



Science Team Selection Process

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Background

- NASA will have an NRA or AO for participation in WFIRST-AFTA at start of Phase A (~ 2016 or 17)
- Coronagraph and/or wide-field IR imager may be selected competitively or may be provided by NASA. If competitive, those teams would also include scientific investigations.
- Other scientific investigations selected will be selected competitively
 - Large teams with PI, Co-Is and collaborators
 - Interdisciplinary Scientists
 - EPO Scientist
- Paul Hertz has asked the SDT for suggestions on the make-up of the scientific investigations



Mission Science Team

Typically 15-20 members

- Project Science team (fm NASA Centers)
PS, Inst Sci, Tel Sci, Det Sci
- Science center leads
- PIs of selected investigations / instruments
- Interdisciplinary scientists (IDSs)
- EPO scientist
- Program Scientist (fm HQ, ex-officio)
- Foreign representatives



Example - SIM

- Instruments provided by NASA
- AO in 2000 was for *initial* science investigation with promise of a future 2nd AO
- AO lists science goals of mission:
 - Census of nearby stars searching for planetary systems
 - Program of astrophysical research using global astrometry
- "The Science Team will be made up of the SIM PS, PI's of selected Key Project teams, E/PO Scientist, Data Scientist(s), Instrument Scientist(s), Interdisciplinary Scientist(s), Imaging and Nulling Scientist, and ex officio members of SIM Project"
- Key Project science teams (up to 8)
- Science teams for smaller investigations (no number given)
- Interdisciplinary scientist (2)
- GO program not part of AO



Example - JWST

- Instruments selected by AO
- NASA AO in 2001 was for NIRCam PI, MIRI Science Lead, MIRI Science Team Members, Facility Scientist, Telescope Scientist, and IDS proposals
- Later ESA AO selected NIRSspec team
- "The primary science goal of the NGST mission is to advance the understanding of the formation of the first stars and galaxies."
- "Reference telescope" described to provide basis for proposals
- GO program not part of AO



Example – JWST cont

Table 3-1 Proposal Class Aspects

Proposal Category	Deliverables	SWG Member	NGST Program Interface	Approx. GTO time (hrs)	Expected PI effort (FTE)†	Number selected via this AO*
NIRCam Principal Investigator	Fully qualified flight hardware, calibration and commissioning plans, analysis tools, and documentation	Yes	ISIM Project	900	1.0	1
Facility Scientist	None	Yes	SWG	260	0.5	1
Telescope Scientist	None	Yes	Observatory Project	210	0.5	1
MIRI Science Lead	MIRI teaming plan, algorithms for instrument operation, calibration plans, commissioning plans, analysis tools, and documentation	Yes	ISIM Project	210	**	1
MIRI Science Team Member	None	No	MIRI Science Team	60	0.25	Up to 3
Interdisciplinary Scientist	None	Yes	SWG	110	0.25	4



WFIRST-AFTA Options

- If instruments are provided by NASA, scientific investigations and interdisciplinary scientists would be selected
- Assume 8 investigations and 3 IDSs
- Option A:
 - 4 investigations for IR survey
 - 4 investigations for exoplanets
- Option B:
 - 1 investigation **each** for WL, BAO, SNe
 - 1 investigation for non-DE survey science
 - 1 or 2 investigations for microlensing
 - 1 or 2 investigations for exoplanet coronagraph
 - 1 or 2 investigations for debris disks