

Town Hall Meeting Earth Science Technology Forum 2010

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Topics

– ***Recent Events***

- Budget Status — for Earth Science, for Technology
- New Chief Technology Officer for NASA
- Current/Anticipated Announcements of Opportunity

– ***Technology Activities***

- Current and Anticipated Solicitations
- ARRA (Stimulus) Investments
- Future Opportunities for Involvement

– ***Your Questions and Comments***



Earth Science Division Overview

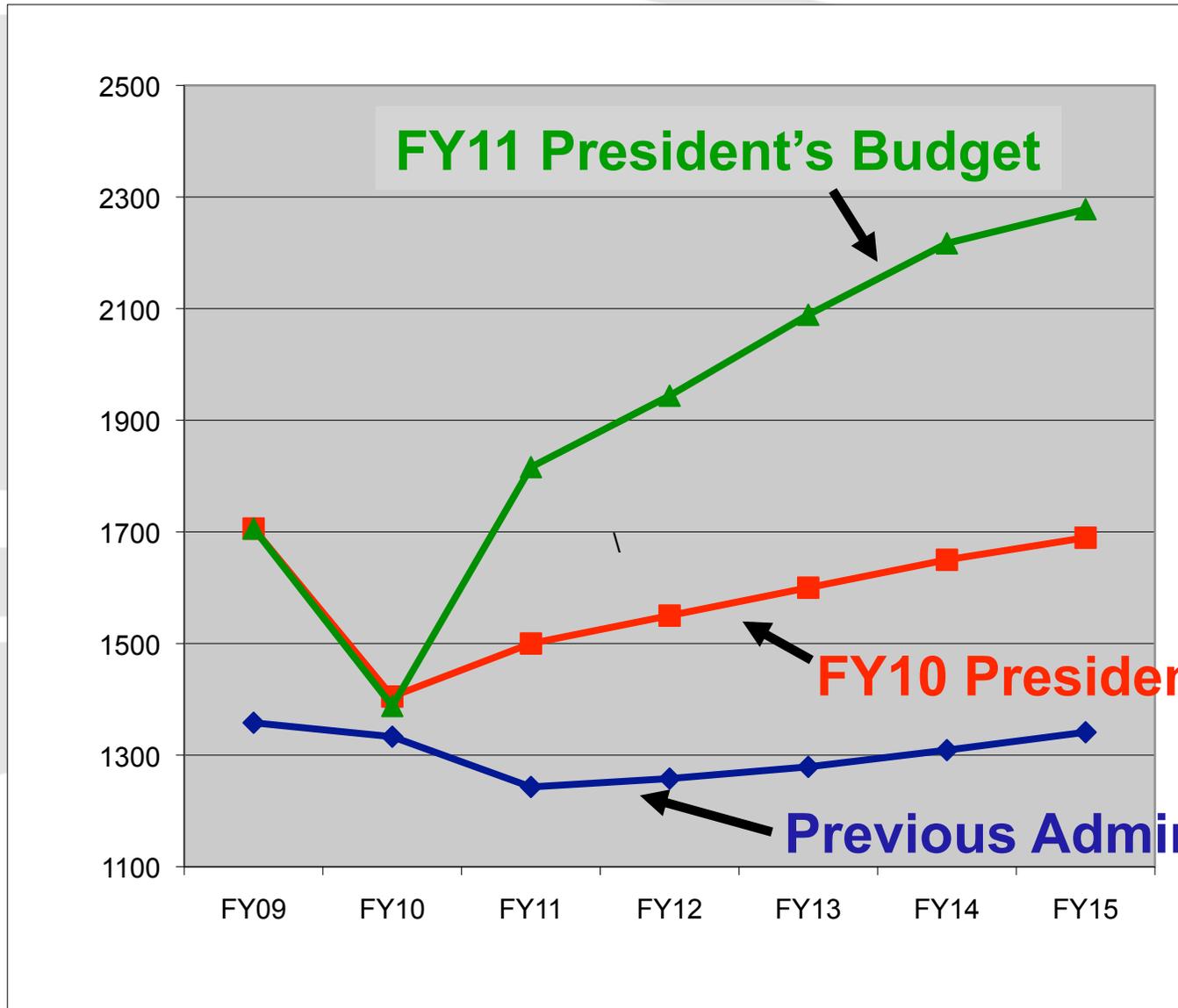


- Overarching goal: to advance Earth System science, including climate studies, through spaceborne data acquisition, research and analysis, and predictive modeling
- Six major activities:
 - **Building and operating Earth observing satellite missions**, many with international and interagency partners
 - Making high-quality data products available to the broad science community
 - Conducting and sponsoring cutting-edge research
 - **Field campaigns to complement satellite measurements**
 - Analyses of non-NASA mission data
 - Modeling
 - **Applied Science**
 - **Developing technologies to improve Earth observation capabilities**
 - Education and Public Outreach

NASA Earth Science Division BUDGET MARKS: FY11 Submit



BUDGET (\$M)



New Earth Science Investments

- Earth Venture-1 (EV-1) Solicitation: the first series of Venture Class proposals, awards announced at the end of May.
- Airborne Instrument Technology Transition (AITT) Solicitation: airborne experiments, in process of selection.
- Technology Augmentation: Allows for new awards for climate measurements, and expands validation opportunities that leverage NASA investments and lowers the development risk of key components vital for climate measurement instruments
