

Proposed MODIS-Atmosphere Collection 006 Change Document
L2 Atmospheric Profiles Version 28 (04/08/2011)

Status Keyword List: [Not Started], [Investigating], [Coding], [Testing], [Dropped] or [Implemented]. Note: If no status keyword appears after an item, the status was not communicated to the author of this document.

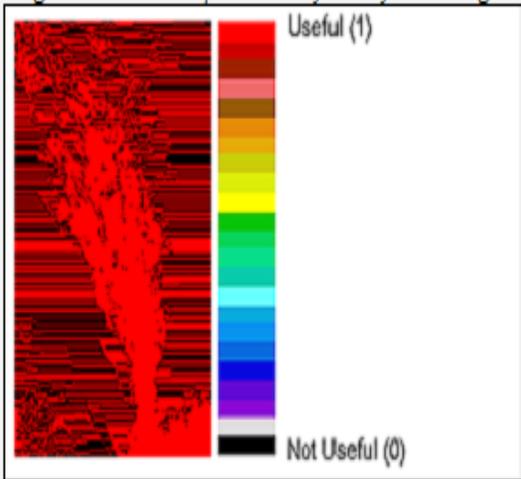
Atmospheric Profile (07_L2) (Updated 04/08/2011) Eva Borbas

- Update surface emissivity data base to current version. [Status: Implemented]
- Training data improvements regarding skin temperature assignment. [A skin temperature sensitivity study was completed, no change will be made.] [Status: Implemented]
- Update NedT for both Terra and Aqua. [Status: Implemented]
- Investigate the dry bias in Aqua TPW for moist cases and make adjustments to improve. [Status: Implemented]
- Apply zero bias in the radiative transfer calculation. [Status: Implemented]
- Introduce H2O/CO2 channel spectral shifts for Aqua. [Status: Implemented]
- Update the radiative transfer model from prototypeCRTM to CRTM. [Status: Implemented]
- Perform a more thorough evaluation of the ozone product through intercomparisons with TOMS and AIRS and make adjustments to algorithm. [Status: Implemented]
- Assess the TPW Low and TPW High products and possibly change the levels of integration to make them more useful. [Status: Implemented]
- Improve QA/QC flags and screening for bad input MOD02L1B data. [Status: Dropped] The QA plan document has been updated.
- Examine the MOD07 Level 3 products for consistency with other long term datasets. [Status: Implemented]
- Making Aqua and Terra DAAC code uniform. [Status: Implemented]
- Look into whether we can include all profiles at 101 levels in direct broadcast or at the DAAC, and adding water vapor mixing ratio profiles. [Status: Implemented]
- Output file label updates: [Status: Implemented]
 - Change "Surface Temperature" to "Skin Temperature" in the output file
 - Adding pressure levels, offset/scale factor usage to the output file
 - Fix K-index valid range in the output file
- Have the Atmosphere Profile development team fix (remove the noise in fill regions) all 07_L2 Atmosphere Profile Usefulness and Confidence QA Flags. This problem might stem from the QA flags not being initialized as 0's; but this is unclear. [Fixed, Status: Implemented]

Collection 5

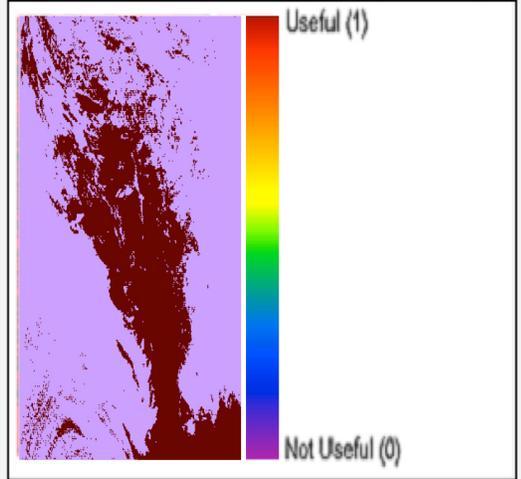
Collection 6 (fixed QA)

Flag = "Retrieved Temperature Profile Usefulness Flag" ¹



SDS = "Quality_Assurance" (Atmospheric Profile)

Flag = "Retrieved Temperature Profile Usefulness Flag" ¹



SDS = "Quality_Assurance" (Atmospheric Profile)

Adjust CO₂ amount daily (1.5 ppm per year using 367 for Jan 2000)