New Figure Ideas

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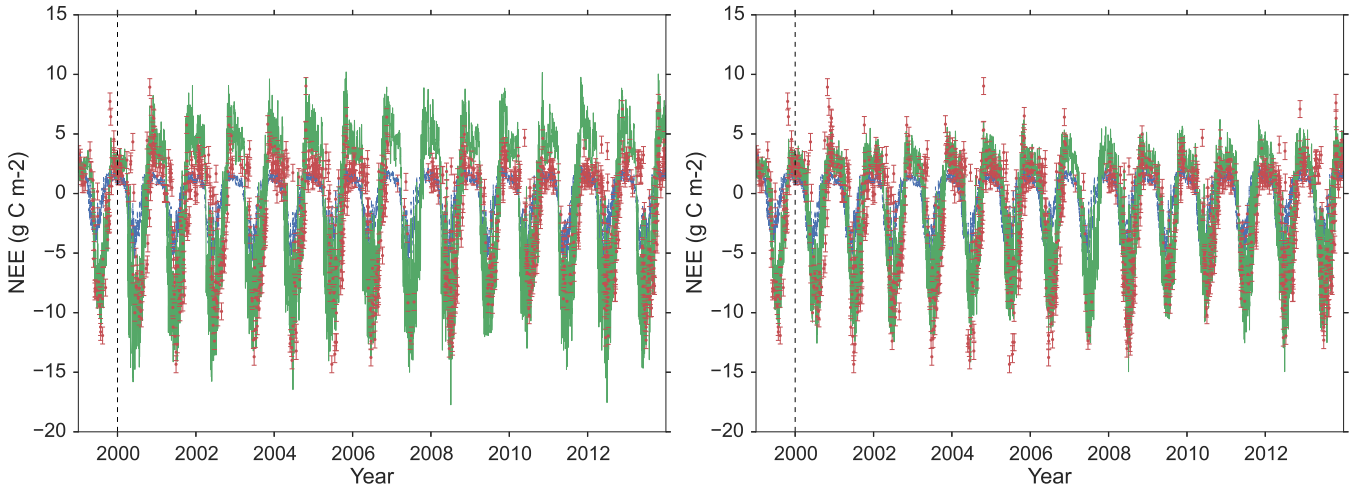
Experiment	RMSE (gCm^{-2})	Bias (gCm^{-2})	Correlation coefficient	Minimisation function evaluations
Background	3.86	-1.60	0.70	n/a
A	1.36	-0.03	0.96	571
B	1.42	-0.04	0.95	353
C	1.37	-0.09	0.96	444
D	1.43	-0.09	0.95	316

Table 1: Analysis (1999-2000) results for experiments and background when judged against observed NEE.

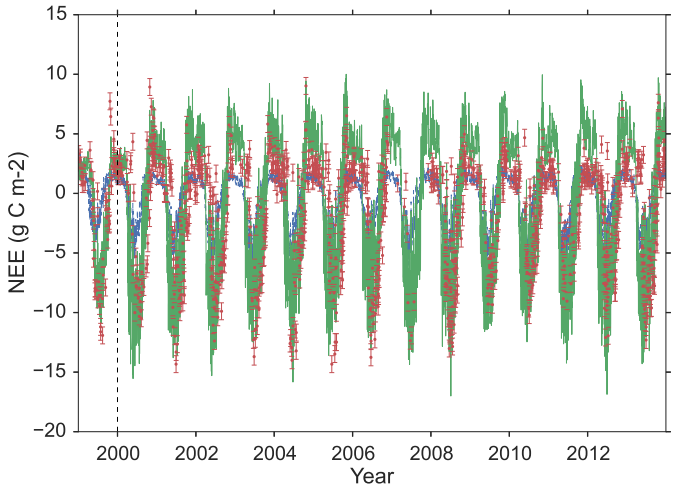
Experiment	RMSE (gCm^{-2})	Bias (gCm^{-2})	Correlation coefficient	Minimisation function evaluations
Background	3.86	-1.36	0.66	n/a
A	4.22	-0.30	0.79	571
B	2.56	-0.20	0.87	353
C	4.09	-0.51	0.78	444
D	2.38	-0.33	0.88	316

Table 2: Forecast (2000-2014) results for experiments and background when judged against observed NEE.