 - **Expanded Validation and Partnering** – expand validation opportunities for ESTO technologies, including through partnering, using small, ready tasks
 - **Targeted Risk Reduction** – competitively target component technology to reduce substantial risk for future Decadal Survey missions
 - **Information Technology for Applications Partnering** – infusion of advanced data analysis and data fusion capabilities into science and application campaigns



Earth Venture-1 Awards

- “Airborne Microwave Observatory of Subcanopy and Subsurface. Principal Investigator,” Mahta Moghaddam, University of Michigan
- “Airborne Tropical Tropopause Experiment,” Eric Jensen, NASA Ames Research Center
- “Carbon in Arctic Reservoirs Vulnerability Experiment,” Charles Miller, NASA Jet Propulsion Laboratory
- “Deriving Information on Surface Conditions from Column and Vertically Resolved Observations Relevant to Air Quality,” James Crawford, NASA Langley Research Center
- “Hurricane and Severe Storm Sentinel,” Scott Braun, NASA Goddard Space Flight Center



ESTO Decadal Survey Technologies

Braun/GSFC - Hurricane and Severe Storm Sentinel:
Doppler wind lidar (IIP – Gentry),
Wind / rain radar (IIP –
Heymisfield), Microwave sounder
(IIP – Lambrigtsen)



Moghaddam/UMich - Airborne Microwave Observatory of Subcanopy and Subsurface:
UHF radar (IIP - Moghaddam),
radar pod / electronics / control
(UAVSAR – Hensley)



EV-1 Mission



Earth Venture

Jensen/ARC – Airborne Tropical Tropopause Experiment:
Cloud lidar multi-channel scalar (SBIR 3 – Leventhal)



Crawford/LaRC - DISCOVER-AQ :
High spectral resolution lidar (IIP - Hostetler)



Miller/JPL - Carbon in Arctic Reservoirs Vulnerability Experiment:
Microwave radar/radiometer (Wilson – IIP), RFI mitigation (Piepmeier – ACT/IIP)



Current ESTO Investments: Enabling the Decadal Survey

 Instrument Technology Investments
(Instrument Incubator Program Solicitation)

