Supporting materials for "Impact of topography on black carbon transport to the southern Tibetan Plateau during pre-monsoon season and its climatic implication"

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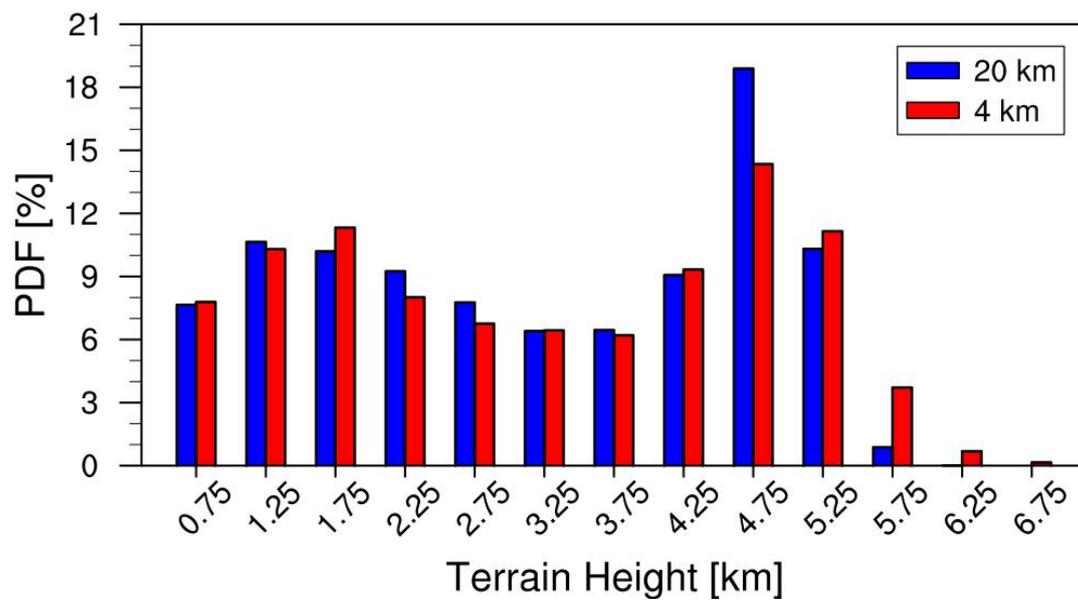
