Introduction to

Managing Science Mission Cost Performance

Noel W. Hinners

NASA SMD PI Forum 3
Annapolis, MD
July 29, 2011

The ‘No Brainers’ of the Mission Performance Challenge

- ✓ Technical
- ✓ Schedule
- ✓ Cost

In an ideal world, this is a prioritized order.
However, ideal does not exist.

OMB, GAO and Congressional Committees are pushing for better SMD cost performance.

Managing SMD Mission Cost

1. In 2009 NASA initiated an extensive study of SMD mission costs, close to done

2. The 1981 “Hearth” study dealt with many of the same issues

So, what’s the problem? Is NASA:

1. inept (no)
2. a slow learner (at times)

OR

3. is it the “nature of the beast” (often) and/or
4. is it that the external world simply does not understand the process and the challenge (in large part)

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The Nature of the Beast

The Challenge

- Science missions are one of a kind – not production programs
- Scientists are incentivized to ‘pack it in’ to win; they are clever
- Forefront science demands forefront technology
  – newest, with unknowns

A Partial Solution (not all new)

- Compete by cost-defined mission class:
  - Explorers, Discovery, New Frontiers, Flagships
- Competitive down-select process, emphasizing cost
- Conduct adequate Phase A and B (10 – 15% of mission cost)
  - schedule and budget to match the challenge

If the ‘External’ World Does Not Understand,
That Makes it OUR PROBLEM

Thus it is essential to:

1. inform them
2. get agreement on the process
3. meet commitments

Mike Luther and Roy Maizel will now address what SMD is doing on these issues.