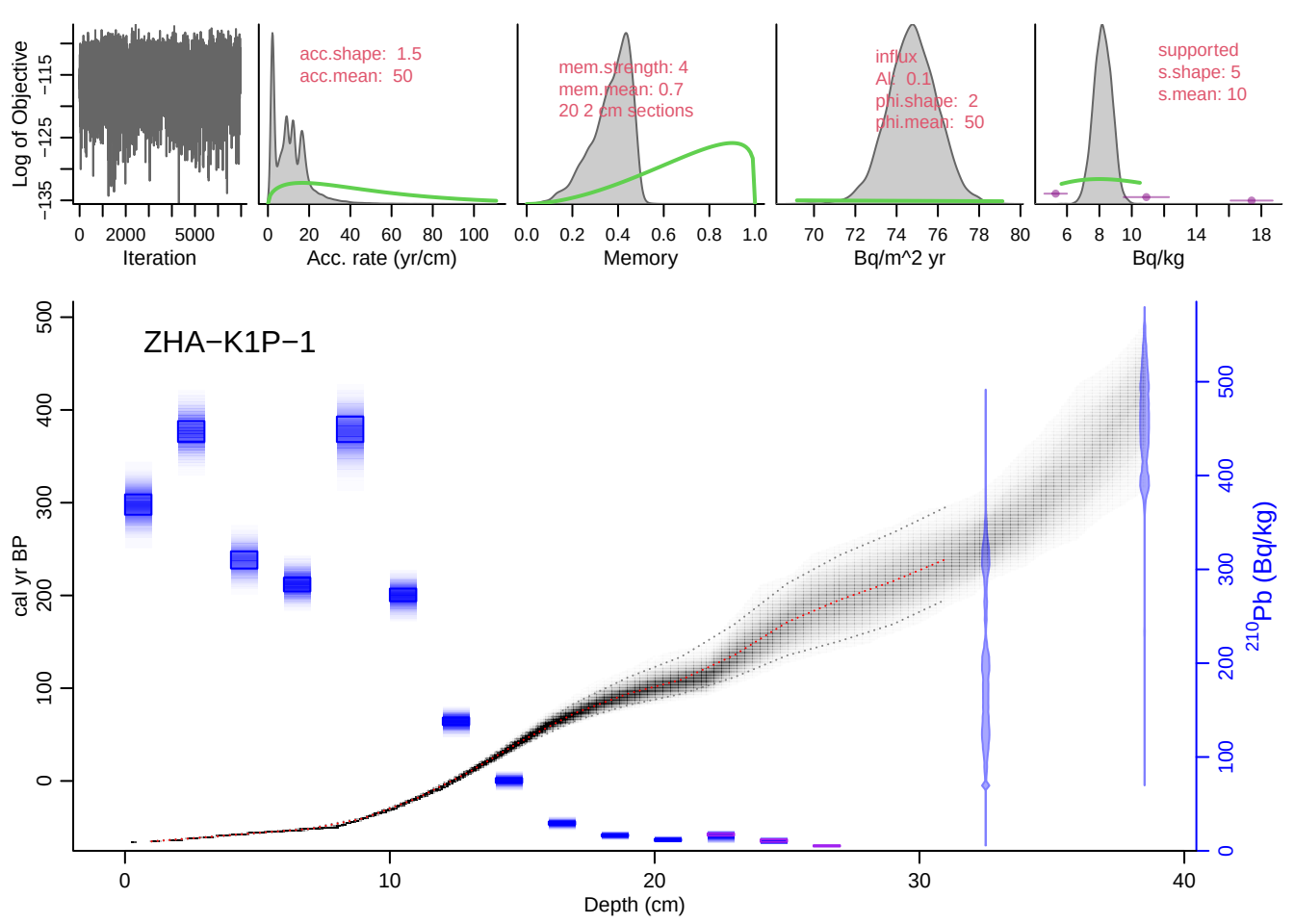

VAR−BB−01
Depth (cm)
0
50
100
150
200
8000
6000
4000
2000
0
cal BP

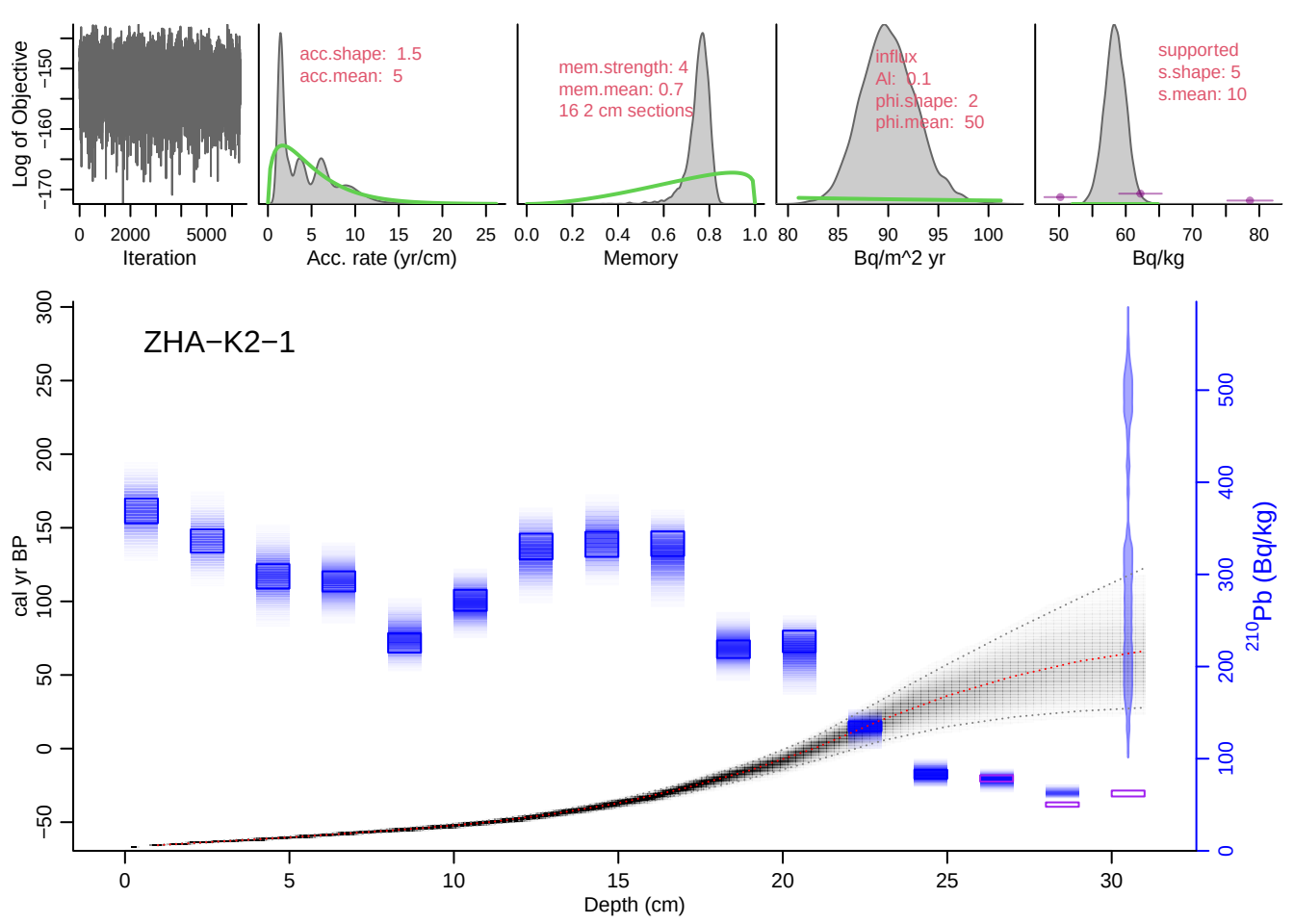

Log of Objective
−40
−50
−60
−70
0
1000
3000
5000
Iteration
acc.shape: 1.5
acc.mean: 35
0
100
200
300
400
500
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
54 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
VAR−CCR−P
cal yr BP
0
2000
4000
6000
8000
10000
0
50
100
150
200
250
Depth (cm)