Figure S1. Probability distribution of terrain height between the topography representations at 20 km and 4 km resolutions as shown in Fig. 3.
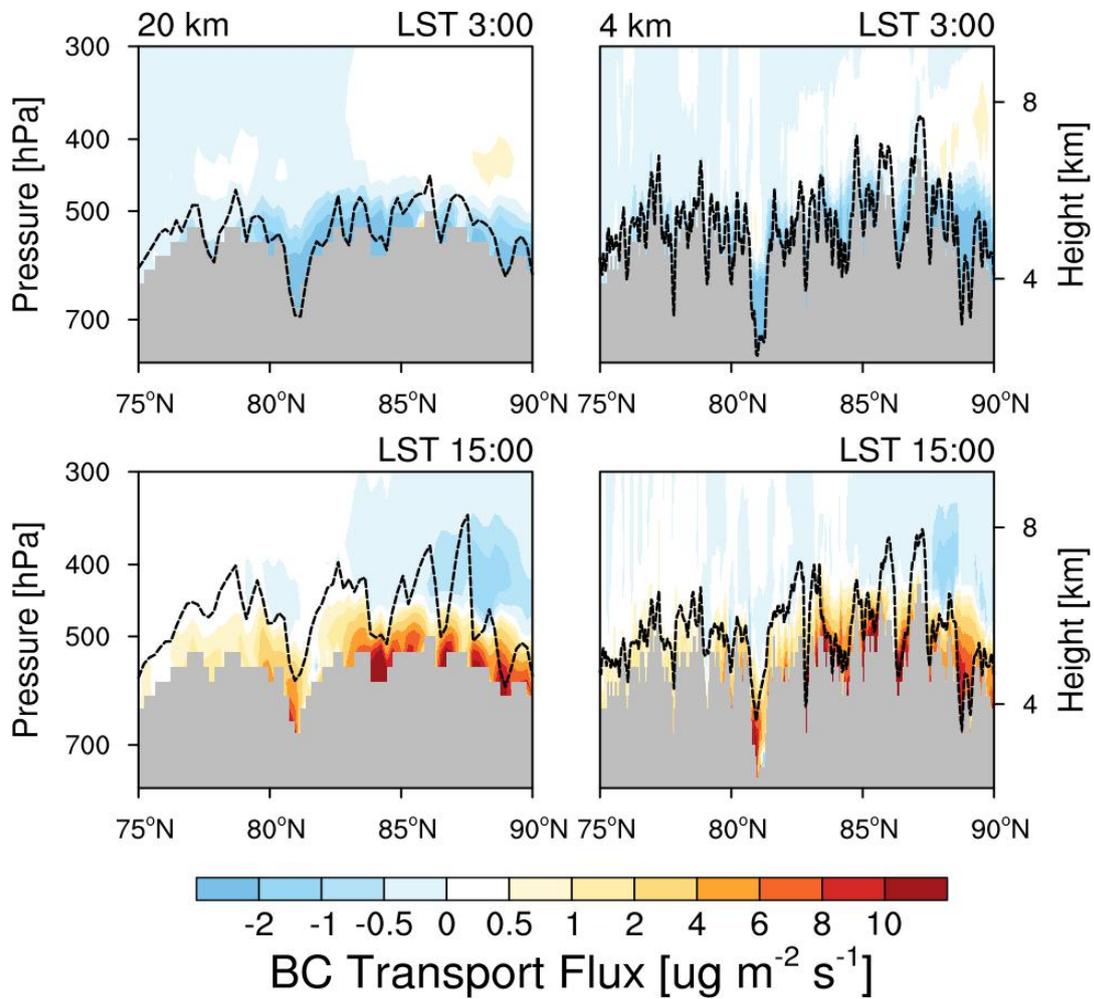
Figure S2. Cross section of BC flux anomalies along the black dash cross line shown in Fig. 3 (remove daily mean).
