Supplementary Material for:
A perturbed biogeochemistry model ensemble evaluated against in situ and satellite observations

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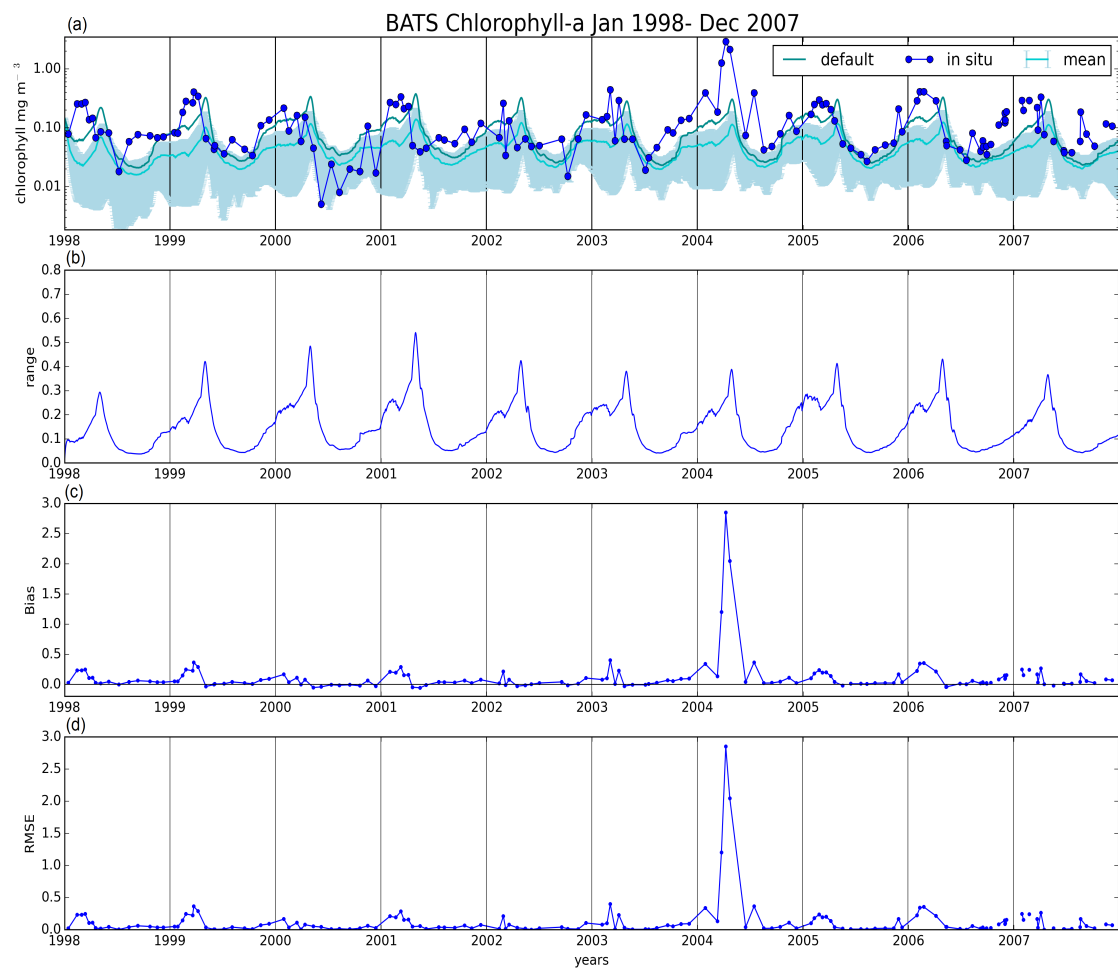
Figure S1. (a) In situ surface chlorophyll at station BATS overlain with the ensemble 75th and 25th percentile (blue shade), ensemble mean (cyan), and default run (dark cyan). Statistical metrics associated with the ensemble