

L2 Cloud Mask Version 28 (04/13/2011)

Cloud Mask (35_L2) (Updated 4/13/2011) Steven Ackerman, Rick Frey

- Use LEOCAT software (C, C++); replaces current FORTRAN code. [Status: Implemented]
- Implement day/night, land/water dust detection algorithm. [Status: Implemented]
- Implement cloud adjacency flag. [Status: Implemented]
- Implement scattering angle and background NDVI-dependent 0.66 μm thresholds for day land. [Status: Implemented]
- Implement Pinty et al. version of GEMI as a cloud test for day land; use on all surface types including desert. [Status: Implemented for arid regions only (NDVI < 0.3)]
- Implement use of background NDVI map to define desert (arid and semi-arid) processing path. [Status: Implemented]
- Eliminate tri-spectral test for oceans; replace with simple 8.6-11 μm BTD threshold test. [Status: Implemented]
- Implement additional 3.9-11 μm BTD test for low clouds over night ocean using TPW-dependent thresholds; keep original 3.9-11 μm BTD test for low-emissivity stratus clouds. [Status: Implemented]
- Change night land 3.9-11 μm BTD test thresholds to be function of TPW. [Status: Implemented]
- Implement new SST test for day and night ocean. [Status: Implemented]
- Use collocated CALIOP/MODIS data to verify or adjust cloud test thresholds. [Status: Done]
- Calculate means and standard deviations of band 1 and 2 reflectances over the 16 250-m pixels associated with each 1-km pixel; output to new SDS in cloud mask product [Status: Implemented]