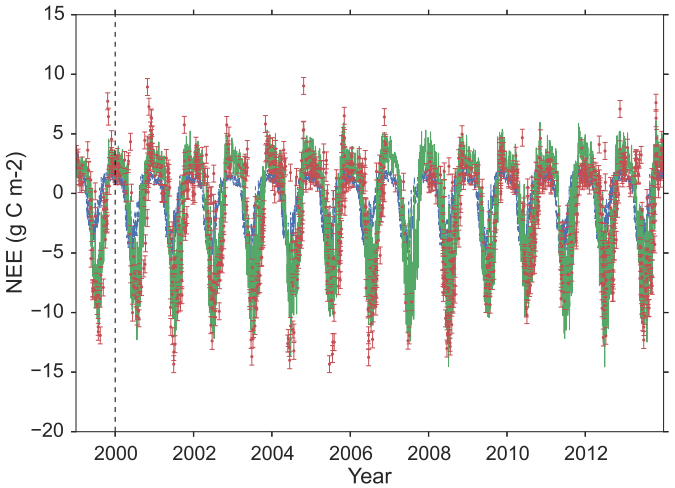


(a) Experiment A

(b) Experiment B

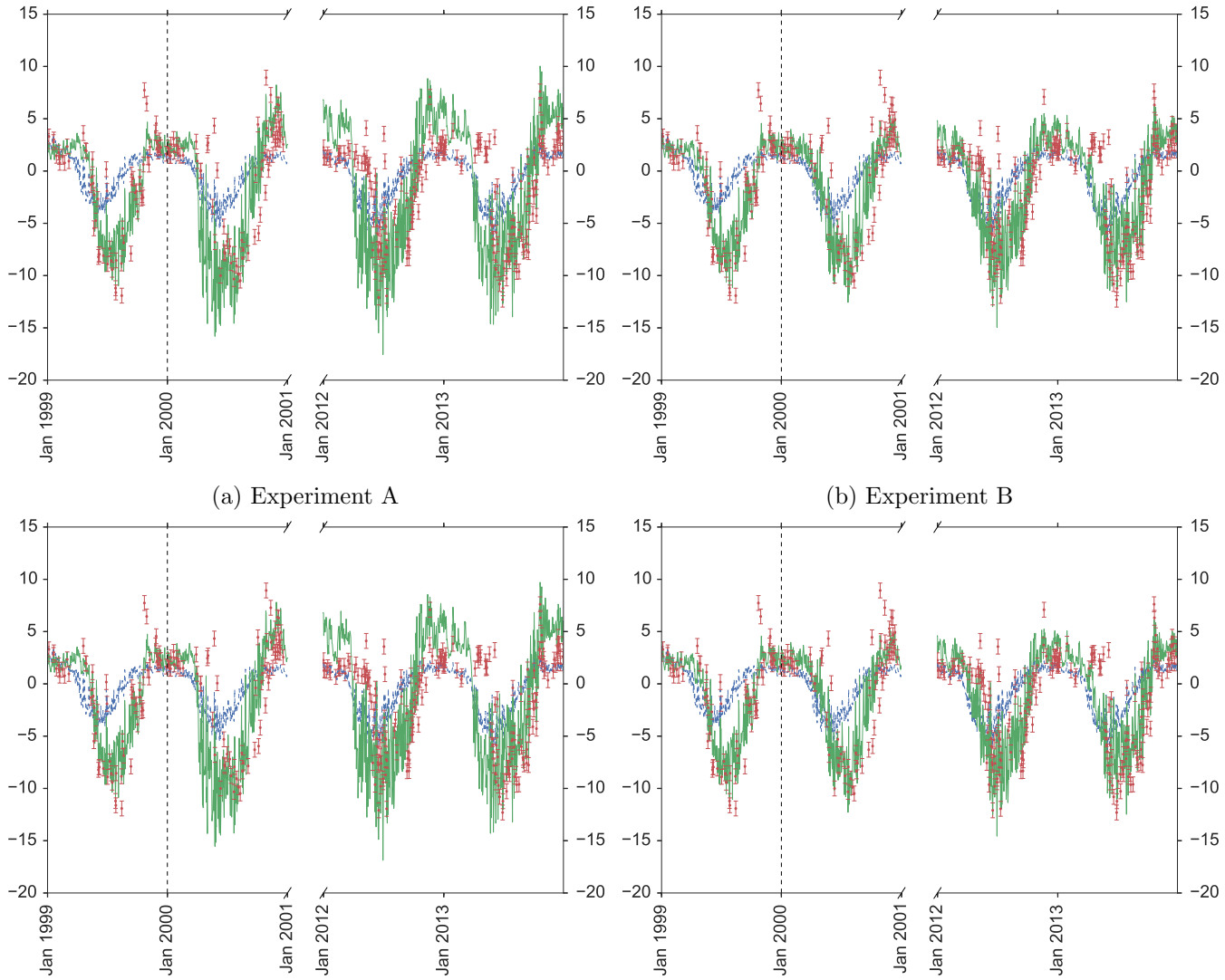


(c) Experiment C



(d) Experiment D

Figure 1: One year assimilation and fourteen year forecast of Alice Holt NEE with DALEC2, blue dotted line: background model trajectory, green line: analysis and forecast after assimilation, red dots: observations from Alice Holt flux site with error bars.