mean's surface chlorophyll such as range, bias, and RMSE are shown on (b), (c), and (d) respectively. Bias in this figure is (in situ – ensemble mean)
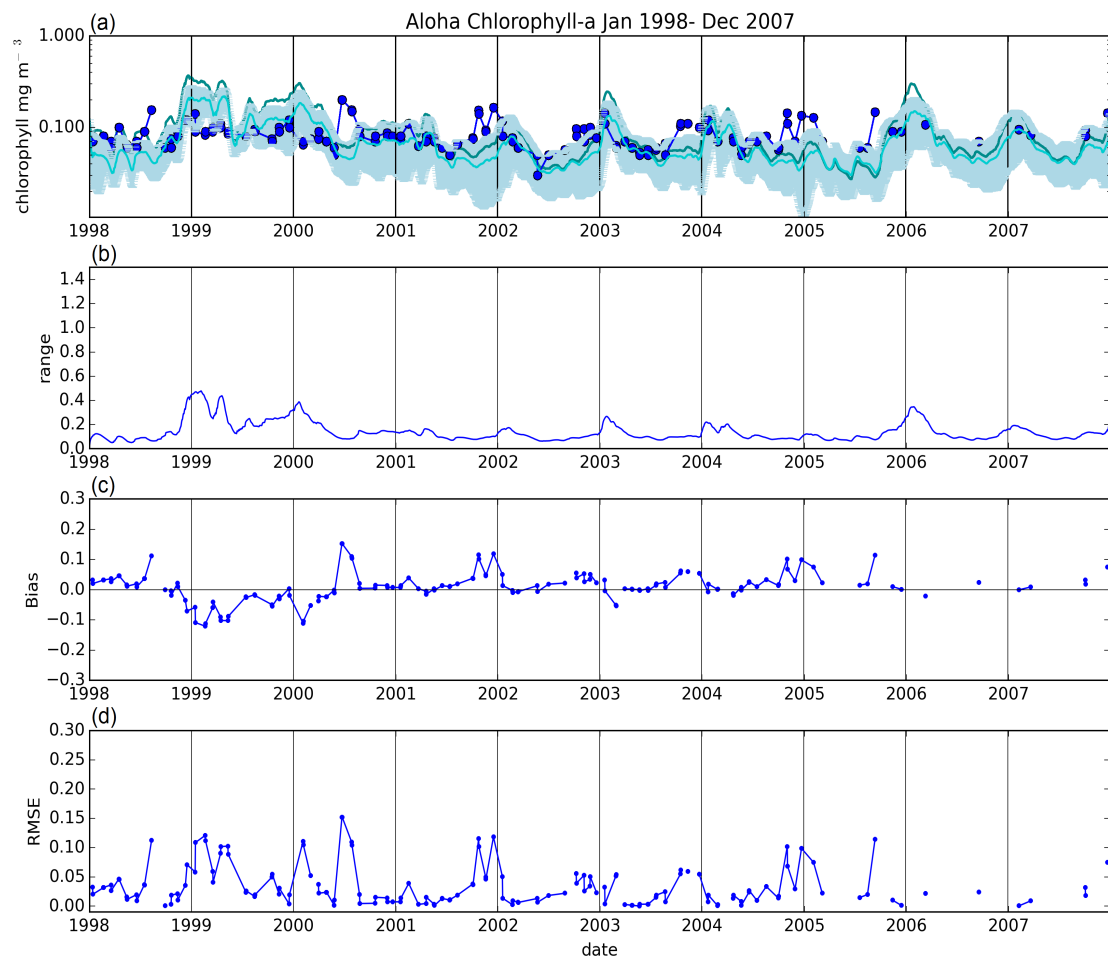
Figure S2. (a) In situ surface chlorophyll at station ALOHA overlain with the ensemble 75th and 25th percentile (blue shade), ensemble mean (cyan), and default run (dark cyan). Statistical metrics associated with the ensemble mean's surface chlorophyll such