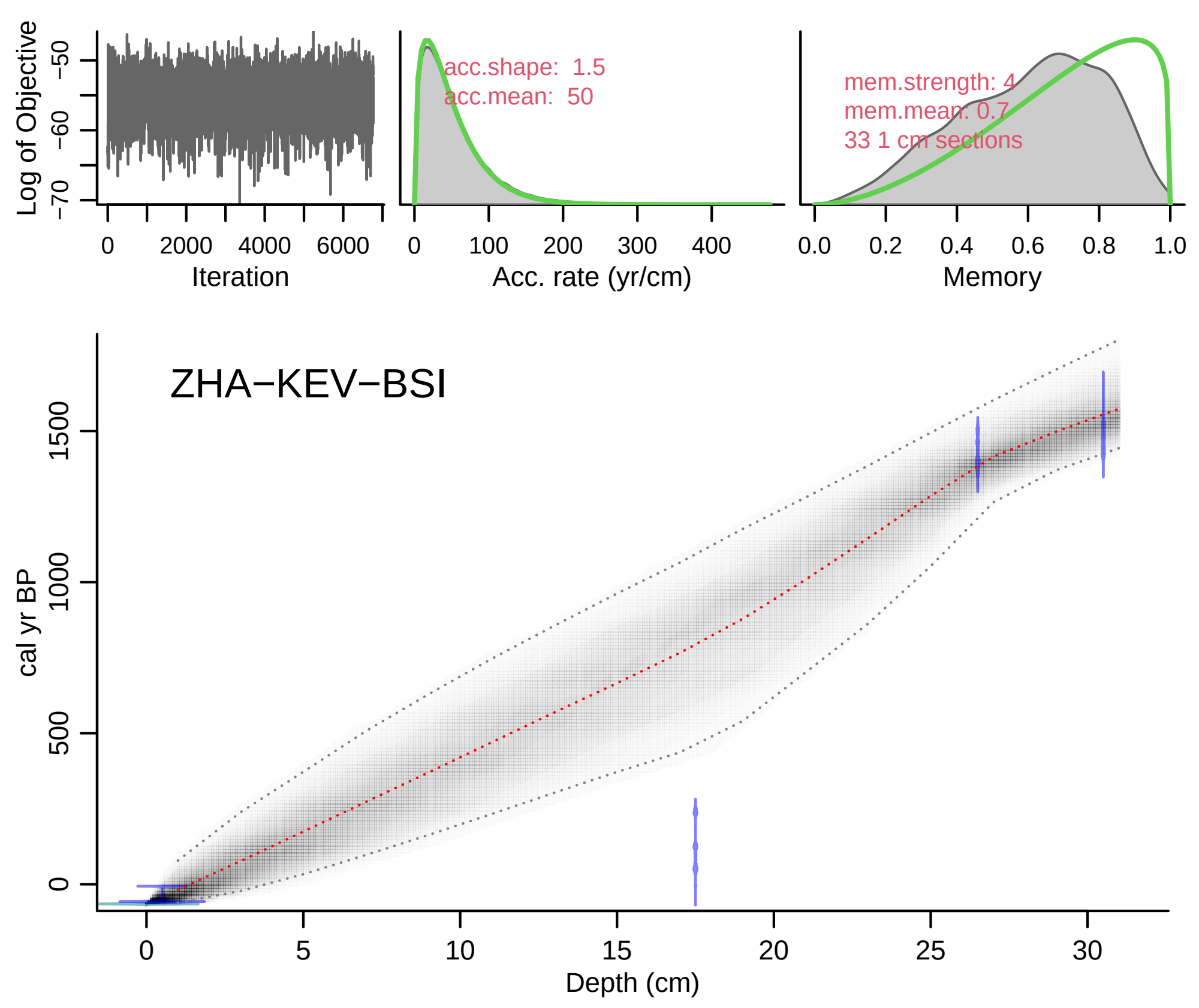

Log of Objective
−85
−100
−115
0
2000
4000
6000
Iteration
acc.shape: 1.5
acc.mean: 20
0
50
150
250
350
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
61 5 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
VAR−KUK−B
cal yr BP
0
2000
4000
6000
8000
0
50
100
150
200
250
300
Depth (cm)

