Committee on Earth Science and Applications from Space

Mark Abbott, Oregon State University

Space Studies Board

November 7, 2013

Disclaimer: These slides represent a personal assessment of the issues discussed by the CESAS. This document should not be cited or quoted because the views expressed do not necessarily reflect those of CESAS, SSB, or the NRC.

Planning for the Next Decadal Survey

- Background
  - Start first quarter of 2015
  - Incorporating lessons learned, inc. NRC workshop:
    - "It's the statement of task, stupid"
      - You get what you asked for, like it or not
    - Consideration of international and interagency collaboration could be improved
    - Importance of programs resilient to budget and policy changes (decision rules etc.)
    - Improving the Cost Assessment and Technical Evaluation (CATE) process
    - Balance between science goals and specific mission recommendations
- Expectations
  - Relied upon by Congress and Administration
  - What is needed, not what is wanted
  - New constraints and new mandates

Some Constraints

- Many missions from the last DS are still in formulation
  - And some have been moved from NOAA to NASA
- Budgets will be tight
  - Most DS work under an implicit assumption of a slowly-growing budget
- How do we engage other agencies that have drivers other than the DS recommendations?
- Emerging mandates in “actionable science”

A Possible Approach

- Review the landscape of Earth Science
  - Assess recent progress of all civilian remote sensing agencies
- Review science questions and emerging issues
  - Positioning the country to respond to new challenges
- Assess present plans
  - Advancing science and providing societal benefit
  - Evaluate and validate missions in the queue
  - What has changed since the DS
    - Climate-centric architecture
- Planning for the future
  - Consider the following in terms of balance
    - Sustained vs. new data streams
    - Systematic vs. venture
      - PI-led vs. facility
    - *A priori* cost cap or iterative cost design
  - Resilience
    - How can the program respond to Administration/Congressional guidance?
  - Partnerships
    - Within a continuity framework

Future Activities

- Long-lead time needs for survey organization; e.g., calls to community for white papers
  - Begin analysis of concepts and/or technology needs ahead of the start of the survey?
- Engagement of the community in organizing the next survey
  - How to best use the March meeting
- In 2014:
  - Formulation of statement of task
  - Gather lessons learned from extant science teams?
  - Initiate focused activities ahead of the survey to inform:
    - Consideration of cost-constrained design
    - Balance of continuity and new technology/science
    - The committee also has cross-membership with the ESD “continuity study”
- Engagement with NOAA and USGS?
  - Future satellite architectures (post JPSS 1, 2 and GOES-R)
  - Continuity missions are being pushed off to NASA
  - Sustained land imaging under a cost cap