

# The Atmospheric Science User Forum



## New ORACLES and PODEX L1B2 Version Data Releases

The NASA Langley Atmospheric Sciences Data Center (ASDC) and Jet Propulsion Laboratory (JPL) announces the public release of the [AirMSPI Level 1B2 data products](#) for the ObseRvations of Aerosols above CLouds and their intERactionS ([ORACLES](#)) and Polarimeter Definition Experiment ([PODEX](#)) flight campaigns.

AirMSPI Level 1B2 products contain radiometric and polarimetric images of clouds, aerosols, and the surface of the Earth. In particular, products contain map-projected data at 8 wavelengths: 355, 380, 445, 470, 555, 660, 865, and 935 nm. The data products include radiance, time, solar zenith, solar azimuth, view zenith, and view azimuth for all spectral bands. Wavelengths for which polarization information is available (470, 660, and 865 nm) also include the Stokes parameters Q and U, as well as degree of linear polarization (DOLP) and angle of linear polarization (AOLP). Q, U, and AOLP are reported relative to both the scattering- and view meridional planes.

ORACLES doi: 10.5067/AIRCRAFT/ORACLES/RADIANCE/AirMSPI

PODEX doi: 10.5067/AIRCRAFT/PODEX/RADIANCE/AirMSPI

## Announcing New Release of SEAC4RS V005 Data



Studies of Emissions and Atmospheric Composition, Clouds and Climate Coupling by Regional Surveys ([SEAC4RS](#)) processed data soon to be released from the airborne field study conducted from August 6 to September 23, 2014. The primary SEAC4RS science objectives are: to determine how pollutant emissions are redistributed via deep convection throughout the troposphere; to determine the evolution of gases and aerosols in deep convective outflow and the implications for UT/LS chemistry; to identify the influences and feedbacks of aerosol particles from anthropogenic pollution and biomass burning on meteorology and climate through changes in the atmospheric heat budget (i.e., semi-direct effect) or through microphysical changes in clouds (i.e., indirect effects); and lastly, to serve as a calibration and validation test bed for future satellite instruments and missions.

SEAC4RS doi: 10.5067/AIRCRAFT/SEAC4RS/RADIANCE/AirMSPI

## CALIPSO IIR Level 1 Version 2 Data Available

[CAL IIR L1- Standard-V2-00](#), version 2.00 of the IIR Level 1 product, is the first major revision since the initial release in 2006. The calibration procedure has been adjusted to reduce known small seasonal calibration biases in the Northern Hemisphere, which were caused by thermal drifts synchronized with the elapsed time since the night-to-day transition.

The product is available from June 13, 2006 to current. The Version 1 standard and expedited data products will continue to be generated and provided to the public. There is no expedited version of the V2.00 IIR Level 1 planned for this release.

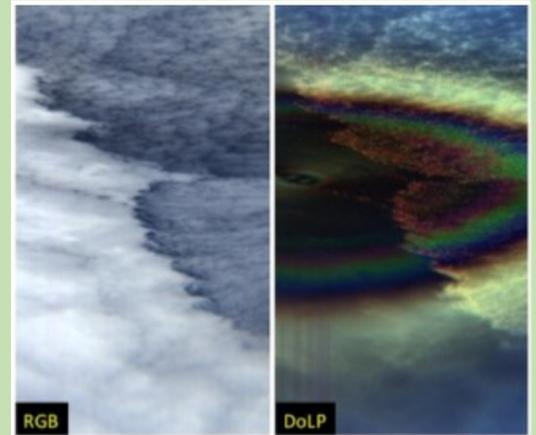
CALIPSO IIR L1 V2 doi: 10.5067/IIR/CALIPSO/Standard\_L1B-V2-00



## News from the Forum

September 2017

### AirMSPI Quick Look Image



**Sunday Sept. 18's ORACLES flight (RGB on the left, Degree of Polarization (DOLP) on the right)**  
The DOLP image indicates the different physical properties of two distinct cloud layers. Multiple transects under, within, and above the distinct layers of low clouds and elevated biomass burning aerosols (i.e. soot) above the Atlantic were observed with both aircrafts (ER-2 and the P-3 ) to study their properties along spatial gradients. The DOLP image indicates the different physical properties of two distinct cloud layers. The offset cloudbows in DoLP indicate different cloud droplet sizes.

## Questions from the Forum

CALIPSO User Question:

I'd like to work on the cloud layer in 5 km resolution, f.ex. CAL\_LID\_L2\_05kmCLay-Standard-V4-10.2008-01-01T04-48-09Z.hdf. I have difficulty to understand why the maximal number of layers in cloud layer products are 10. What does each layer represent? Since Feature type ranges from 0-7, cloud subtype ranges also from 0-7. Where can I find a table to list the meaning of each layer??

Answer:

- \* Each layer represents a cloud layer detected at differing horizontal averages.
- \* For any given 5km profile contained in this file we don't expect more than 10 distinct cloud layers.
- \* [https://www-calipso.larc.nasa.gov/resources/calipso\\_users\\_guide/data\\_summaries/vfm/index.php#feature\\_classification\\_flags](https://www-calipso.larc.nasa.gov/resources/calipso_users_guide/data_summaries/vfm/index.php#feature_classification_flags)  
Table 44 contained in the link above will describe what each of the parameters mean.