Atmospheric energy budget response to aerosol perturbation in tropical cloud systems

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Content:

Figs. S1-S3.

Supplementary material containing a few examples of snapshots of MODIS-Terra (Platnick et al., 2003) true color images and cloud cover form the model output for the two cases simulated here (Figs S1-2). In addition, Fig. S3 presents relative fraction of the different cloud type for the two simulated cases.
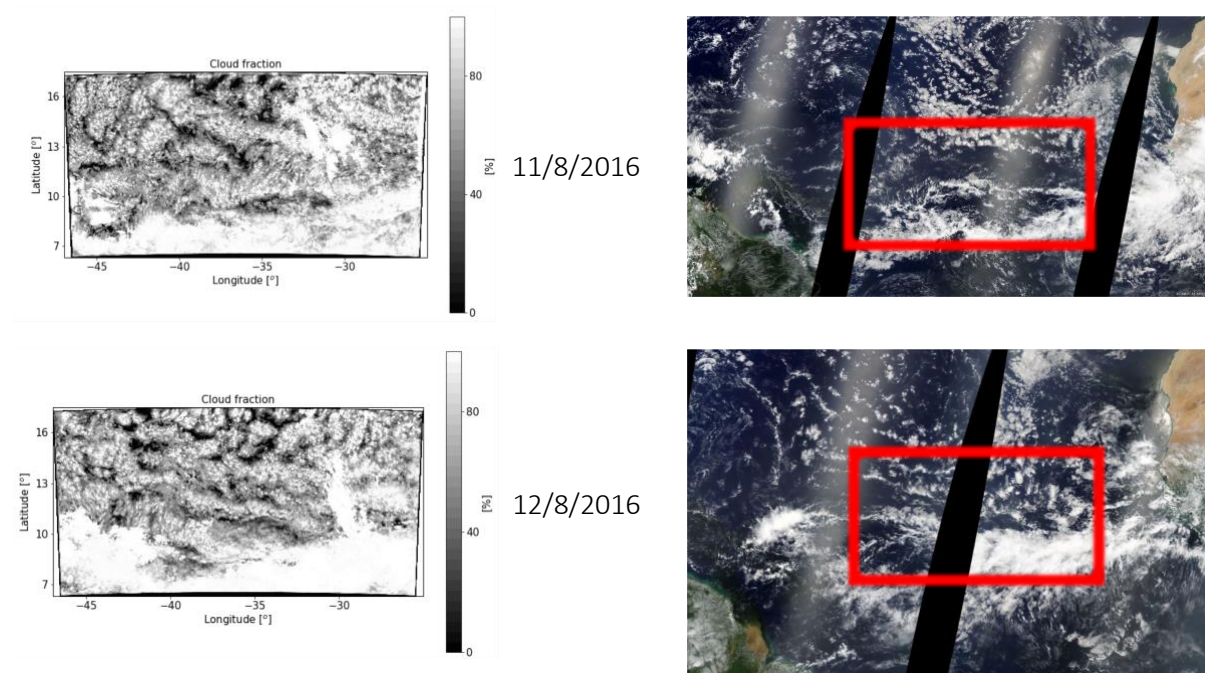
Figure S1. Cloud cover from the model simulations (left column) and MODIS-Terra true color images (right column (Platnick et al., 2003) © NASA) for the 11/8/2016 (upper row) and 12/8/2016 (lower row). The red rectangle represents the model domain.
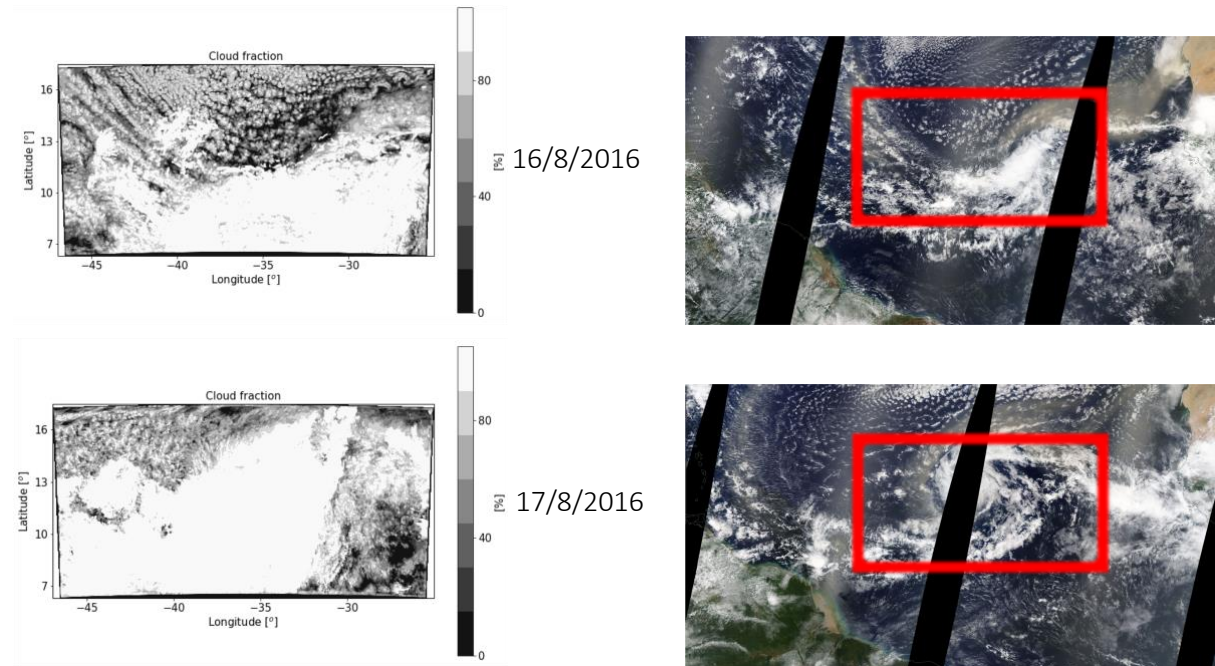

