

NASA Mission Update

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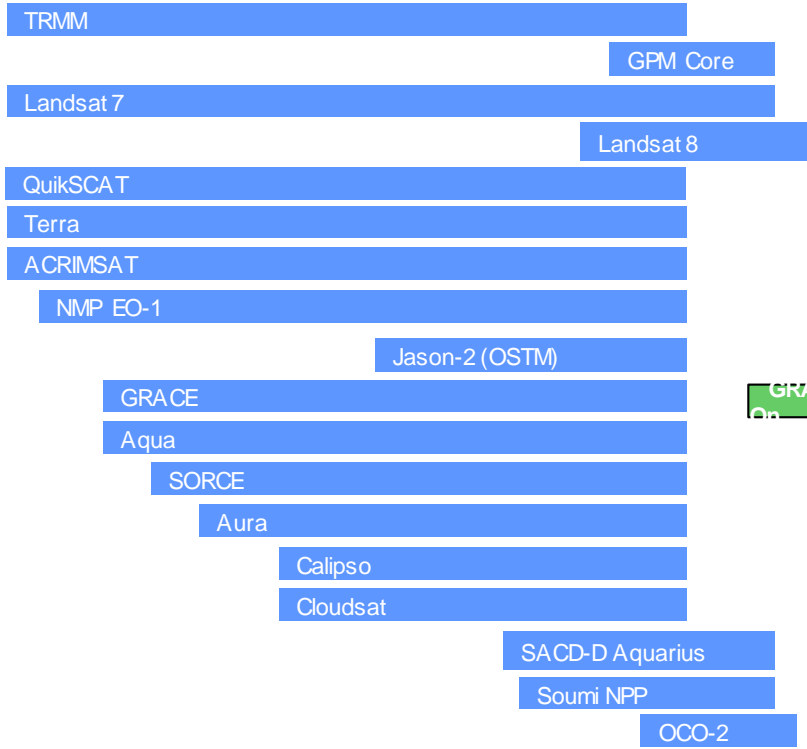
JECAM Meeting
July 22, 2014



Current and Future NASA Missions



YEAR... 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30



Current Missions 18 total (as of July 2014)

* All data is free and open access

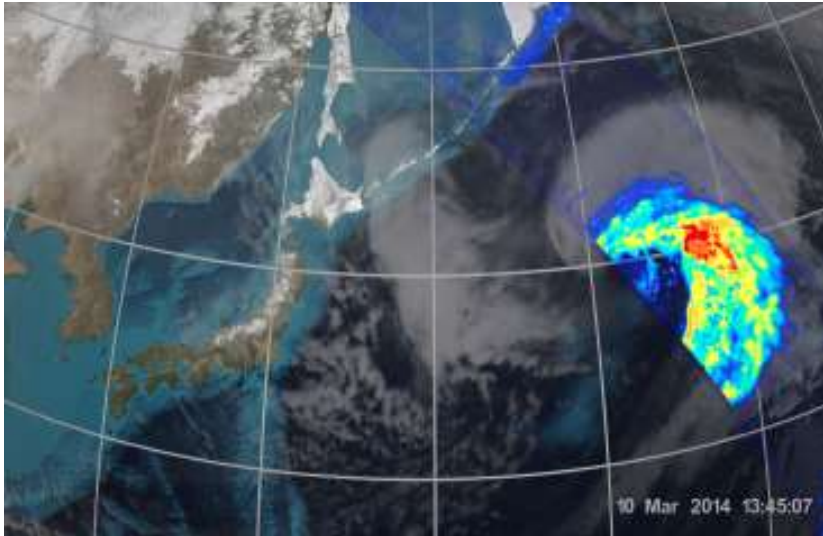
Future Missions – 12 missions and 7 instruments.

* Many missions extend well beyond planned 5 yr lifetime

* 4 of the 7 instruments are planned for the International Space Station.

