

Proposed MODIS-Atmosphere Collection 006 Change Document
L2 Joint Atmosphere (ATML2) Version 28 (4/22/2010)

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.

Joint Atmosphere (ATML2) (Updated 4/22/2010) Steve Platnick, Paul Hubanks, Michael King, Lorraine Remer, Clare Salustro

- New: Incorporate 5 km L1B samples from MYD02SSH per request from A. Heidinger. Will have to modify MYD02SSH sampling (currently pixel 3, 3) to be consistent with ATML2. [Status: Not Started]
- Add all needed cloud top and cloud optical parameters and QA flags to the ATML2 product so files can be used to create user-tuned L3-like products on the fly (post operational processing). This endeavor was started upon request by UW. [Status: Some investigation and meetings have taken place.]
- Check with all L2 development teams to ensure any C006 changes to L2 HDF files (new parameters, new or changed QA, etc.) are accounted for in the Joint L2. [Status: Not Started]
- Revisit complete Joint Product SDS list with all Atmosphere teams for additions or deletions. [Status: Not Started]
- The Deep Blue Aerosol group has no changes regarding the Deep Blue SDS's for C006. Both Terra and Aqua should contain the same Deep Blue SDSs.
- Regarding Deep Blue Aerosol Quality Assurance, we'd like this to represent only the Deep Blue Confidence Flag from 04_L2 "Quality_Assurance_Land" (Byte #4, bits 1-2). We would like this same integer SDS to be present in the C006 04_L2 files, so this can be a direct copy.
- The dark target Aerosol group required the following change. Change the **source** SDS for the ATML2 SDS [Aerosol_Optical_Depth_Ratio_Small](#) from the 04_L2 SDS [Optical_Depth_Ratio_Small_Land_And_Ocean](#) to the 04_L2 SDS [Optical_Depth_Ratio_Small_Ocean](#) (the former SDS will be dropped from 04_L2 in C6). Change the description (long name) from "over land and ocean" to "over ocean only".
- Hubanks needs clarification from the Aerosol group if the new QA usefulness and confidence flags for "Aerosol Size" for Ocean Aerosol added by Rob Levy in C6 need to be copied over to ATML2. These new flags are in Quality_Assurance_Ocean, byte 4, bits 1-4. Hubanks believes it might be better to copy both Aerosol QA arrays Quality_Assurance_Land and Quality_Assurance_Ocean in their entirety into ATML2 for future flexibility.
- Hubanks notes that it's unclear if the "Deep_Blue_Aerosol_Quality_Assurance" SDS in the C51 ATML2 file is being populated or not. I wonder if this might have been a place holder array to be populated for C006. I think Brad Wind worked on this before he left. Note that the file spec doesn't show the dimension of this Deep Blue QA SDS as being defined. It's possible that for the Joint product, the file spec is written after the fact and is not critical (i.e. the guts are in the software not the file spec). At minimum for C006 the following needs to be done: a.) fix the file spec so the dimension variable of the above SDS is defined – and b.) check the ATML2 software to see if the dimension of this SDS is defined and if any bits are being copied to it.