16/8/2016

17/8/2016

Figure S2. Cloud cover from the model simulations (left column) and MODIS-Terra true color images (right column © NASA) for the 16/8/2016 (upper row) and 17/8/2016 (lower row). The red rectangle represents the model domain.
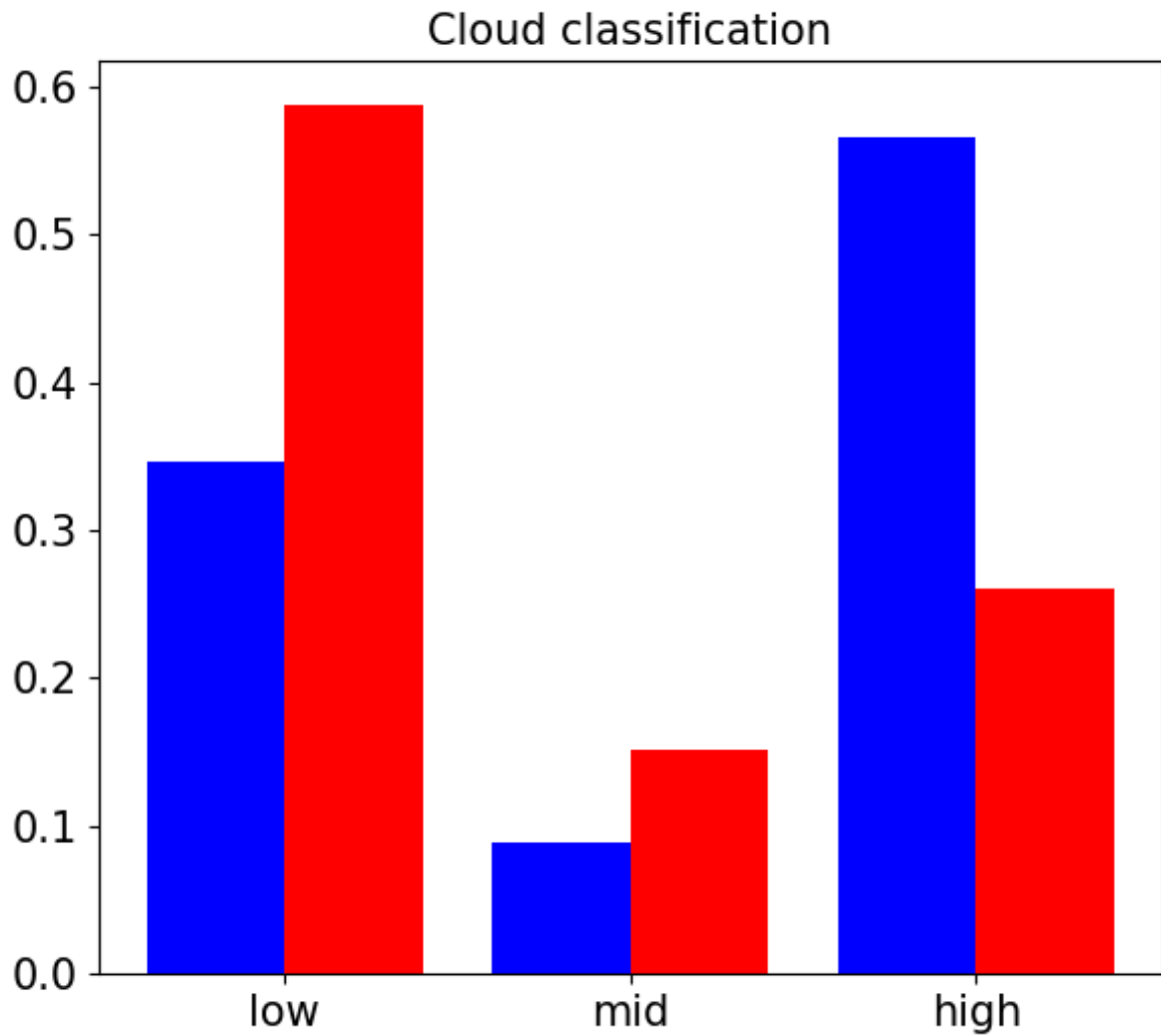
Figure S3. The relative fraction of the different cloud type for the two simulated cases. Red represents the shallow-cloud dominated case while blue represents the deep-cloud dominated case. The different cloud classifications are according to the cloud top: low is for tops below 800 mb, mid is for tops between 800 mb and 500 mb, while high is for tops above 500 mb. In our simulations the vast majority of clouds with high top are formed by deep convection, hence the "high" category represents mostly deep convective cores and anvils.