

Improvements in Night-time Low Cloud Detection and MODIS-Style Cloud Optical Properties from MSG SEVIRI

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The MODIS cloud optical properties algorithm (MOD06/MYD06 for Terra and Aqua MODIS, respectively) slated for production in Data Collection 6 has been adapted to execute using available channels on MSG SEVIRI. Available MODIS-style retrievals include IR Window-derived cloud top properties, using the new Collection 6 cloud top properties algorithm, cloud optical thickness from VIS/NIR bands, cloud effective radius from 1.6 and 3.7 μ m and cloud ice/water path. We also provide pixel-level uncertainty estimate for successful retrievals.

It was found that at nighttime the SEVIRI cloud mask tends to report unnaturally low cloud fraction for marine stratocumulus clouds. A correction algorithm that improves detection of such clouds has been developed.

We will discuss the improvements to nighttime low cloud detection for SEVIRI and show examples and comparisons with MODIS and CALIPSO. We will also show examples of MODIS-style pixel-level (Level-2) cloud retrievals for SEVIRI with comparisons to MODIS.