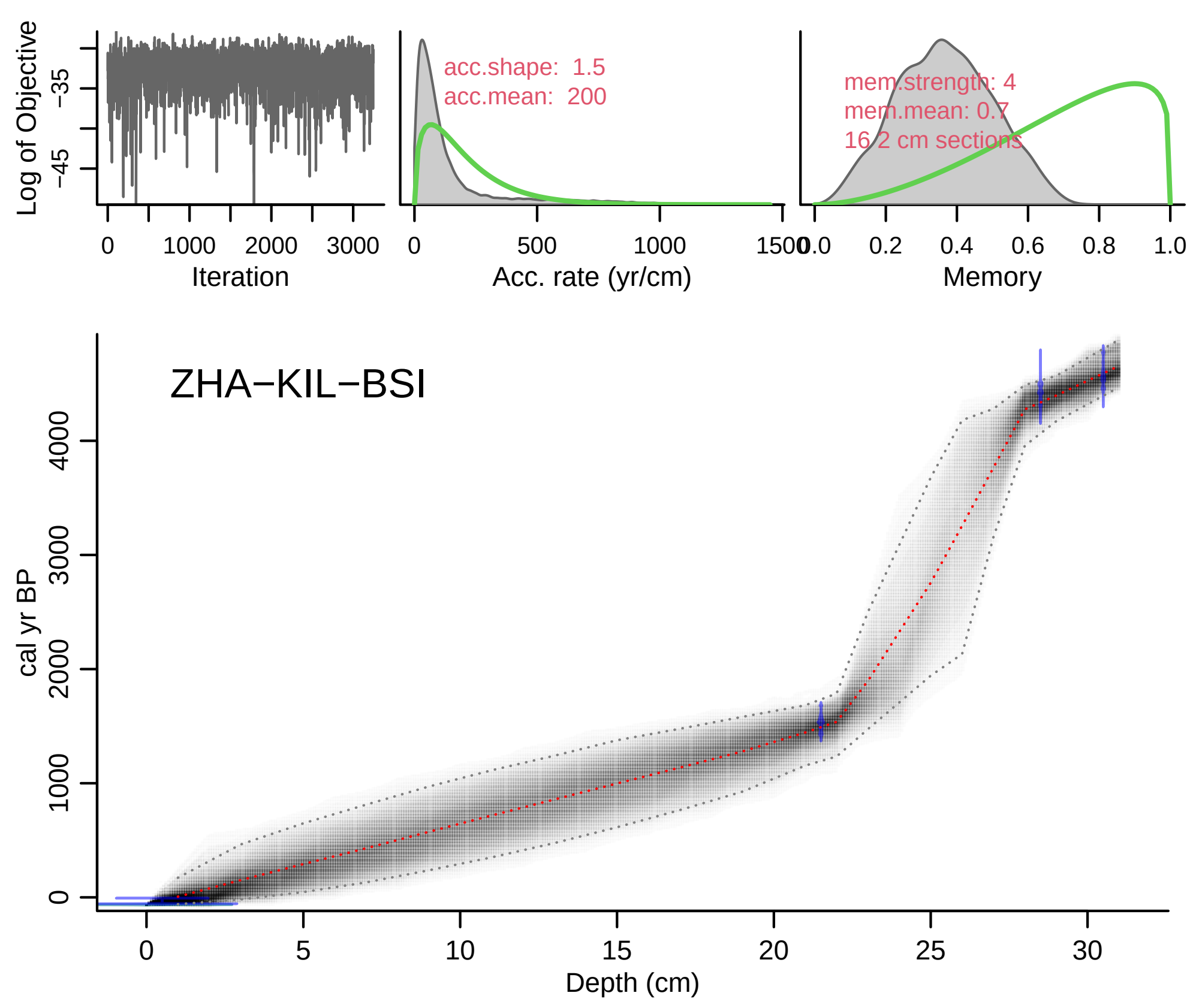

VAR−TKP−01
0
50
100
150
Depth (cm)
8000
6000
4000
2000
0
cal BP

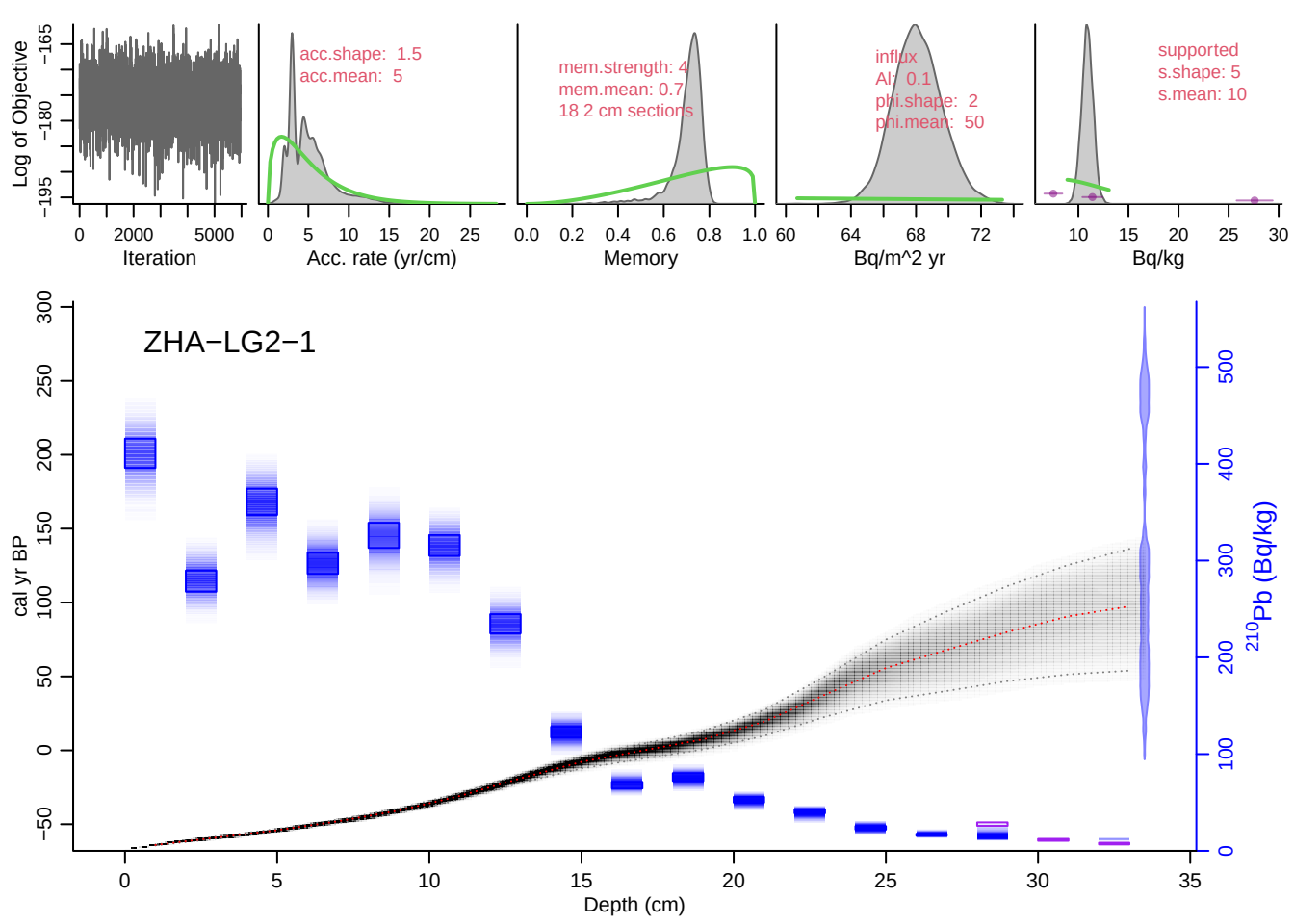

Log of Objective
−270
−285
−300
0
2000
4000
Iteration
acc.shape: 1.5
acc.mean: 200
0
1000
2000
3000
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
45 1 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
influx
Al: 0.1
phi.shape: 2
phi.mean: 50
25
26
27
28
29
30
31
Bq/m^2 yr
supported
s.shape: 5
s.mean: 10
4
6
8
10
12
Bq/kg
ZHA−IND−VSI
cal yr BP
0
1000
2000
3000
4000
5000
6000
7000
0
10
20
30
40
Depth (cm)
210Pb (Bq/kg)
0
100
200
300