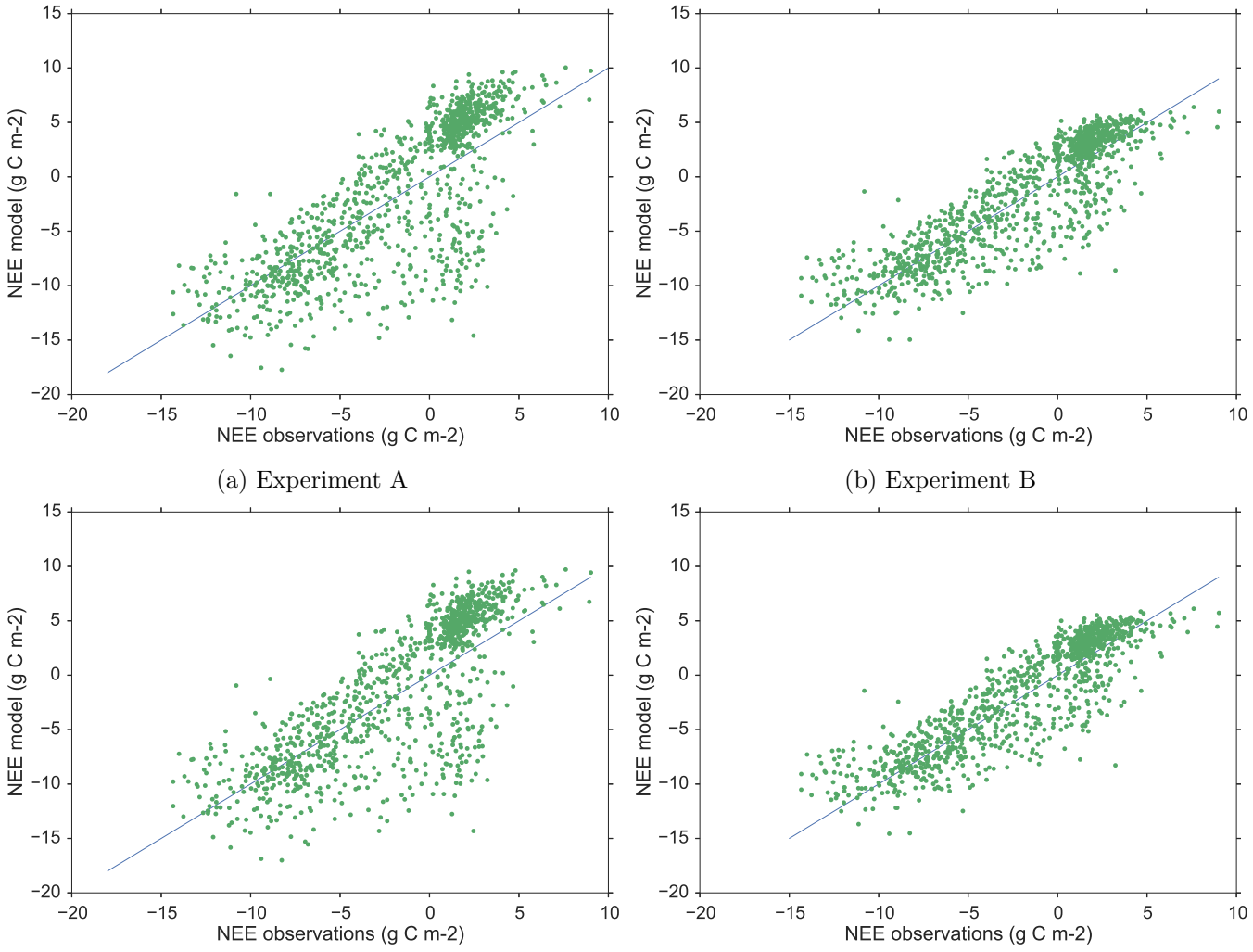
(a) Experiment A

(b) Experiment B

(c) Experiment C

(d) Experiment D

Figure 2: Broken: One year assimilation and fourteen year forecast of Alice Holt NEE with DALEC2, blue dotted line: background model trajectory, green line: analysis and forecast after assimilation, red dots: observations from Alice Holt flux site with error bars.



(a) Experiment A

(b) Experiment B

(c) Experiment C

(d) Experiment D

Figure 3: Forecast scatter plot of modelled NEE vs. observations for 2000-2014 (green dots). Blue line represents the 1-1 line.