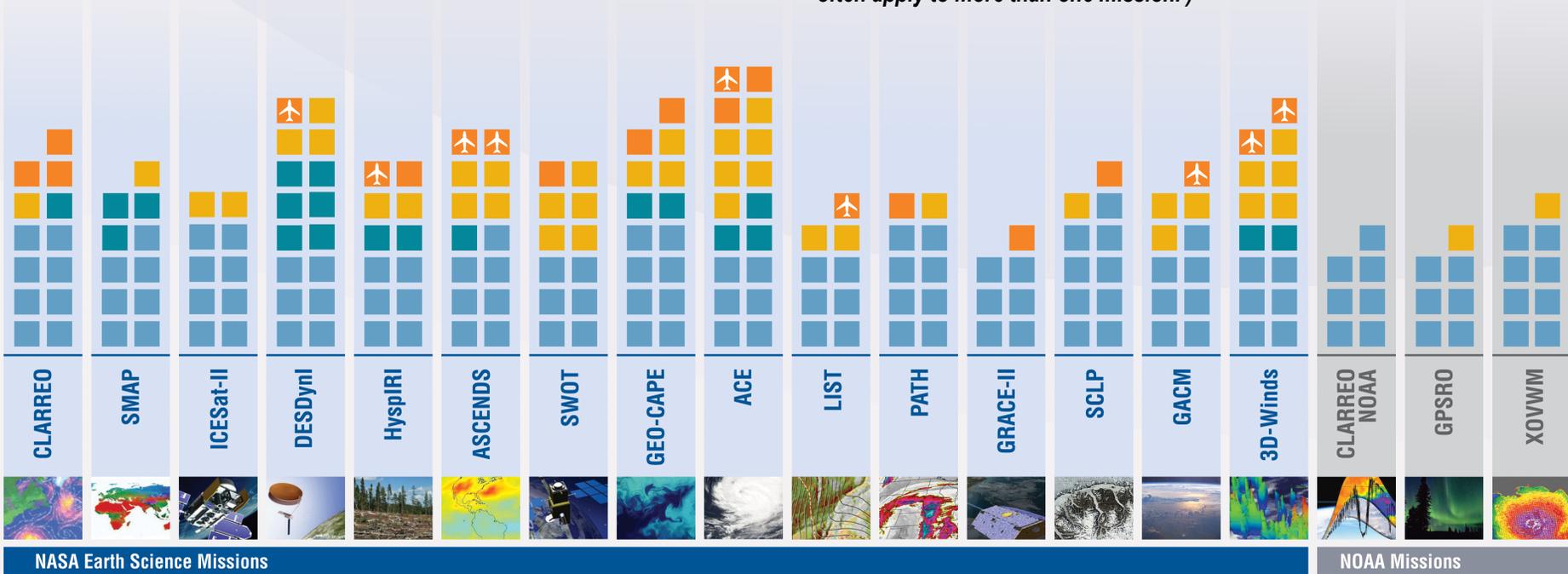
 Instrument Investments that include planned airborne testing
(2007 Instrument Incubator Program Solicitation)

 Component Technology Investments
(2008 Advanced Component Technologies Program Solicitation)

 Information Systems Technology Investments with Direct Applicability
(2008 Advanced Information System Technologies Program Solicitation)

 Information Systems Technology Investments with Secondary Applicability
(2008 Advanced Information System Technologies Program Solicitation)

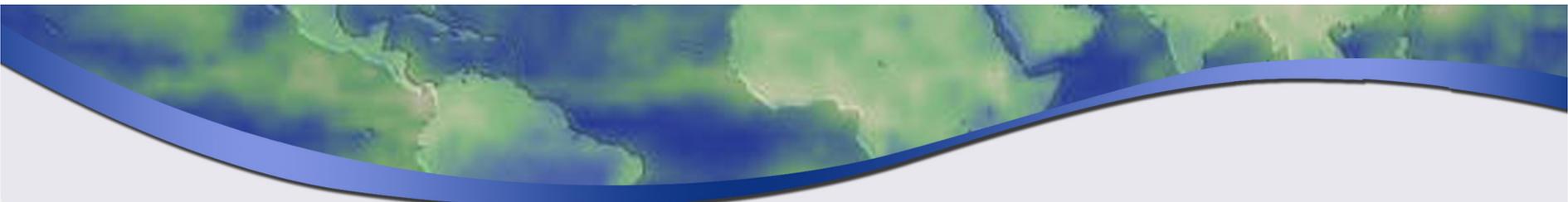
(Note that individual Component and Information Systems Technologies often apply to more than one mission.)



Upcoming Opportunities for Participation

- Instrument Incubator – open now
 - Solicitation Released February 12, 2010
 - Proposals Due July 21, 2010
 - Review Panels October 2010
 - Announcement of Award December 2010
- Advanced Component Technology and Advanced Information Systems Technology – both programs will solicit new ideas within the next year
- The annual American Geophysical Union (AGU) meeting, held in San Francisco in December of each year – program topics have just been announced, and calls for participation (papers and posters) are now open.





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