Future Missions/Instruments: TBD or >2020

HICO-ISS	GEO-CAPE	ACE
SAGE-III-ISS	HyspIRI	ASCENDS
OCO-3-ISS	CLARREO	PACE

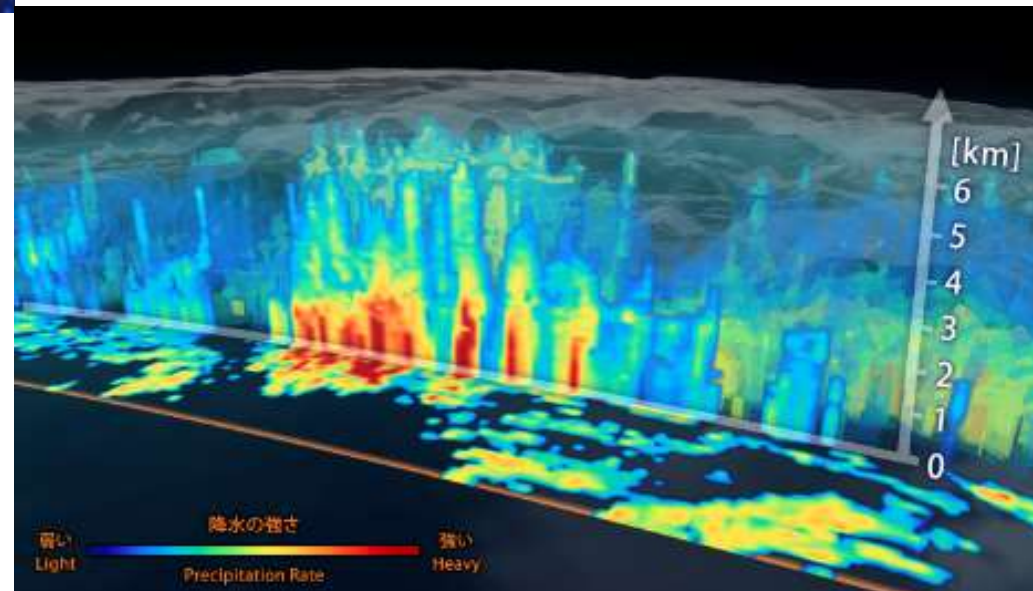


GPM Launched: Feb 27, 2014

An extra-tropical cyclone seen off the coast of Japan on March 10, 2014 by the GPM Microwave Imager. The colors show rain rate: red=heavy, yellow=medium, blue=low.

3-D view inside the cyclone as seen by GPM's Dual-frequency Precipitation Radar. The vertical section (7km high) shows rain rates.

Credit: NASA and JAXA.





- NASA's missions were conceived as research missions, but have supported **operational and near-real-time applications** due to their recognized value, longevity, sustained calibration and validation, and data quality.
- Continued operation of the missions is determined through a biennial science review process, called the “**Senior Review**”, which considers operational use but primarily uses science for determining continuation. The next Senior Review is scheduled for 2015.
- **Direct Broadcast** is currently available for three NASA missions including: Aqua, Terra, and Suomi-NPP. Visit the Direct Readout Laboratory (DRL) website: <http://directreadout.sci.gsfc.nasa.gov>
- NASA also provides access to **Near Real-Time (NRT)** products from the MODIS (on Terra and Aqua), OMI and MLS (on Aura), and AIRS (on Aqua) instruments in less than 2.5 hours from observation from the Land and Atmosphere Near real-time Capability for EOS (LANCE) data system at <http://earthdata.nasa.gov/lance>



- **Landsat-8** has continued to increase coverage to the maximum ~650 scenes per day. **Landsat-7** is nearing the end of its lifetime (estimate 2017). Land coverage with both missions is near-global every 8 days.
- **GPM** (Global Precipitation Mission) launched in Feb 2014. Aging TRMM mission still provides good rainfall data from the PR instrument. Rainfall data (rainfall rates and monthly gridded totals) may be of interest to JECAM studies.
- **SMAP** (Soil Moisture Active-Passive) mission will be launched in late 2014. Soil moisture products (daily composites, 50 hour latency, 3-km radar resolution) may be of interest to JECAM.
- **MODIS** (on Terra and Aqua) is aging and will end soon. Users should review **VIIRS** (on Soumi-NPP) for similar measurements. Cross-calibration is in progress.