Planning for the next NRC Decadal Survey for Solar and Space Physics

Daniel N. Baker, Chair, NRC Committee on Solar and Space Physics
Arthur Charo, National Research Council

NOAA/SWPC Space Weather Workshop, April 29, 2010
Watershed Events in Solar & Space Physics

- 1995 - Establishment of National Space Weather Program
- 2002 - Community Survey of Solar & Space Physics
- 2006 - Decadal Review of National Space Weather Program (OFCM)

A new opportunity is now before us
Context

- **The Sun to the Earth—and Beyond: A Decadal Research Strategy in Solar and Space Physics**
- Was first NRC “decadal survey” in Solar and Space Physics
- Integrated plan for the field
- Sponsors: NASA, NSF, NOAA, DoD (AFOSR and ONR)
NASA Mission Costs 1: (Solar Probe Start in FY03)
NSF Program Costs:
Similar Terms of Reference for the 2013-2022 Survey (note new prioritization)

- **Provide an overview of the science** and a broad survey of the current state of knowledge in the field, including a discussion of the relationship between space- and ground-based science research and its connection to other scientific areas;
- **Identify the most compelling science challenges** that have arisen from recent advances and accomplishments;
- **Identify**—having considered scientific value, urgency, cost category and risk, and technical readiness—**the highest priority scientific targets for the interval 2013-2022, recommending science objectives and measurement requirements for each target rather than specific mission or project design/implementation concepts**; and
- **Develop an integrated research strategy** that will present means to address these targets

**Note:**
1. Missions prescribed in *The Sun to the Earth—and Beyond* and other recent NRC reports that are not yet in formulation or development will be reprioritized
2. An independent contractor will assist the NRC in a cost and technical analysis of selected mission concepts—similar to that underway in the planetary and astronomy decadal surveys.
Survey Organization

- **Steering Committee**
  - Approximately 16 representatives from across the community
  - Representatives from supporting study panels
- **Interdisciplinary (~8-member) study panels:**
  - Atmosphere-Ionosphere-Magnetosphere Interactions
  - Solar Wind-Magnetosphere Interactions
  - Solar and Heliospheric Physics
- “National Capabilities” Working Groups
- Option for focused workshops; e.g., R2O
## Panel Organization

### Disciplinary Panels

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### National Capabilities Working Groups

- Astrophysics
- Planets
- Earth
- Planets
Schedule

- Spring 2010: Nominations to survey committee and panels completed
- Summer 2010:
  - First of up to 5 meetings of the survey committee
  - First of 3 meetings of the panels
  - Working groups are organized and meet with panels
- Survey committee and panels continue meeting throughout 2011
- Report due to sponsors by March 31, 2012
Summary Observations

- U.S. Space Weather program has grown organically (some trial and error)
- New Decadal Survey offers opportunity for:
  - Better alignment of agency roles
  - Clearer reconciliation of research and applications goals
- Gen. D. Eisenhower: “Plans are useless; Planning is essential”
- M. Mead: “A small group of committed people can change the world. Indeed, it’s the only thing that ever has”