Development of the NASA Science Plan

NAC Science Subcommittees
Science Planning Conference
May 4, 2006

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NASA Authorization Act for 2005 (S.1281)  
Title I Section 101  
(d) SCIENCE.— (1) IN GENERAL.—The Administrator shall develop a plan to guide the science programs of NASA through 2016.

(2) CONTENT.—At a minimum, the plan developed under paragraph (1) shall be designed to ensure that NASA has a rich and vigorous set of science activities, and shall describe—(A) the missions NASA will initiate, design, develop, launch, or operate in space science and earth science through fiscal year 2016, including launch dates; (B) a priority ranking of all of the missions listed under subparagraph (A), and the rationale for the ranking; and (C) the budget assumptions on which the policy is based, which for fiscal years 2007 and 2008 shall be consistent with the authorizations provided in title II of this Act.

(6) SCHEDULE.—The Administrator shall transmit the plan developed under this subsection to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 1 year after the date of enactment of this Act.
Generic Science Strategic Planning Flow

NRC Decadal Survey → Community Roadmap → Budget & Other Constraints → Priorities → Strategic Plan

Mission Concept Formulation

Technology Development

Research & Analysis
Science Plan Draft Outline

- Preamble: The NASA Science Story
- Purpose & Progress
- Summary of Science Questions and Prioritized Missions
  - Principle requirement in the NASA Authorization Act
- Common Elements of Strategy
- Research Areas
  - Bulk of the Plan; a section for each of the four science areas
- Science Enabling and Enabled by Human Exploration
- Summary: On the Brink of Understanding
- Appendices
How NAC SC & Subcommittees Can Help (1)

- The biggest challenge facing SMD (and thus the NAC SC & Subcommittees) is creating the prioritized list of missions and accompanying rationale.

- SMD plans to do this by Division science area; thus each Division will have its own prioritized list.

- Divisions will discuss prioritization criteria & considerations with the Subcommittees on May 3-4.

- Using the results of the May 3-4 Science Planning Conference and earlier inputs (e.g., decadal surveys and community roadmaps), SMD Divisions will take a first cut at such a list and rationale by the end of May for the June 15 draft.

- This can be the basis for discussion of this subject in the July meetings of the Subcommittees and the NAC SC.
Science Plan Discussion Overview

• Overview of Division Planning Process
• NRC Decadal Survey & Other Reports
• Community Roadmap Summary
• Top-level Impact of Budget on Pace of Implementation
• External & Internal Drivers/Constraints

➤• Proposed Outline of this section of the Science Plan
• Science Questions

➤• Criteria/Considerations in Establishing Mission Prioritization
• Missions Thru 2016
• Discussion & Capture of Findings & Recommendations
How NAC SC & Subcommittees Can Help (2)

• Once a complete draft of the Science Plan is ready (6/15)
NAC SC and Subcommittees can also weigh in on the same
questions we will ask of the NRC/SSB:
  – Responsiveness to National Research Council’s (NRC) [and other science community] recommendations in recent reports;
  – Attention to interdisciplinary aspects and overall scientific balance;
  – Utility to stakeholders in the scientific community; and,
  – General readability and clarity of presentation

• Three opportunities to shape the Science Plan:
  – This meeting as the first draft is being prepared
  – July 6-7 meeting to review the draft
  – TBD Fall meeting to review how NASA has addressed the comments received