as range, bias, and RMSE are shown on (b), (c), and (d) respectively
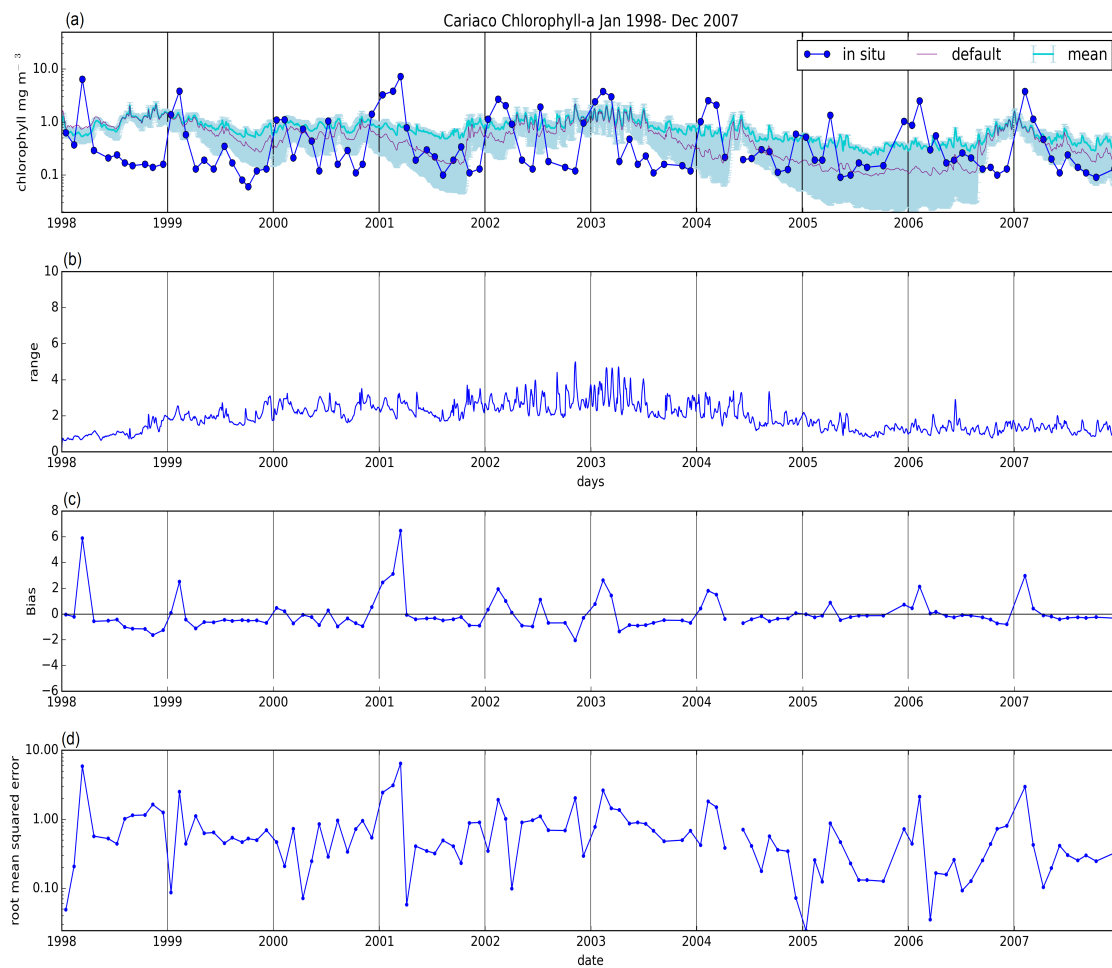
Figure S3. (a) In situ surface chlorophyll at station Cariaco overlain with the ensemble 75th and 25th percentile (blue shade), ensemble mean (cyan), and default run (violet). Statistical metrics associated with the ensemble mean's surface chlorophyll such as range, bias, and RMSE are shown on (b), (c), and (d) respectively. Bias in this figure is (in situ – ensemble mean)
