

Planetary Science Decadal Survey 2009-2011

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Outline

- First decadal survey for planetary sciences
- Major topics to be addressed in the new decadal survey
- Organization and schedule of the decadal survey
- Community input

New Frontiers in the Solar System

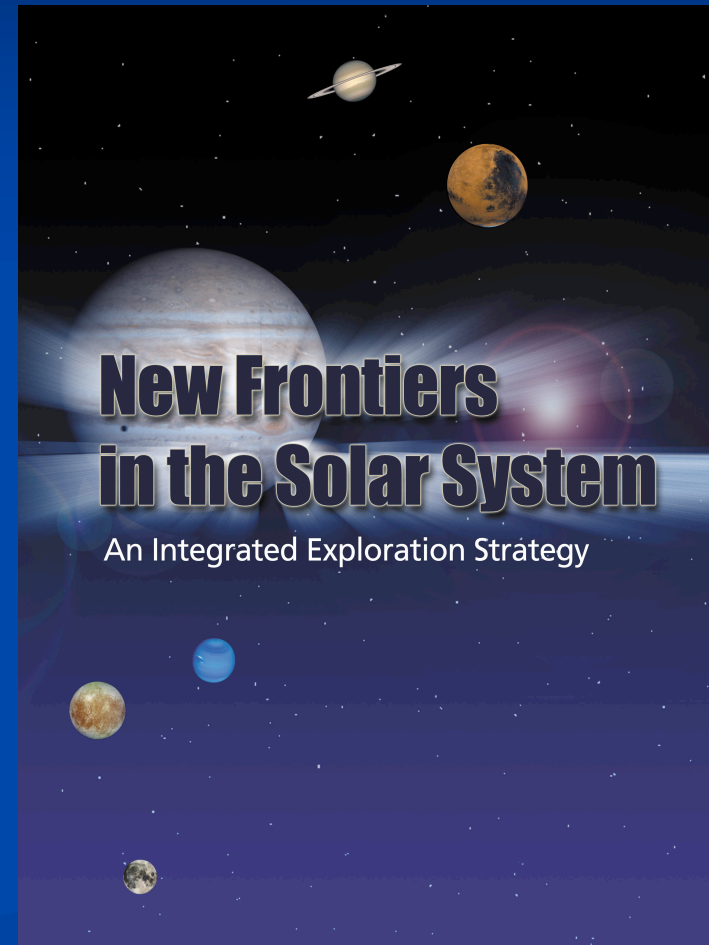
Origin NASA request

Purpose To define for solar system exploration a decadal science and mission strategy, akin to those drafted by the astronomy and astrophysics communities for the last 40 years

Study Group Steering group of 15 supported by 45 others on six panels (plus 200+ authors of white papers)

Study period 7/01 to 7/02

Final Report Issued 2003



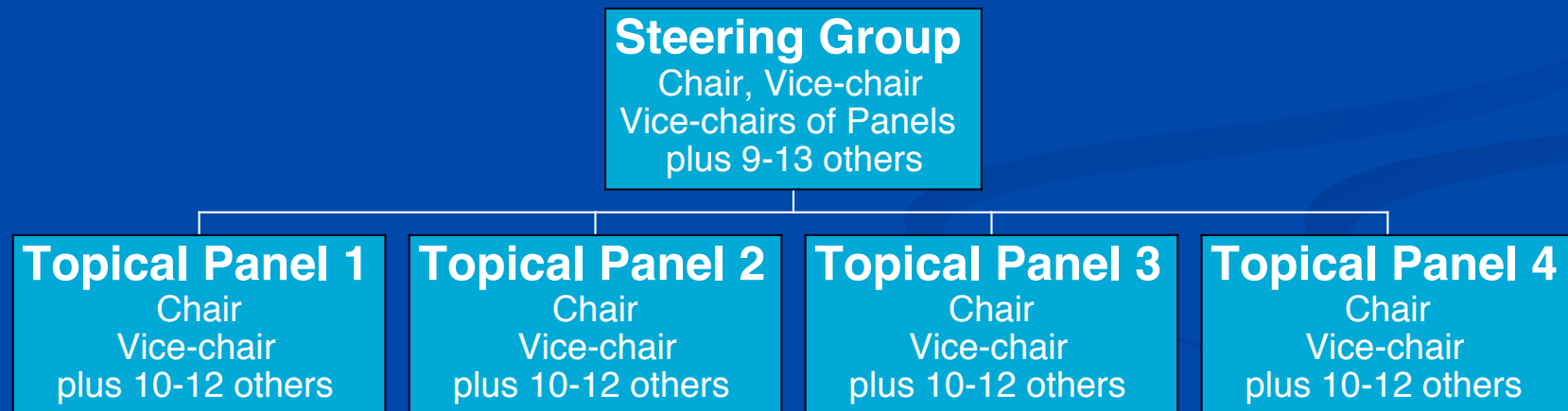
What will the Report Address?