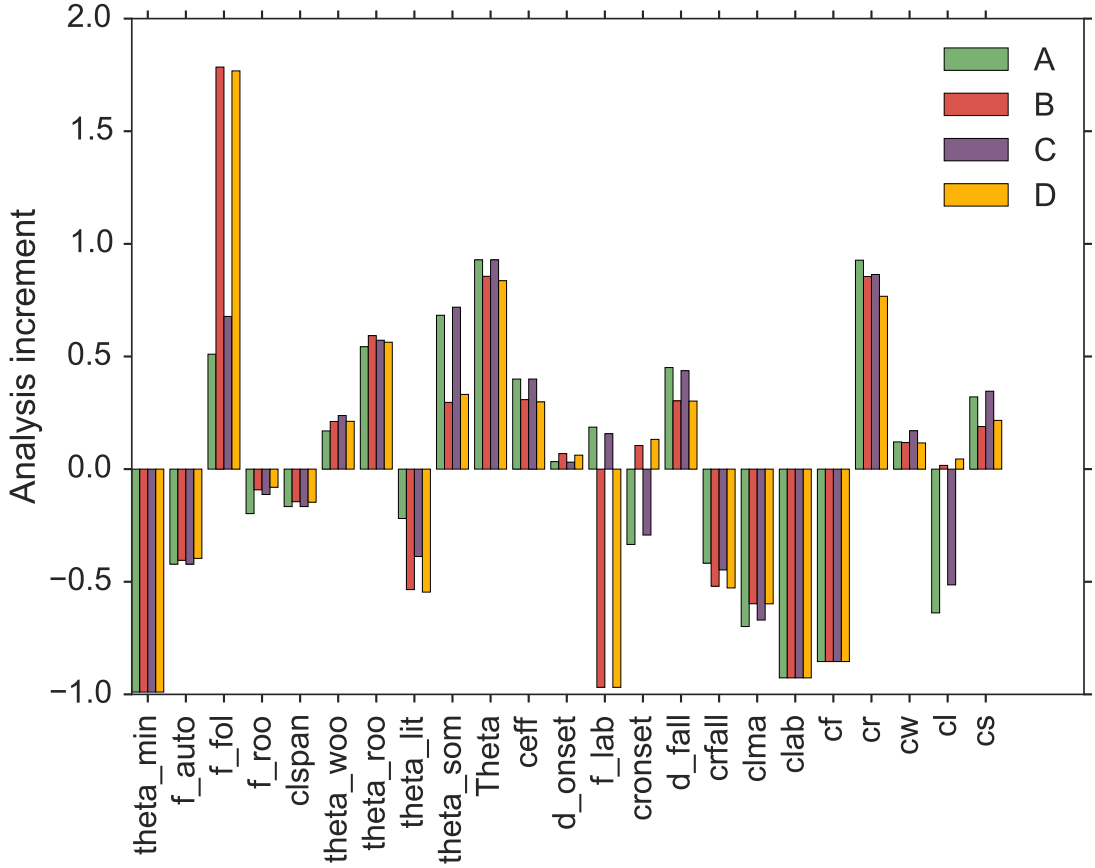


Figure 4: Analysis increment for the four experiments.

Appendix

Parameter	Background	A	B	C	D
θ_{min}	$9.810e-04$	$1.000e-05$	$1.000e-05$	$1.000e-05$	$1.000e-05$
f_{auto}	$5.190e-01$	$3.000e-01$	$3.089e-01$	$3.000e-01$	$3.134e-01$
f_{fol}	$1.086e-01$	$1.640e-01$	$3.025e-01$	$1.822e-01$	$3.006e-01$
f_{roo}	$4.844e-01$	$3.886e-01$	$4.398e-01$	$4.298e-01$	$4.452e-01$
c_{lspan}	$1.200e+00$	$1.000e+00$	$1.026e+00$	$1.000e+00$	$1.023e+00$
θ_{woo}	$1.013e-04$	$1.185e-04$	$1.228e-04$	$1.254e-04$	$1.228e-04$
θ_{roo}	$3.225e-03$	$4.977e-03$	$5.136e-03$	$5.070e-03$	$5.041e-03$
θ_{lit}	$3.442e-03$	$2.688e-03$	$1.601e-03$	$2.107e-03$	$1.563e-03$
θ_{som}	$1.113e-04$	$1.873e-04$	$1.443e-04$	$1.914e-04$	$1.482e-04$
Θ	$4.147e-02$	$8.000e-02$	$7.697e-02$	$8.000e-02$	$7.616e-02$
c_{eff}	$7.144e+01$	$1.000e+02$	$9.347e+01$	$1.000e+02$	$9.276e+01$