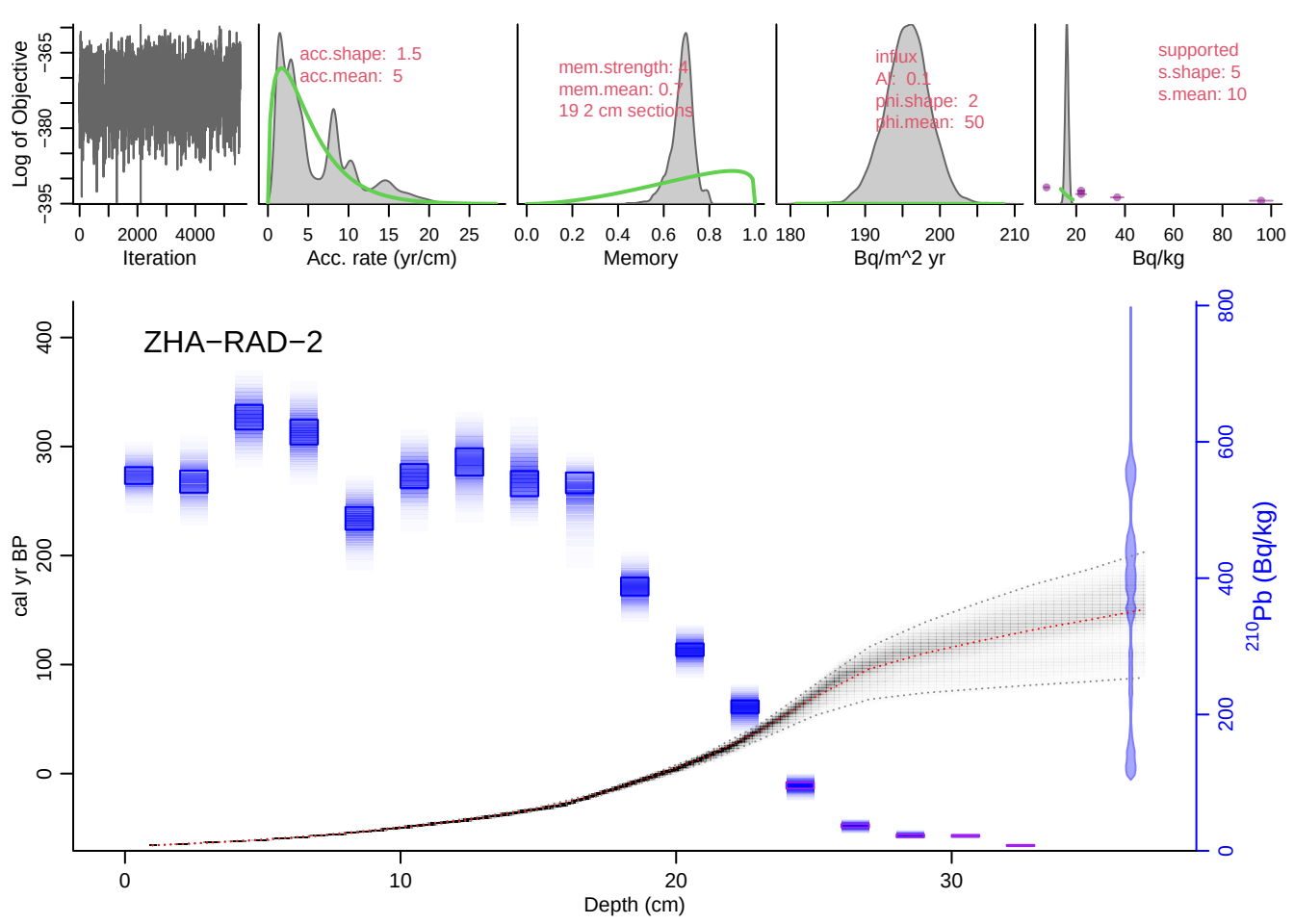

Log of Objective
−115
−125
−135
0
2000
5000
Iteration
acc.shape: 1.5
acc.mean: 50
0
20
40
60
80
100
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
20 2 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
influx
Al: 0.1
phi.shape: 2
phi.mean: 50
70
72
74
76
78
80
Bq/m^2 yr
supported
s.shape: 5
s.mean: 10
6
8
10
14
18
Bq/kg
ZHA−K1P−1
cal yr BP
0
100
200
300
400
500
0
10
20
30
40
Depth (cm)
210Pb (Bq/kg)
0
100
200
300
400
500


Log of Objective
−150
−160
−170
0
2000
5000
Iteration
acc.shape: 1.5
acc.mean: 5
0
5
10
15
20
25
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
16 2 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
influx
AI: 0.1
phi.shape: 2
phi.mean: 50
80
85
90
95
100
Bq/m^2 yr
supported
s.shape: 5
s.mean: 10
50
60
70
80
Bq/kg
ZHA−K2−1
cal yr BP
300
250
200
150
100
50
0
−50
0
5
10
15
20
25
30
Depth (cm)
210Pb (Bq/kg)
500
400
300
200
100
0


Log of Objective
−50
−60
−70
0
2000
4000
6000
Iteration
acc.shape: 1.5
acc.mean: 50
0
100
200
300
400
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
33 1 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
ZHA−KEV−BSI
cal yr BP
0
500
1000
1500
