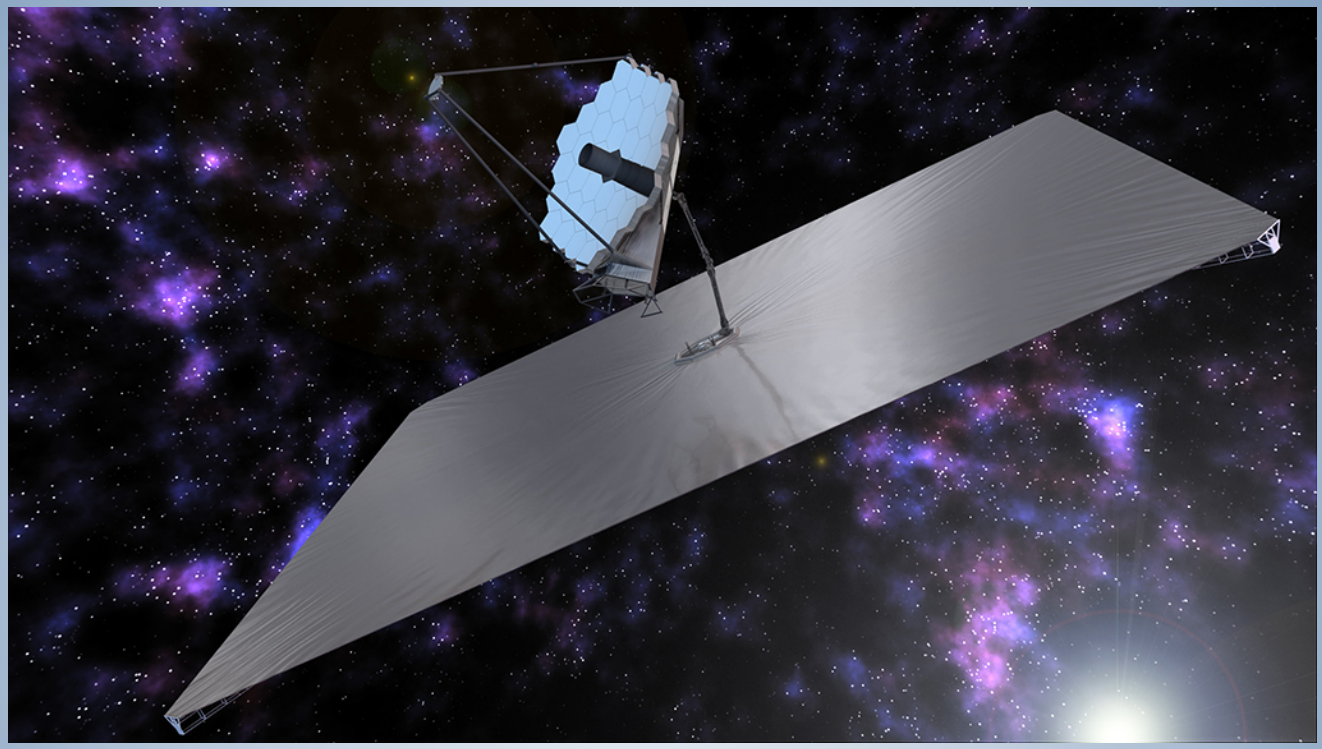
Technology sub-committee overview



Credit: NASA: Goddard Space Flight Center

Matthew Beasley
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Science Interest Group 2

Today

- A flagship mission – what can we do?
- MgF_2 coatings on Al for the mirrors
- For the UV – MCP based detector
- Echelle would use a mechanically ruled grating (like STIS)
- UV/Vis CCD cameras (might be a dichroic split with optimized coatings/CCDs) – like WF3
- NIR would use Hawaii IR FPAs
- Bandpass (0.115 to 1.8 microns)

A testament to serviceability

- That 25 years after Hubble launched, we don't have an immediate better option available in terms of efficiency
- On the other hand, COS and WF3 were selected in 1997
- Why haven't we moved much further in almost 20 years?

What is possible?

- Where are the revolutions possible?
  - Coatings? Bluer bandpasses without compromising VIS/NIR?
  - Multi-object spectroscopy
    - In the UV, direct multiplexing increases efficiency
    - Need to know distribution of sources on the sky
  - High data rate communications
    - Gigapixel cameras should be observing as much as possible to use their capability – Ka band from L2 will be limited

Crucial for exo-planets

- Stability
- Stability
- Stability
- Coatings

Goals for the technology subcommittee

- What are the most crucial technologies to improve?
- What is a reasonable amount to spend to improve them?
- What is the most cost effective improvement available?
- Is there a community consensus on the best use of funding to improve the technology?