Letter from NASA and NSF requesting the survey received on 5 December.
Major items the survey will address include:

1. Overview of planetary science;
2. Broad survey of the current state of knowledge of the solar system;
3. Inventory of the key scientific questions that should guide NASA flight missions and research programs undertaken by NASA and NSF;
4. Assessment of NSF infrastructure supporting planetary research;
5. Recommendations on the optimum balance across the solar system and among small, medium, and large missions and research activities;
6. Prioritized recommendations for major flight investigations in the New Frontiers, and flagship classes for initiation in the period 2013-2022; and
7. Recommendations for NASA-funded research activities required to maximize the science return from the flight investigations; and
8. Technology development needs and opportunities relevant to NASA.

Scope: Ground- and space-based planetary science, astrobiology
and comparative planetology of extrasolar planets.

Notional Organization Decadal Survey Committee 2009-2011



How should the topical panels be organized?

Notional Schedule 2008-2011

2008

4th Quarter

Informal request received, NRC approves initiation,
Formal request received, Proposal to NASA.

2009

1st Quarter

Funding received, Chair identified,
Chair and members appointed

2nd Quarter

Meetings of the steering group and panels begin

3-4th Quarter

Panels' period of peak active

2010

1st Quarter

Panel reports finalized

2-3rd Quarter

Prioritization and drafting of survey report

4th Quarter

Draft survey report to reviewers, Report revised

2011

1st Quarter

Report approved, NASA briefed
and prepub. released

3rd Quarter

Printed report released

Outreach
Sessions

Science
Presentations

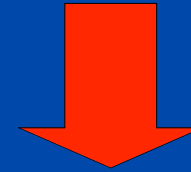
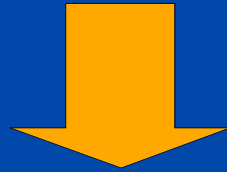
Agency
Presentations

Individual
Inputs

Community
White Papers



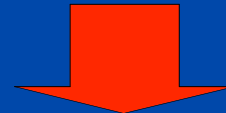
Community Involvement



SSE Survey Panels

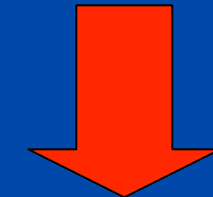
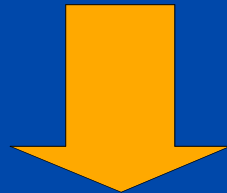


SSE Survey Steering Group



Part I

Part II



Decadal Survey Report

Community Interactions 2000-2003

- **Through town hall meetings at multiple venues:** such as scientific conferences, specially arranged meetings, in conjunction with panel and steering-group meetings, and professional meetings.
- **Stimulation of written input from ad hoc community panels**
 - Web page sponsored by the DPS / AAS in conjunction with PGD / GSA, PSS / AGU and Meteoritical Society
 - 24 panels formed (3 to 61 members each) involving >308 individuals
 - 23 finished reports published as *The Future of Solar System Exploration, 2003-2013: Community Contributions to the NRC Solar System Exploration Decadal Survey* (Marc V. Sykes, Ed., Astronomical Society of the Pacific Conf. Series, Volume 272).
 - Community ad hoc reports used by panels and steering group
- **Independent DPS and Planetary Society polls** on some key issues
- **NRC Report review process** solicited comments from 13 reviewers who supplied more than 450 specific comments, response to which immeasurably improved the quality of the report.

Topics of Community Panels

Mercury

Venus

Mars

Asteroids

Io

Europa

Titan

Neptune System

Kuiper Belt Objects

NEOs: Sample Return

NEOs: Human Exploration and Utilization

NEOs: Discovery, Tracking and Characterization

Lunar Exploration: Robotic and Human

Comets

Interplanetary Dust

Planetary Rings

Sub-orbital Program

Education and Outreach

Terrestrial Analogs to Mars

Radio Science and the DSN

Extraterrestrial Mineralogy

Instrument Technology

Solar System Astrometry

Should other, more macro-level topics also be addressed by the community?

Optimizing Community Interactions

How to stimulate broad community input?

- Town hall and open meetings as early as possible (e.g., **DPS**, **AGU** and VEXAG, MEPAG, OPAG, RAS and LPSC). The schedule last time was suboptimal for engaging in outreach at major community meetings.
- Coordinate with other groups that have overlapping interests.
- Early stimulation of ad hoc community reports. (The DPS committee was very proactive and successful in generating inputs to the 2000-2003 decadal survey). Last time, the community reports could have had a greater impact on the formulation of panel positions if they had arrived earlier.

Other actions?

Summary

Issues to consider:

1. How should the decadal survey's topical panels be organized?
Who should chair the panels?
Who should serve on the steering group and panels?
2. How can community interactions and input be optimized given the decadal survey's likely schedule.
3. What can the survey committee do to facilitate input from the community and vice versa?

Written input is encouraged and preferred.

A decadal survey website is now on-line.

Access it at www.nas.edu/ssb.