0
5
10
15
20
25
30
Depth (cm)


Log of Objective
−35
−45
0
1000
2000
3000
Iteration
acc.shape: 1.5
acc.mean: 200
0
500
1000
1500
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
16.2 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
ZHA−KIL−BSI
cal yr BP
0
1000
2000
3000
4000
0
5
10
15
20
25
30
Depth (cm)


Log of Objective
−165
−180
−195
0
2000
5000
Iteration
acc.shape: 1.5
acc.mean: 5
0
5
10
15
20
25
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
18 2 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
influx
Al: 0.1
phi.shape: 2
phi.mean: 50
60
64
68
72
Bq/m^2 yr
supported
s.shape: 5
s.mean: 10
10
15
20
25
30
Bq/kg
ZHA−LG2−1
cal yr BP
300
250
200
150
100
50
0
−50
0
5
10
15
20
25
30
35
Depth (cm)
^{210}Pb (Bq/kg)
0
100
200
300
400
500


Log of Objective
−365
−380
−395
0
2000
4000
Iteration
acc.shape: 1.5
acc.mean: 5
0
5
10
15
20
25
Acc. rate (yr/cm)
mem.strength: 4
mem.mean: 0.7
19 2 cm sections
0.0
0.2
0.4
0.6
0.8
1.0
Memory
influx
A: 0.1
phi.shape: 2
phi.mean: 50
180
190
200
210
Bq/m^2 yr
supported
s.shape: 5
s.mean: 10
20
40
60
80
100
Bq/kg
ZHA−RAD−2
cal yr BP
0
100
200
300
400
0
10
20
30
Depth (cm)
^{210}Pb (Bq/kg)
0
200
400
600
800