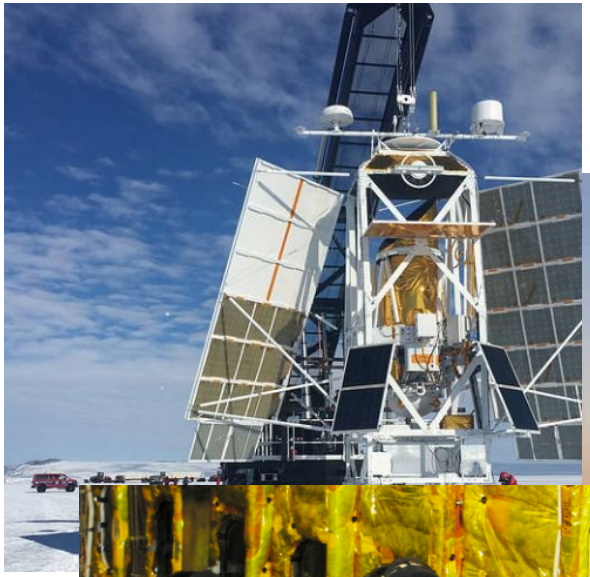
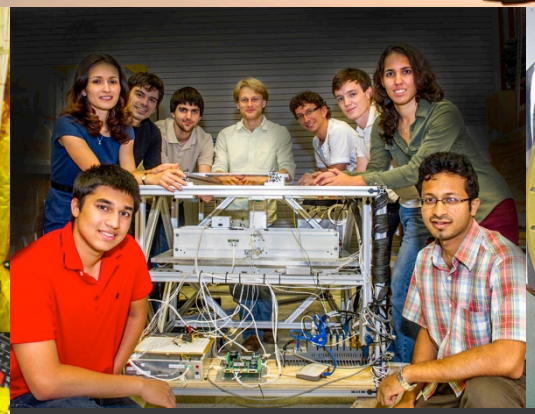
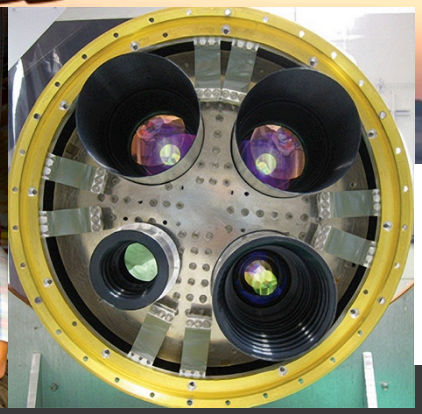
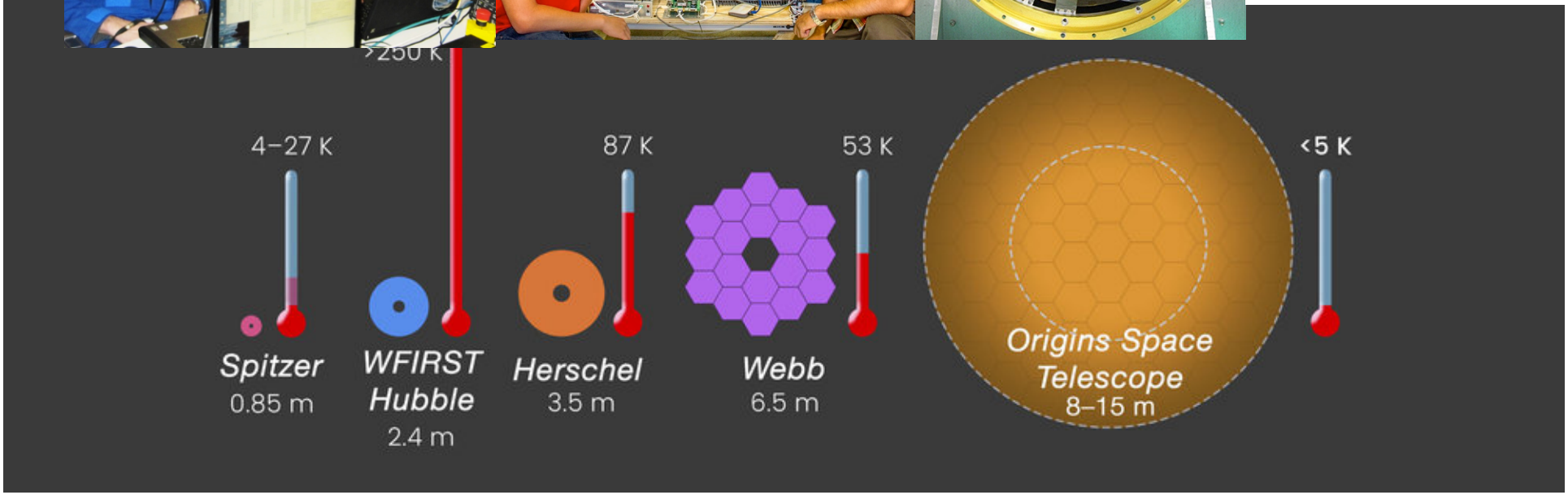
Far Infrared Next Generation Instrumentation Community Workshop







March 23, 2017



Take-Aways

General:

- Important to make sure a report from this workshop is provided to NASA
  - FIRSIG Workshop Report Circulated to the Community first for further comment
    - Espec. Balloon PIs to comment/add to
  - Make it ready as input the COPAG's TIG/Technology Interest Group (1st Meeting in June – check with TIG chairs)
  - Need FIRSIG membership on the TIG

Take-Aways

SOFIA:

- Strategy for “rapid response” (eg. days’ response supernova) for SOFIA is encouraged
- 3 years from flow of money to delivery is a minium time for a SOFIA instrument (allows for tech development)
- Standard Cryostat option is attractive
  - The drawings would be most welcome (vs. hardware)
- Common software
- International Cooperation is desired and needs to be allowed
  - Past experience for partnership has been difficult ; except for Collaborations
  - Benefits of stability
  - Suggestion of NASA/DLR joint call
- PI Instrument emphasized, or a joint University-Center / University consortium
  - More training, more students
- Lower the barriers to getting instruments on SOFIA is desired
- Preference for a 2 step proposal process

Take-Aways

Balloons

- Balloon is a different model to SOFIA
  - They both have strengths and weaknesses. Comparing them is like comparing apples & oranges.
- Standardize gondola?
  - Ask the instrument builders not just balloon PIs.
  - Could this expand the community?
- Balloon cadence is improving, can potentially be staggered every other year.
- The General Observatory Balloon, with becomes a reality, will need a science center.

Workshop Goals

At the end of today, we're looking for an agreement on…

- 3 things you would like to see in the next SOFIA instrument (solicitation is coming out this summer!)
  - Graduate Students involvement
  - 2 Steps, PDR within 3-6 months after start of project
  - Allowing PI instrument model (finding avenues to make this happen)
  - Foreign Collaboration (language encouraging)
  - Science from community drives the desired instrument proposal

- 3 things you would like to see in FIR technology / instrumentation / instruments on other platforms
  (1) Detectors
  (2) Larger Pixel Count - factor of 10 above the current state of art (Future: OST need 10^5 direct detectors, 100 for heterodyne)
  (3) Large format cryogenic readout technology
  (4) Low power electronics