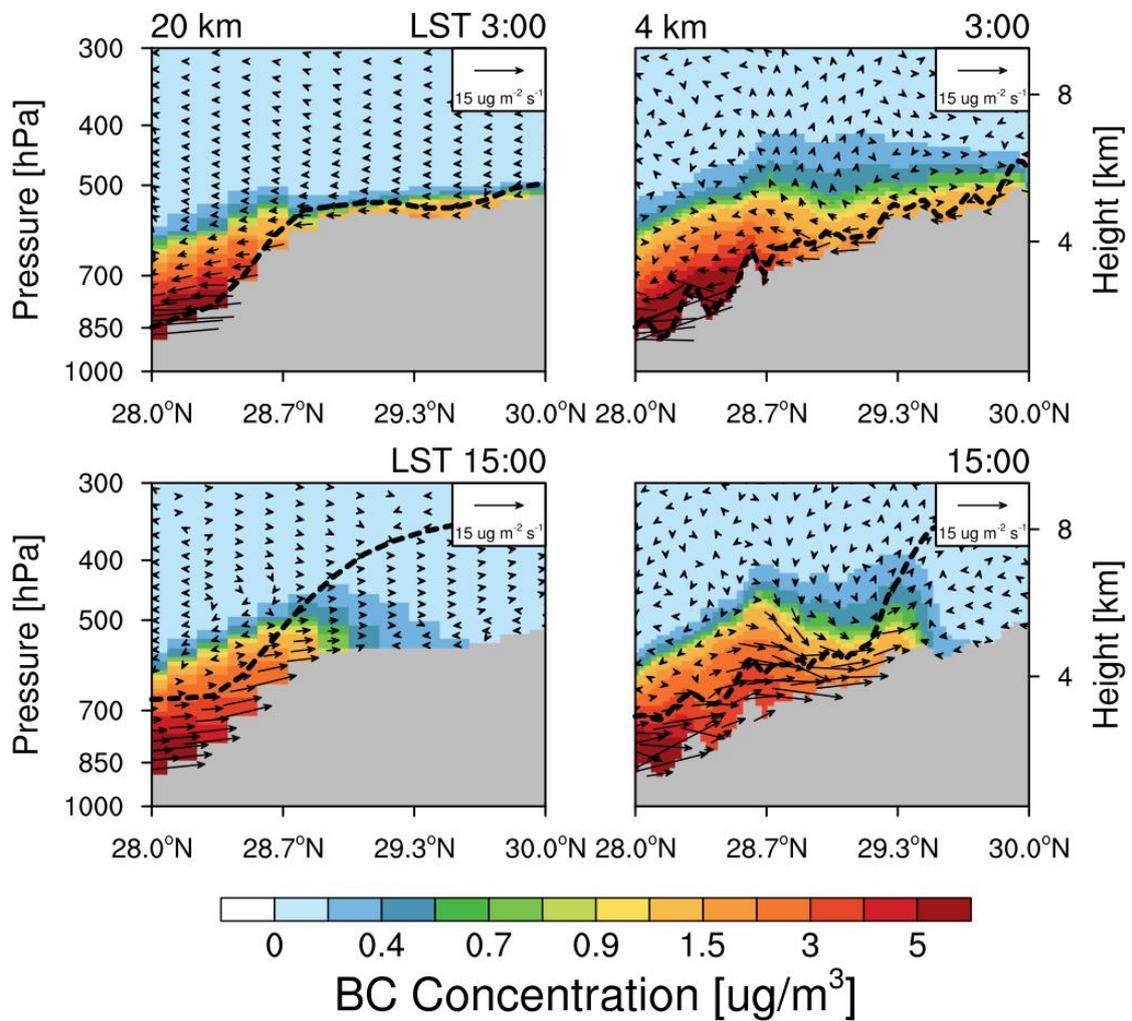
Figure S3. Cross section of BC flux anomalies along the valley (remove daily mean).
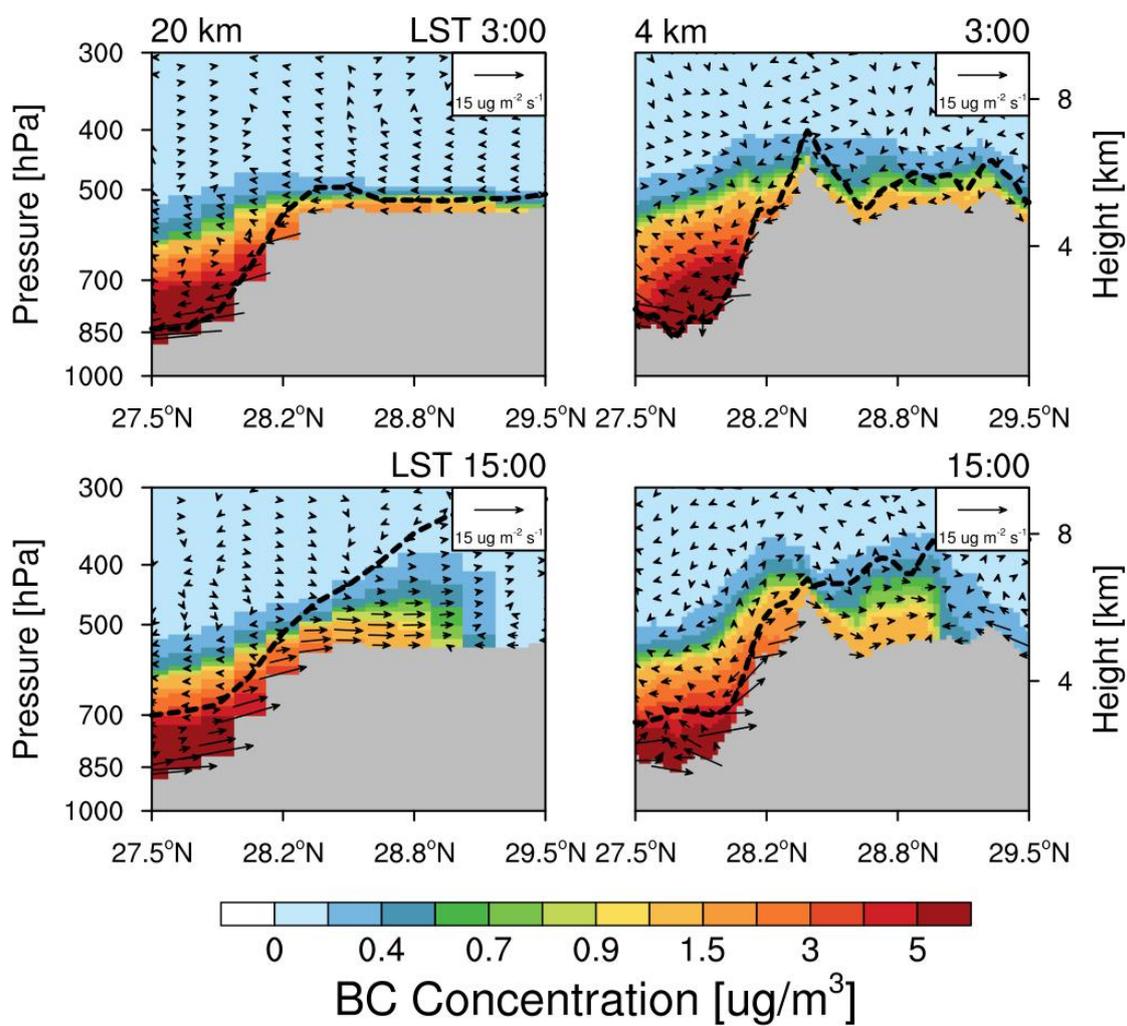
Figure S4. Cross section of BC flux anomalies cross the mountain (remove daily mean).
