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1. Introduction

The International Satellite Cloud Climatology Project (ISCCP) was established in 1982 to determine the global distribution of clouds, their properties, and their diurnal, seasonal, and interannual variations from satellite measurements (Rossow, et al, 1996). Data collection began on 1 July 1983 and is currently planned to continue through 30 June 2002. The resulting data products can be used in support of many cloud studies including the role of clouds in climate, radiation balance and hydrological cycle.

2. ISCCP data product descriptions.

The ISCCP analysis combines radiance measurements from geostationary and polar orbiting satellites with atmospheric temperature and humidity profiles derived from TIROS Operational Vertical Sounder (TOVS) and correlative ice and snow (IS) data to provide several cloud products. These products vary in their temporal and spatial resolution.

ISCCP stage B3 reduced resolution radiance product contains normalized satellite radiances with a resolution of 30 km every three hours. The data include visible and infrared radiances and navigation information. The monthly volume for global coverage is about 1.1 Gbytes.

ISCCP stage DX pixel level cloud product contains calibrated radiances, cloud detection results and cloud and surface properties from radiative analysis with a resolution of 30km every three hours. The monthly volume for global coverage is about 5 Gbytes. These data are good for regional scale analyses as the data are organized by satellite. The data are in binary format with a temporal coverage of July 1983 - December 1998.

- Up to 45 variables per pixel, dependent on day or night pixel

ISCCP stage D1 global cloud product contains spatial averages of DX quantities and statistical summaries, including cloud type properties on a 280km equal-area grid every three hours. Data from all the satellites are merged into a global grid and the data include atmospheric and surface properties. The monthly volume for global coverage is about 320 Mbytes. These data are good for global scale analyses. The data are available in binary and Hierarchical Data Format (HDF) formats with a temporal coverage from July 1983 – December 1998.

- 202 variables organized into the following areas:
 - Grid identification
 - Cloud detection statistics
 - Cloud Top Pressure
 - Cloud Top Temperature
 - Cloud Optical Thicknesses
 - Cloud Water Paths
 - Properties of Low-Level Cloud
 - Properties of Middle-level Cloud
 - Properties of High-level Cloud
 - Surface skin Temperatures
 - Surface Visible Reflectances
 - Near-infrared Reflectance
 - Infrared Radiances
 - Visible Radiances
 - Temperature profile
 - Precipitable water
 - Total ozone
 - Ice/snow amount

ISCCP stage D2 climatological summary product contains monthly averages and summary statistics of the stage D1 quantities on a 280km equal-area grid every three hours. This data provides a more compact summary of the cloud results. These data are also good for global scale analyses. The monthly volume for global coverage is about 8 Mbytes. The data are available in binary and Hierarchical Data Format (HDF) formats with a temporal coverage from July 1983 – December 1998.

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- 130 variables organized into the following areas:
 - Grid identification
 - Cloud Amounts
 - Mean Cloud Top Pressure
 - Mean Cloud Top Temperature
 - Mean Cloud Optical Thicknesses
 - Mean Cloud Water Path
 - Infrared Cloud Type
 - Low-Level Cloud Types
 - Middle-Level Cloud Types
 - High-Level Cloud Types
 - Mean Surface Skin Temperature
 - Mean Surface Visible Reflectance
 - Ice/Snow Cover
 - Temperature profile
 - Precipitable water
 - Total ozone
 - Ice/snow amount

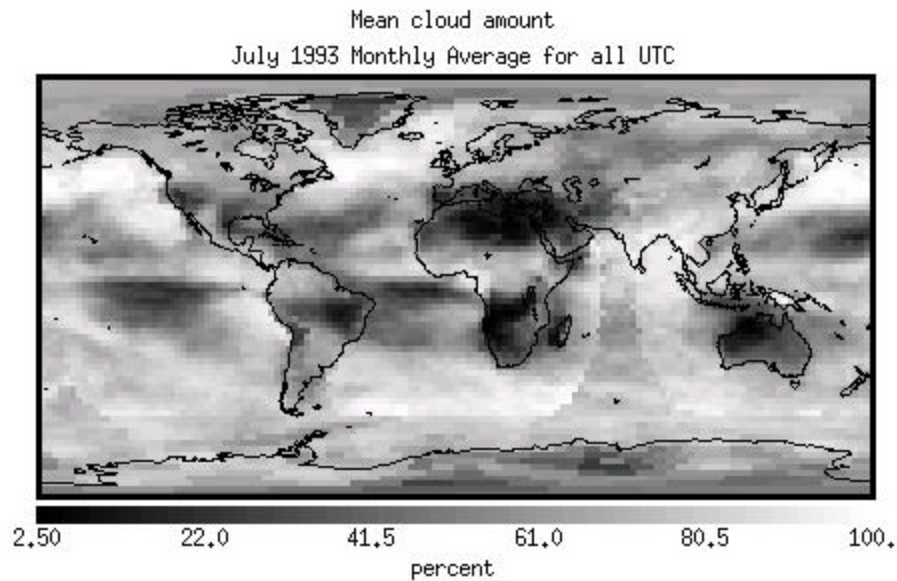
3. Data Availability

Data and documentation can be obtained from the NASA Langley Atmospheric Sciences Data Center at the following URL:

<http://eosweb.larc.nasa.gov>

4. References

Rossow, W.B., A.W. Walker, D.E. Beuschel, and M.D. Roiter, 1996: International Satellite Cloud Climatology Project (ISCCP) Documentation of New Cloud Datasets. WMO/TD-No. 737, World Meteorological Organization, 115 pp.



ISCCP D2 data file d2_3hrlymon_199307 (HDF format)