A new mission class?

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Astrophysics & Heliophysics Explorers Missions

**MIDEX**
- $300M – Inc. launch

**SMEX**
- $170M – Inc. launch

**UNEX • MO • INTERNATIONALS**

[Image of various space missions]
Discussion within Missions subcomm

• Clear consensus for a mission with a $\approx 800M$ cost cap, which, after including launch costs, results in $1B$.

• Long development times should be avoided

• Zero-sum game: Do you want to launch two midExes or a probe?

![NASA Astrophysics Budget: FY04-FY15 Appropriated, FY16 Requested, FY17-FY20 Notional Planning](chart.png)

- $200M – 5 yr$
- $100 M – 10 yr$

M. Perez talk

- WFIRST
- Managed by JWST Program Off
- Managed by Astrophysics Div
- Total Astrophysics

includes SMD E/PO and SMD STEM activities
Where is the money coming from?

- Increased budget (Ha!)
- Develop partnerships
  - Other countries
    - Unless partnership is equitable, it may increase total cost
  - Public – Private partnerships: foundations, universities
    - Common in ground-based, yet to be tried in space
How to select them?

- Probably not PI direct call
- What was done 10 years ago?
    - ROSES call for quick (~9 month) paper concept studies
    - ~9 concepts selected in 2004; total funding ~$1M ($100K average)
  - Astrophysics Mission Concepts Study (AMCS; 2007)
    - ROSES call for ~1 year paper concept studies
    - Nineteen (+1) ASMC concepts selected in 2007; total funding $13M ($700K average)
- Each Flagship STDT will be challenged to identify one or more probe-class versions of their mission and to estimate the percentage of the original science case that can be achieved.