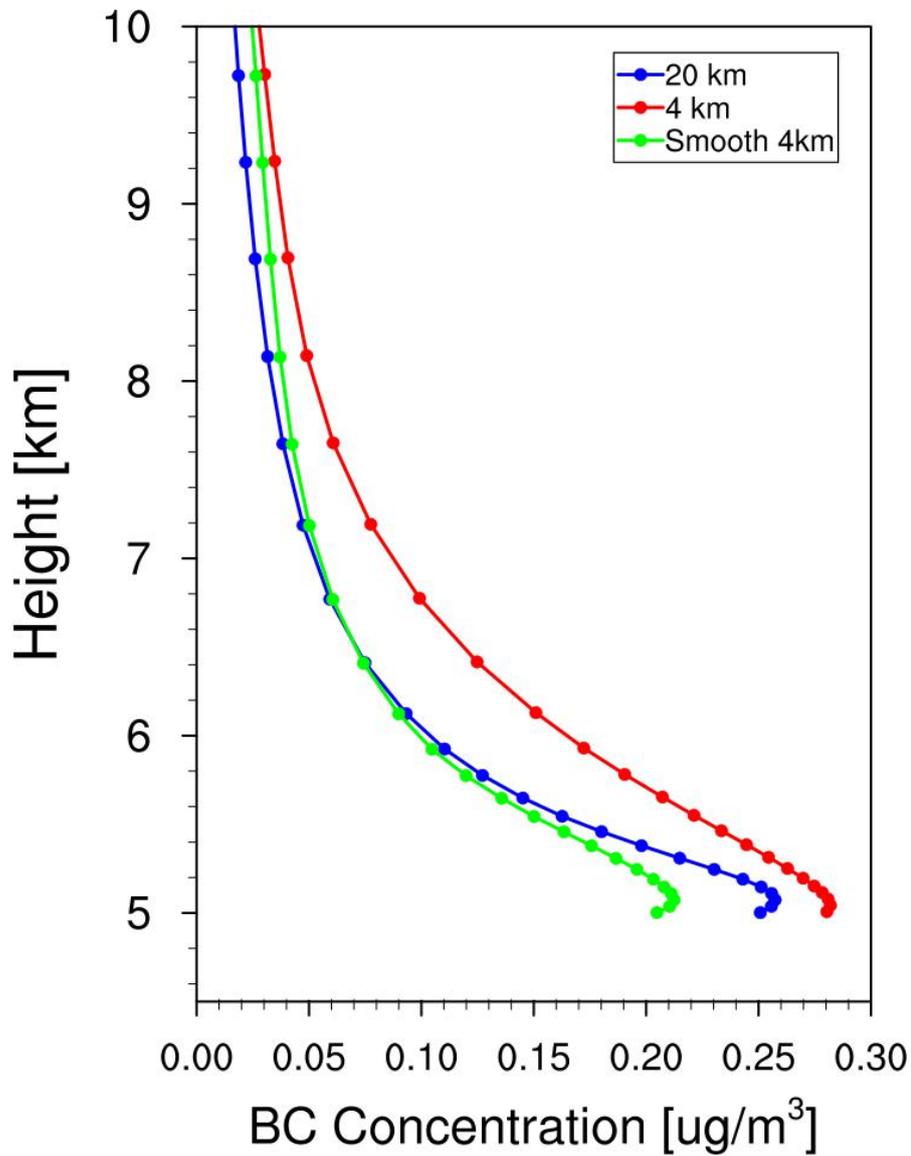
Figure S5. Vertical profile of BC concentration averaged over the TP (with elevation > 4 km) within the domain shown in Fig. 1 of April 1-20, 2016 from the simulations at 20 km and 4 km resolutions. The result from the sensitivity experiment at 4 km resolution but with the smoothing 20 km topography is also shown.