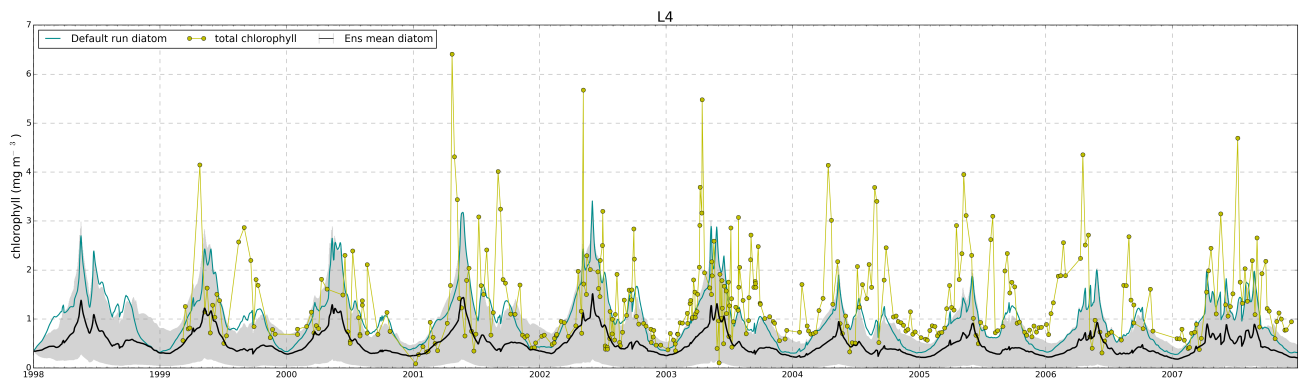
Figure S4. In situ surface total chlorophyll at station L4 (yellow) and the ensemble 90th and 10th (grey shade) percentile, ensemble mean (black), and default run (dark cyan) of diatom surface chlorophyll
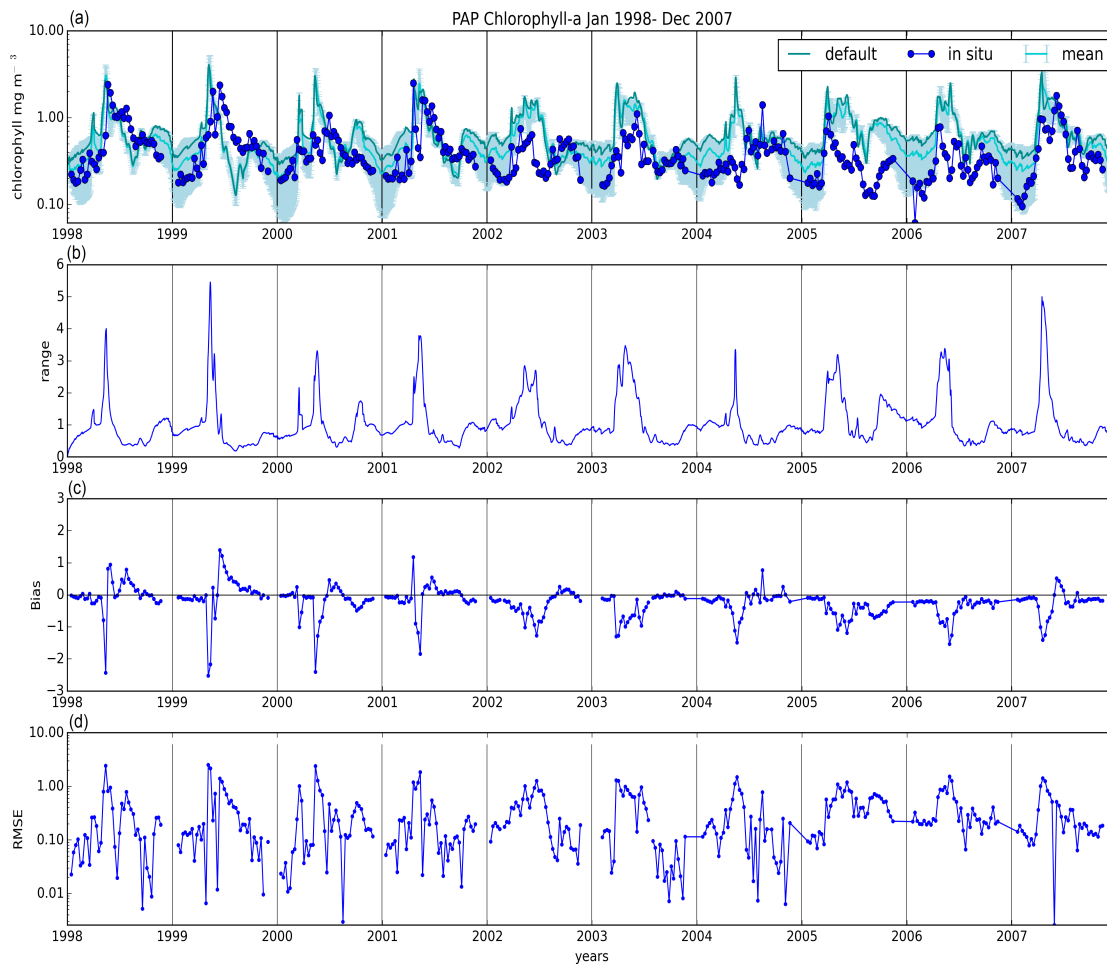
Figure S5. (a) SeaWIFs-derived surface chlorophyll-a at station PAP overlain with the ensemble 75th and 25th (blue