Figure S1. Statistical metrics of IOA (first column), MB (second column), and RMSE (third column) for BASE (top row), NMC (middle row), and NEW NMC (bottom row) simulations at PM$_{2.5}$ measurements over Northeast Asia. All model data are validated at 00, 06, 12, and 18 UTC during the period of 1 May to 14 June, 2016.
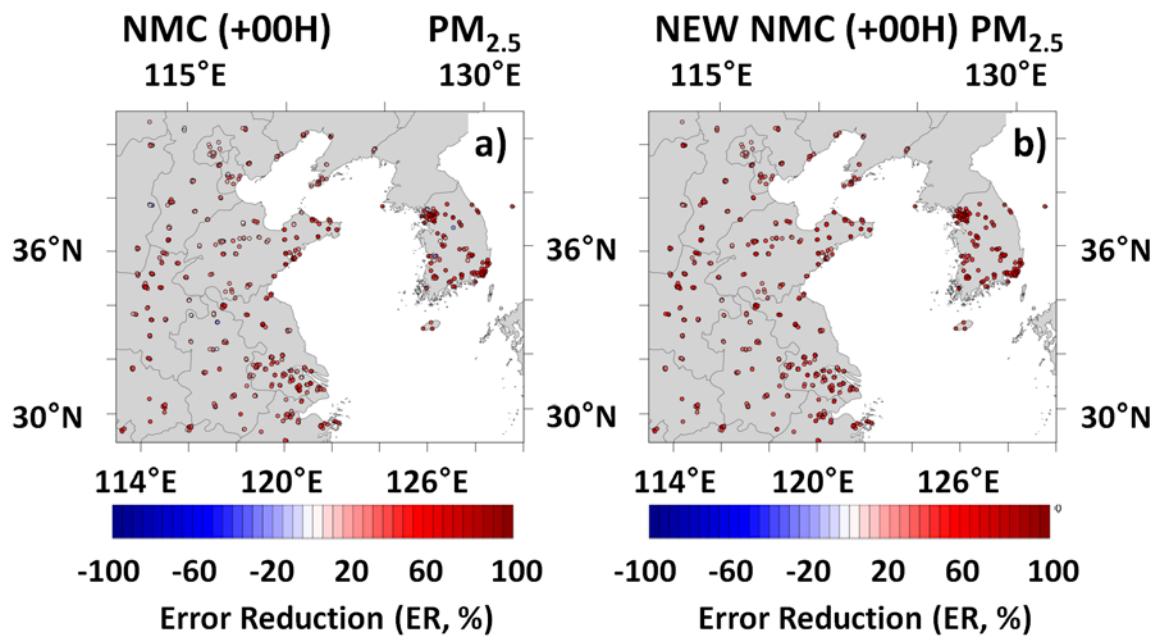
Figure S2. Same as Fig. S1, except for error reduction (ER) by the NMC (left), and the NEW NMC (right) methods.