ISCCP 25th Anniversary Symposium

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On 1 July 2008, the International Satellite Cloud Climatology Project (ISCCP), the first project of the World Climate Research Program, marked the 25th Anniversary of the beginning of data collection. Not bad for a project that originally was to last for only 5years! The original concept for ISCCP was to collect and distribute enough global satellite data to facilitate research on the role of clouds in climate, specifically their effects on the radiation budget and their role in the atmospheric water cycle. These data were to be sampled at sufficiently fine space-time intervals to capture the mesoscale-to-global scale and diurnal-to-interannual variations of cloud physical properties.

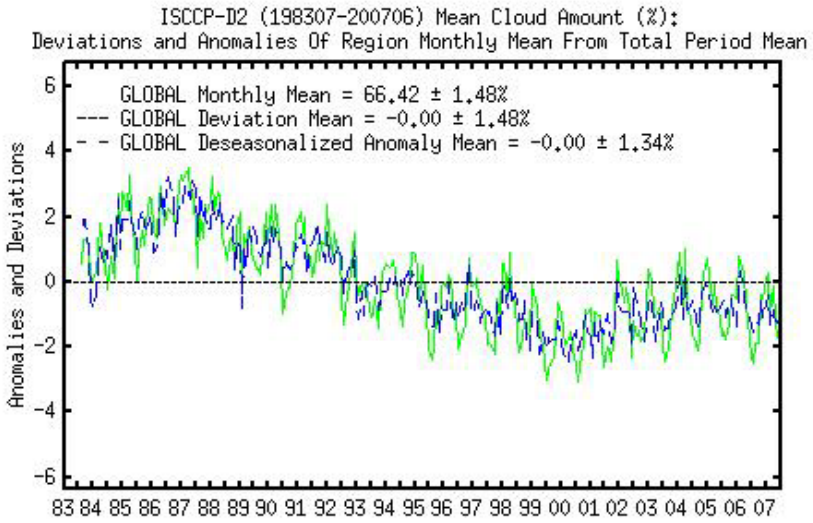
In addition to calibrating, navigating, quality checking and distributing the satellite radiance data for the research community to use (one of the earliest projects to invest in more "user-friendly" Level 1 data), ISCCP conducted a comparison of the then existing cloud algorithms and then processed the radiance data to provide several different cloud data products for research. After more research and evaluation results accumulated, the ISCCP analysis was revised once, particularly to include a treatment for ice clouds. The ISCCP product line has continued to expand, now including radiative flux profiles, cloud particle sizes and several subsets concerning specific cloud system types (convective tracking, cyclone tracking, pattern recognition analysis for tropics and midlatitudes).

To celebrate this occasion, to take stock of research progress and discuss plans for the future, a Symposium was held at NASA Goddard Institute for Space Studies (the Global Processing Center for ISCCP) on 23-25 July 2008. About 40 scientists from six countries participated. The presentations are posted on the ISCCP website at: *http://isccp.giss.nasa.gov/index.html.*

The ISCCP products have now developed into one of the longest time records of global cloud variations and have become part of the Global Climate Observing System (GCOS). Approval of continuing funding now makes it possible to switch the analysis from the 30 km sampled radiances to the 10 km sampled radiances, which will provide results at nearly the full (infrared) resolution and make the products statistically more robust for cloud process studies. ISCCP was not originally designed as a "climate data record," however, with the record length growing there is more interest in that use. There are a number of features that make the current products less useful for that purpose, but approval has been obtained to re-engineer the ISCCP processing system to improve the quality enough to form a cloud Climate Data Record and to make the whole project "operational" to continue into the future.

Participants at the ISCCP 25th Anniversary Symposium.

ISCCP Cloud Amount



Cloud amount increased by about 2 percent during the first 3 years of ISCCP and then decreased by about 4 percent over the next decade. ISCCP data collection began after one of the largest El Ninos (1982-83) and the eruption of the El Chichon volcano, both of which may have caused global changes in clouds. There were other, weaker El Ninos in 1986-87, 1990-91 and 1992-94, and another volcanic eruption (Mt. Pinatubo) in 1991. This figure and the entire ISSCP Climatology of Global Cloud and Surface Properties is available at: http://isccp.giss.nasa.gov/climanal1.html.