These are baseline results for the RMSE from matlab diagnostics generated by script TEST\_DRIVER\_FOR\_RSME.csh.

Columns are ensemble size, state RMSE, tracer RMSE.

Case 1: Test on 16 Dec. with Prior and Posterior inflation

6 28.47, 2.12

10 24.38, 1.88

15 20.54, 1.55

20 18.42, 1.39

25 16.99, 1.27

30 15.95, 1.16

40 14.49, 1.07

50 13.80, 0.94

60 13.14, 0.90

70 12.76, 0.86

80 12.72, 0.88

90 12.55, 0.87

100 12.49, 0.83

110 12.34, 0.85

120 12.15, 0.85

130 12.34, 0.83

140 12.30, 0.82

150 12.33, 0.83

160 11.98, 0.81

170 12.07, 0.80

180 12.09, 0.80

240 11.93, 0.79

320 11.85, 0.79

640 11.71, 0.77

Case 2: Test on 16 Dec. with Prior and Posterior inflation

6 24.71, 1.77

10 23.84, 1.83

15 21.18, 1.65

20 18.74, 1.35

25 16.49, 1.17

30 15.47, 1.08

40 14.89, 0.98

50 13.77, 0.93

60 13.50, 0.92

70 13.26, 0.90

80 12.85, 0.89

90 12.81, 0.85

100 12.59, 0.84

110 12.72, 0.86

120 12.47, 0.85

130 12.50, 0.83

140 12.53, 0.83

150 12.32, 0.83

160 12.38, 0.83

170 12.53, 0.81

180 12.27, 0.82

240 12.24, 0.81

320 12.06, 0.80

640 12.13, 0.80

Case 3: Test on 16 Dec. with Prior and Posterior inflation

6 28.64, 2.27

10 24.81, 1.85

15 21.37, 1.61

20 17.93, 1.28

25 16.59, 1.17

30 15.56, 1.18

40 14.78, 1.03

50 13.78, 0.93

60 13.31, 0.95

70 13.26, 0.90

80 13.09, 0.90

90 12.81, 0.87

100 12.64, 0.83

110 12.63, 0.86

120 12.53, 0.84

130 12.53, 0.85

140 12.58, 0.84

150 12.53, 0.81

160 12.48, 0.83

170 12.28, 0.83

180 12.14, 0.80

240 12.23, 0.81

320 12.06, 0.80

640 12.06, 0.80

Case 1: Tracer bounded below (tests on 19 November with prerelease all duplicate)

N Probit 2March 13 Dec. (remove amp\_adj)

6 28.86, 2.39 29.24, 2.45 28.82, 2.20

10 25.95, 2.01 25.81, 1.99 26.14, 1.95

15 21.65, 1.49 22.00, 1.56 same

20 18.55, 1.30 19.64, 1.42 same

25 17.62, 1.22 17.23, 1.23 same

30 16.68, 1.20 16.17, 1.18 same

40 14.30, 1.03 same same

50 13.83, 0.98 same same

60 13.39, 0.95 same same

70 12.90, 0.91 same same

80 12.54, 0.86 same same

90 12.57, 0.86 same same

100 12.52, 0.86 same same

110 12.14, 0.83 same same

120 12.30, 0.83 same same

130 12.21, 0.82 same same

140 12.04, 0.82 same same

150 12.04, 0.80 same same

160 12.12, 0.83 same same

170 12.05, 0.81 same same

180 11.98, 0.80 12.04, 0.78 11.87, 0.80

240 12.09, 0.81 11.97, 0.81 same

320 11.82, 0.79 same same

640 11.54, 0.76 11.60, 0.77 same

1280 11.58, 0.77

2560 11.55, 0.77

5120 11.59, 0.76

Case 2: Tracer bounded above (tests on 19 November with prerelease all duplicate)

Note that order of probit vs logit is reversed, column 3 logit with fixed ens\_quantiles

N 10FebC 2 March 13 Dec. (Remove amp\_adj)

6 29.27, 2.29 28.97, 2.21 30.00, 2.47

10 25.82, 1.93 26.41, 1.99 26.24, 1.95

15 .92, 1.59 22.13, 1.67 same

20 19.15, 1.51 18.87, 1.35 19.19, 1.41

25 16.81, 1.20 17.15, 1.30 17.08, 1.25

30 16.50, 1.09 16.39, 1.13 16.29, 1.12

40 14.52, 1.00 14.32, 0.95 14.48, 0.95

50 13.81, 0.97 14.05, 0.99 same

60 13.52, 0.94 13.38, 0.89 same

70 13.22, 0.90 13.26, 0.92 same

80 12.95, 0.91 12.78, 0.87 same

90 12.75, 0.86 12.72, 0.87 same

100 12.72, 0.86 12.58, 0.83 12.61, 0.83

110 12.50, 0.85 12.58, 0.83 same

120 12.42, 0.86 12.44, 0.86 12.65, 0.85

130 12.56, 0.84 12.23, 0.83 12.36, 0.83

140 12.27, 0.85 12.66, 0.84 12.63, 0.83

150 12.35, 0.84 12.42, 0.82 12.42, 0.81

160 12.26, 0.82 12.30, 0.80 same

170 12.12, 0.82 12.31, 0.81 12.26, 0.83

180 12.37, 0.81 12.07, 0.80 same

240 12.23, 0.81 11.99, 0.79 same

320 12.10, 0.81 11.99, 0.81 same

640 11.86, 0.80 (e-10) 11.87, 0.80 11.85, 0.80

Case 3: Bounded above at 1 (Tests on 4 Dec with prerelease all duplicate)

N Probit Mar2 13 Dec (no amp\_adj)

6 28.42, 2.45 28.77, 2.23 29.31, 2.28

10 25.72, 1.94 26.36, 1.91 25.48, 2.03

15 21.55, 1.55 22.29, 1.59 same

20 18.72, 1.33 18.88, 1.33 19.59, 1.52

25 17.14, 1.21 17.16, 1.36 17.39, 1.24

30 15.73, 1.11 16.02, 1.13 16.07, 1.15

40 14.54, 0.97 14.55, 0.99 14.40, 1.01

50 14.05, 0.99 same same

60 13.38, 0.89 same same

70 13.00, 0.90 13.08, 0.92 same

80 12.91, 0.88 same same

90 12.56, 0.87 12.56, 0.86 same

100 12.60, 0.82 12.59, 0.81 12.67, 0.82

110 12.60, 0.85 same 12.48, 0.83

120 12.42, 0.86 same same

130 12.71, 0.83 same same

140 12.36, 0.84 same same

150 12.39, 0.82 same 12.44, 0.82

160 12.39, 0.82 same same

170 12.18, 0.81 12.18, 0.83 12.23, 0.82

180 12.30, 0.82 12.34, 0.82 12.28, 0.80

240 12.23, 0.82 12.19, 0.81 12.28, 0.81

320 12.09, 0.80 12.17, 0.78 12.09, 0.79

640 11.92, 0.80 11.85, 0.79 same