CALIPSO Quality Statements Summary: Lidar Level 2 Cloud Profile

Lidar Level 2 Cloud Profile Information *Half orbit (Night and Day) averaged cloud profile data and ancillary data*					
Release Date	**Version**	**Data Date Range**	**Product Quality Statement**	**Detailed Quality Statement**	**Maturity Level**
December 2011	3.02	November 1, 2011 to present	3.02 Version Summary	QS 3.01, 3.02	Provisional
May 2010	3.01	June 13, 2006 to February 16, 2009 March 17, 2009 to October 31, 2011	3.01 Version Summary	QS 3.01, 3.02	Provisional
October 2008	2.02	September 14, 2008 to October 29, 2009	2.02 version Summary	QS 2.01	Beta
January 25, 2008	2.01	June 13, 2006 to September 13, 2008	2.01 version Summary		Beta

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Data Release Date: December 2011
Version: 3.02
Data Date Range: November 1, 2011 to present

The CALIPSO Team is releasing Version 3.02 which represents a transition of the Lidar, IIR, and WFC processing and browse code to a new cluster computing system. No algorithm changes were introduced and very minor changes were observed between V 3.01 and V 3.02 as a result of the compiler and computer architecture differences. Version 3.02 is being released in a forward processing mode beginning November 1, 2011.

Data Release Date: May 2010
Version: 3.01
Data Date Range: June 13, 2006 to February 16, 2009 and March 17, 2009 to October 31, 2011

The quality and depth of the information provided in version 3 of the CALIOP Lidar Level 2 Cloud and Aerosol Profile Products are substantially improved over previous releases. The improvements are attributed to a number of factors, including refinements to layer base detection (PDF), more reliable separation of clouds and aerosols (PDF), implementation of a new algorithm for determining cloud thermodynamic phase, and bug fixes in the CALIOP extinction retrieval code. Data usability is greatly enhanced by the addition of new diagnostic and quality assurance parameters (e.g., the atmospheric volume description flags). In addition, several new optical parameters have been added (e.g., particulate depolarization ratio profiles), and range-resolved uncertainty estimates are now provided for all optical profile data.

The organization and structure of the version 3 profile products has also changed significantly. In particular, the aerosol profile products have been completely restructured, and now are reported on the same spatial grid as the cloud profile products. The horizontal resolution of the cloud and aerosol profile products is now identical to the horizontal resolution of the 5-km cloud and aerosol layer products, thus enabling a one-to-one match between the bulk optical properties of any layer (e.g., optical depth) and the profile data (e.g., extinction coefficients) from which the bulk properties were derived. The profile times and latitude/longitude coordinates are now reported identically in the 5-km profile products and the 5-km layer products.

Partly as a result of these many changes, and partly based on preliminary results from several validation studies, the data product maturity level of the profile products has been upgraded to *provisional*. Previous profile product releases were classified as *beta*.

Data Release Date: October, 2008
Version: 2.02
Data Date Range: June 13, 2006 to October 29, 2009

Please refer to the Data Detailed Quality Statement for information about this release.

Data Release Date: January 25, 2008
Version: 2.01
Data Date Range: June 13, 2006 to September 13, 2008

Please refer to the Data Detailed Quality Statement for information about this release.