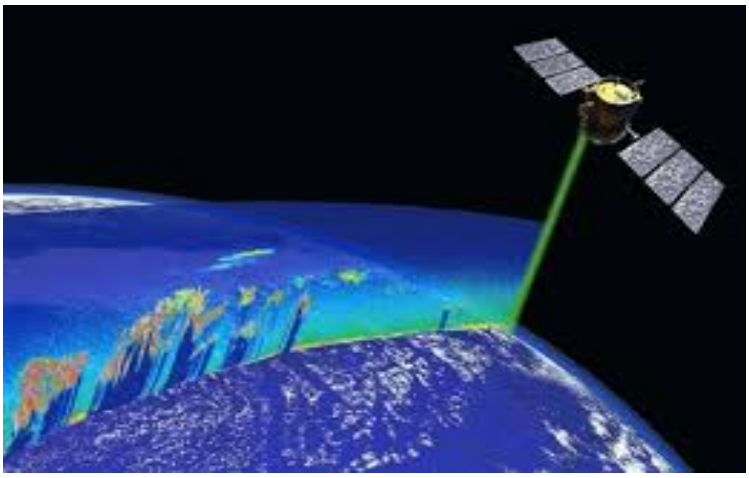
DATA & APPLICATIONS ONLINE

Cloud-Aerosol LIdar with Orthogonal Polarization (CALIOP)

Overview

The Cloud-Aerosol LIdar with Orthogonal Polarization (CALIOP) is one of three instruments on the Cloud-Aerosol Lidar and Infrared Pathfinder Satellite (CALIPSO) satellite. CALIOP is an active sensor providing more highly precise data on the altitude of aerosol layers in the atmosphere and better information on the height and thickness of clouds, plus the degree of overlap of various cloud and aerosol layers than can be obtained with passive sensors. Each lidar measurement is a 100-meter wide snapshot or profile of the atmosphere that can be streamed together to paint a picture of what a vertical slice of our atmosphere looks like. Cloud and aerosol physical properties are derived from appropriate averages of single-shot measurements. Launched on April 28, 2006, CALIPSO is a joint satellite mission between NASA and the French Space Agency, CNES



About the Data

- CALIOP Lidar profile and layer products covering one-half orbit are available for aerosols and clouds separately. Information about the data products is available from: https://eosweb.larc.nasa.gov/project/calipso/calipso_table.
- Layer data: Vertical location of cloud and aerosol layer boundaries and associated layer properties at 5 km horizontal resolution for aerosols, and 1/3 km, 1 km, and 5 km horizontal resolutions for clouds
- Profile data: Particle extinction and backscatter at 5 km horizontal resolution

References

- Sensing Our Planet, 2012, A new pole hole, https://earthdata.nasa.gov/featured-stories/featured-research/new-pole-hole

Data Access

- For search and order, go to Reverb: http://reverb.echo.nasa.gov
- Information and links to Java and HTML web ordering tools are available at https://eosweb.larc.nasa.gov/HBDOCS/langley_web_tool.html
- For CALIPSO Search and Subsetting Web Application, go to https://www-calipso.larc.nasa.gov/search/login.php.
- CALIPSO Browse Images – Viewable, downloadable browse images for three lidar parameters: the total 532 nm attenuated backscatter, the perpendicular 532 nm attenuated backscatter signal, and the total 1064 nm attenuated backscatter signal (https://www-calipso.larc.nasa.gov/products/lidar/browse_images/production/). A browse image tutorial is also available at https://www-calipso.larc.nasa.gov/resources/calipso_users_guide/browse/index.php

NASA Langley Research Center
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NASA Langley Research Center
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https://eosweb.larc.nasa.gov

EOSDIS DAACs
LaRC ASDC is one of twelve NASA Earth Observing System Data and Information System (EOSDIS) Distributed Active Archive Centers (DAACs).

To learn more about data and tools available from EOSDIS, go to earthdata.nasa.gov.

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