shade), ensemble mean (cyan), and default run (dark cyan). Statistical metrics associated with the ensemble mean's surface chlorophyll such as range, bias, and RMSE are shown on (b), (c), and (d) respectively
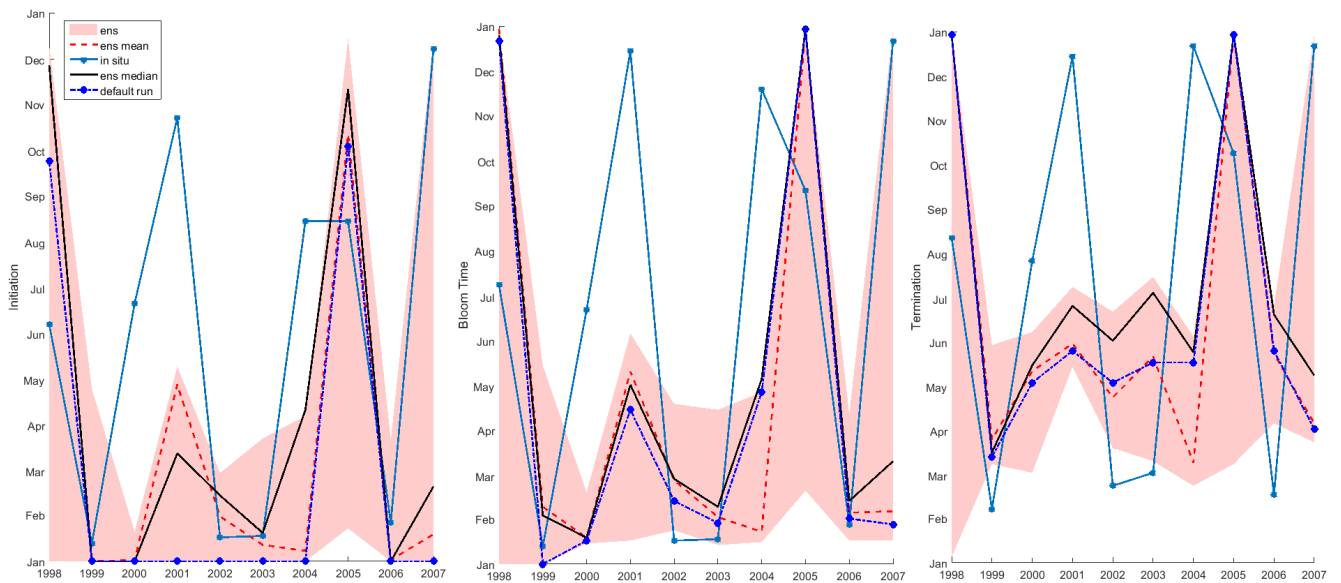
Figure S6. Initiation, bloom time, and termination at station ALOHA from 1998-2007. Some of the bloom time happening in January first because its the highest time is when the model started its simulation