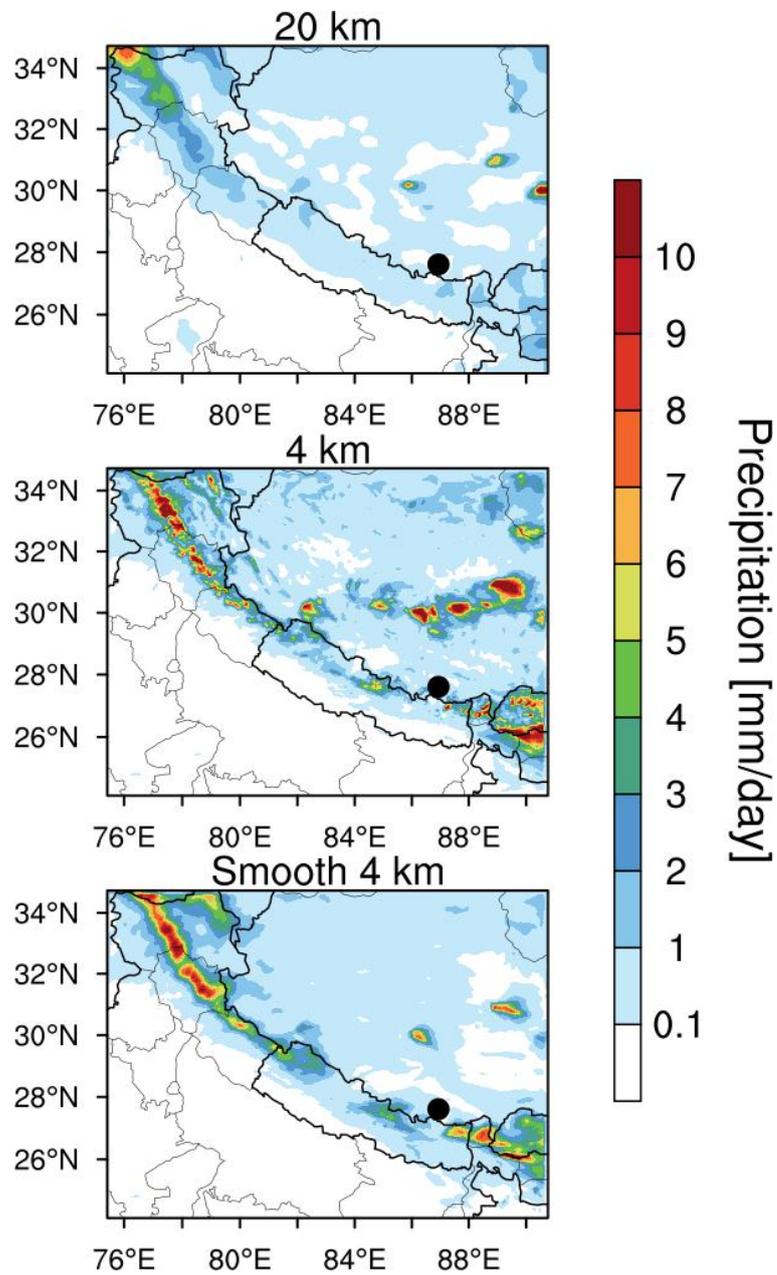
Figure S6. Spatial distributions of precipitation averaged for April 1-20, 2016 from the simulations at 20 km and 4 km resolutions. The sensitivity simulation at 4 km resolution but with the smoothing 20km-topography is also shown.