d_{onset}	$1.158e+02$	$1.196e+02$	$1.237e+02$	$1.194e+02$	$1.230e+02$
f_{lab}	$3.204e-01$	$3.801e-01$	$1.000e-02$	$3.707e-01$	$1.000e-02$
c_{ronset}	$4.134e+01$	$2.752e+01$	$4.567e+01$	$2.924e+01$	$4.680e+01$
d_{fall}	$2.205e+02$	$3.199e+02$	$2.874e+02$	$3.169e+02$	$2.871e+02$
c_{rfall}	$1.168e+02$	$6.801e+01$	$5.605e+01$	$6.450e+01$	$5.517e+01$
c_{lma}	$1.285e+02$	$3.869e+01$	$5.165e+01$	$4.237e+01$	$5.163e+01$
C_{lab}	$1.365e+02$	$1.000e+01$	$1.000e+01$	$1.000e+01$	$1.000e+01$
C_f	$6.864e+01$	$1.000e+01$	$1.000e+01$	$1.000e+01$	$1.000e+01$
C_r	$2.838e+02$	$5.470e+02$	$5.265e+02$	$5.290e+02$	$5.015e+02$
C_w	$6.506e+03$	$7.292e+03$	$7.275e+03$	$7.614e+03$	$7.262e+03$
C_l	$5.988e+02$	$2.165e+02$	$6.088e+02$	$2.911e+02$	$6.258e+02$
C_s	$1.936e+03$	$2.557e+03$	$2.302e+03$	$2.606e+03$	$2.355e+03$

Table 3: Parameter values for background and difference experiment analysis vectors.