Atmospheric
Chemistry
and Physics

Supplement of

Source backtracking for dust storm emission inversion using an adjoint method: case study of Northeast China

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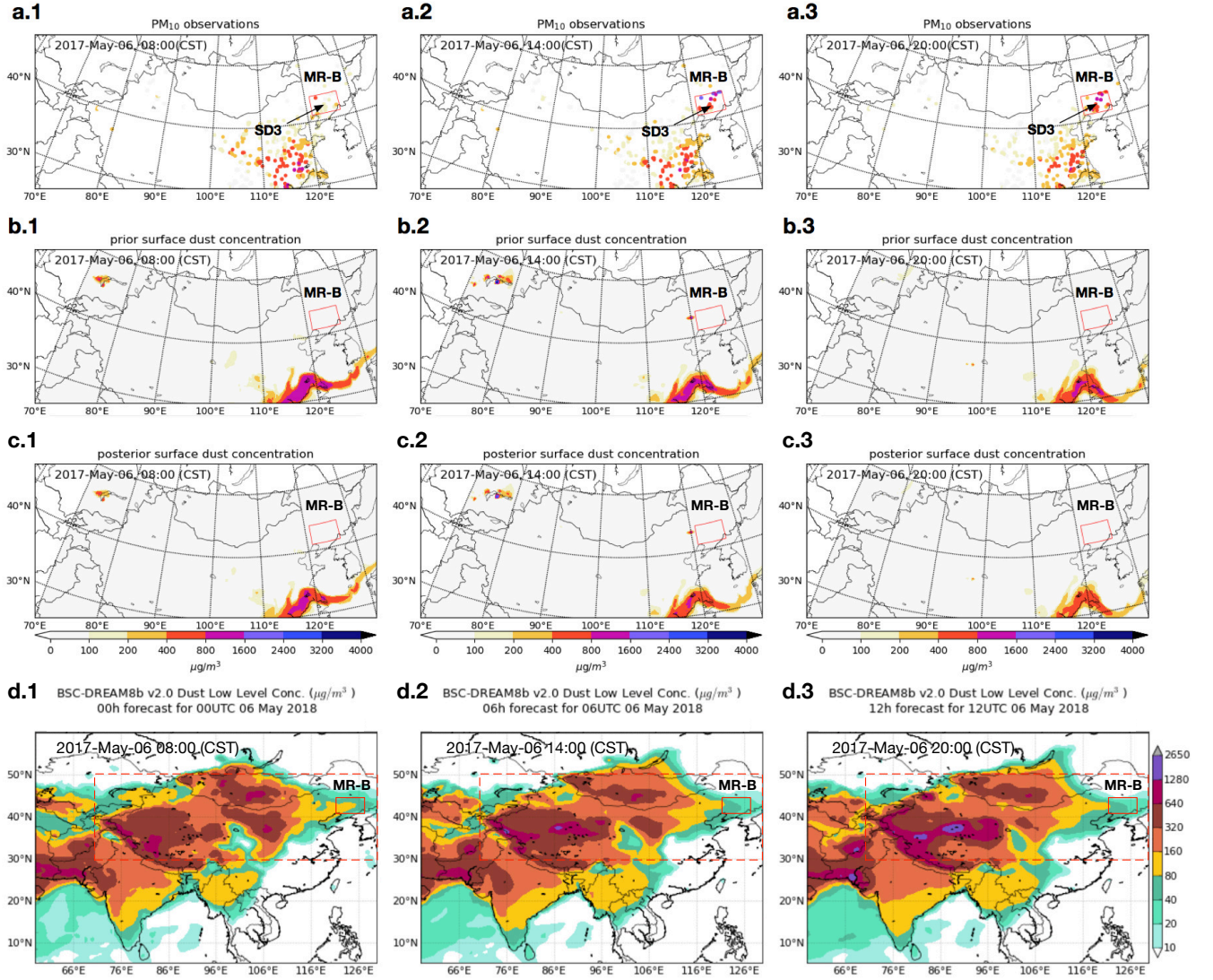
Figure S1. PM$_{10}$ observations (a.1~a.3) vs. surface dust concentration simulation of the 3rd severe dust (SD3) from Lotos-Euros prior (b.1~b.3), posterior (c.1~c.3) and BSC-DREAM8b (d.1~d.3) over the marked region B (MR-B) at May 06 08:00 (CST): a.1~d.1; 14:00 (CST): a.2~d.2; 20:00 (CST): a.3~d.3.
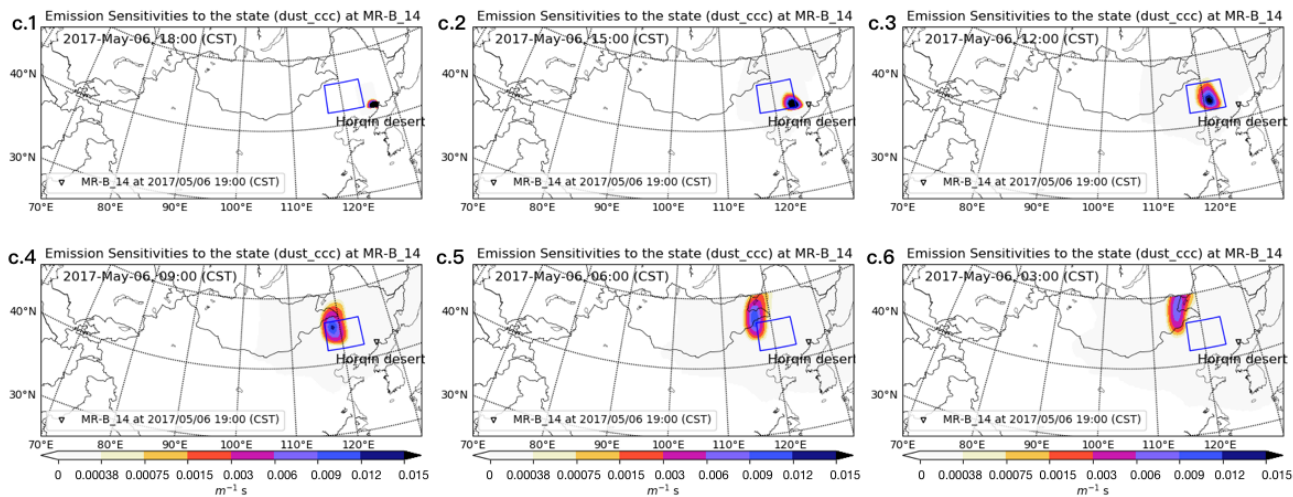
Figure S2. Backward time series of emission sensitivity of the dust simulation at MR-B_14 2017 May 06, 19:00 CST: emission sensitivity distribution at 2017 May 06, 18:00 (c.1), 15:00 (c.2), 12:00 (c.3), 09:00 (c.4), 06:00 (c.5), 03:00 (c.6).
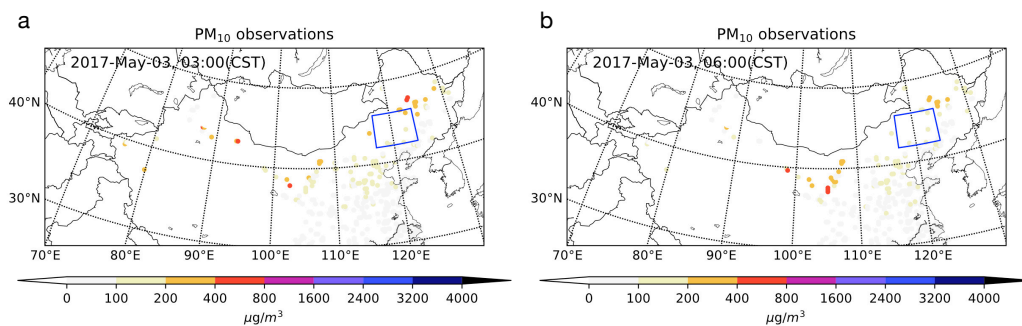

Figure S3. PM_{10} observations at May 03 03:00 CST (a), May 03 06:00 (b).