Geophysical Research Abstracts, Vol. 9, 01444, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-01444

Global inter-agency IPY polar snapshot year (GIIPSY): goals and accomplishments

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Satellite observations are revolutionizing our ability to observe the poles and polar processes. No other technology developed since the International Geophysical Year (IGY) of 1957 provides the high-resolution, continental-scale, frequent-repeat, and all-weather observations available from spaceborne sensors. The utility of such technology is evidenced by related scientific advances including measurements of long term trends in polar sea ice cover and extent, the realization that the polar ice sheets can change dramatically at decade or less time scales, and the quantification of relationships between processes at the poles and at mid and equatorial latitudes.

Large scale coordinated experiments will continue to be important for polar scientists seeking to understand the role of polar processes in climate change, the contribution of the polar ice sheet to sea level, ice sheet and ocean interactions, and the dynamics of ice sheets and sea ice. Coordination is challenging in part because of resource allocation issues and in part because space programs are operated by a host of national and international agencies. To overcome such challenges, the international science community needs a common rallying point. Via GIIPSY, an international polar science plan is being developed for coordinated, spaceborne and in-situ observations of polar regions and polar processes as part of the International Polar Year (IPY) and as part of the IGOS-Cryosphere theme implementation. The goal is to advance polar science by obtaining another critical benchmark of processes in the Arctic and Antarctic during the IPY and to set the stage for acquiring future benchmarks beyond IPY. The technical objective is to coordinate polar observations with spaceborne and in-situ instruments and then make the resulting data and derived products available to the science community.

GIIPSY's goal is to develop the most effective mechanism by which to plan and synchronize IPY satellite acquisition requests (ultimately resulting from approved IPY Projects). This is necessary 1) in order to receive approval from participating organizations for required support of the IPY data processing overhead, 2) to anticipate volumes of data, 3) mission planning, and 4) data distribution demands. The first step in obtaining this goal was a meeting of flight agency representatives and scientists convened on December 12, 2006. The meeting was well attended and was successful in accomplishing it's objectives; mainly to encourage community involvement in GIIPSY planning activities, prepare for the World Meteorological Organization (WMO) sponsored meeting of international flight agencies January 17-19, 2007 (Space Task Group (STG) meeting), and to identify gaps in the STG membership. The STG was established for the purpose of Space Agency planning, processing, and archiving of the IPY Earth Observation legacy dataset. A summary of this meeting and an update on GIIPSY activities shall be given as part of this presentation.