My NRC decadal surveys experience 1979-2012

- Each survey is different
- My past panel experience may not be very applicable to Helio 2024
- Note:
  - Typically only one person from each institution (very rare exceptions)
  - Solar is a small fraction (~15%) of the total survey membership (mostly space physics folks)
  - Survey (steering) committee decides final priorities and recommendations
    - Two co-chairs: S. Fuselier (Space Physics), R. Millian (Magnetospheric Physics)
    - At least one NAS member (S. Fuselier)
    - About 15 additional members
  - Panels do much of the work; prepare formal reports to Survey committee
    - Each Panel has a chair, vice chair, and about 12 other folks (mixture of fields and ages)
    - Relatively collegial and apolitical in my experience
    - Much of the Panel work focused on NASA missions ($$$)
    - Overview & goals section drafted by small groups based on WP inputs
    - Iterations with Survey committee and Working groups
  - Working Groups
    - Half volunteers, half Survey and Panel members
    - Informal reports

The (past) path from White Papers to priorities

- NRC staff and Panels iteratively categorize hundreds of WPs (spreadsheet w/summaries)
- WPs that do not propose projects are grouped and used for the overview & goals section
- Each WP that proposes a project with substantial resource requirements is assigned to two Panel members (a lead and second)
- The lead and second evaluate the WP and present it to the Panel orally for ~10 minutes including discussions (1-2 page evaluation circulated)
- Tentative ranking based on science, readiness, etc.
- In a few cases, proponents asked to present their mission or technology in person
- The top ranked NASA-focused proposals undergo a mandated CATE (Cost and Technical Evaluation) by the Aerospace Corporation. CATE studies are expensive.
- Final rankings and rationales presented to Survey committee
- Individual Panel members draft Panel report sections in their areas of expertise

Helio 2013 specifics:

- Proposals that included operational SWx observations were anathema (-> NOAA)
- CATE doomed many proposals as unaffordable (severe cost constraints affected Helio2013)
- IMAP emerged as the top mission recommendation (effectively, the only one)
- An implied NASA queue developed for new big missions: space physics, interstellar, and AIM (no solar)

Some White Paper dos and don'ts

- Your initial audience is the Panel, mostly space science and AIM folks
- Very competitive; your goal is to get a top-ranked project recommendation into the Survey report or get your other ideas into the overview & goals section of the Survey

Do

+ Superbly-crafted, stand-alone synopsis in order to stay high in the rounds of ranking
+ Strong science justification readily understandable by non-specialists
+ Concise, clear, enthusiastic write up
+ Demonstrate a need, not just a want and show how the proposal will meet this
+ If possible, trace to a recent well-publicized discovery (ex. IBEX -> IMAP)
+ Emphasize support from community workshops and review committees
+ Show scientific, technological, and programmatic timeliness
+ Include credible baseline and optimal budget estimates
+ Include credible claims of societal importance
+ Get critical comments from knowledgeable reviewers before submitting WP

Avoid

- Long, complicated, unnecessarily detailed, jargon-filled text
- Obscure or narrow science justification
- Dubious claims about the science, technology, societal, or other fields impacts
- Low-balled budget estimates
- Claiming entitlement