



AST Mid-scale Innovations Program (MSIP)

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Outline

- Origin of the Mid-scale solicitation
- What AST has done
- Outcome of the first solicitation



“New Worlds, New Horizons” (NWNH) Decadal Survey Recommendation

Mid-Scale Innovations Program (MSIP) - second priority of large ground-based recommendations in NWNH

- Need driven by lack of broad program between Major Research Instrumentation (MRI, <\$4M) and Major Research Equipment and Facilities Construction (MREFC; >\$135M in 2010)
- Recommended a competed instrumentation and facility program to provide first-class science at moderate cost and to involve and train students in experiment design and instrumentation
 - ~Annual calls
 - Cover: (1) conceptual and preliminary design activities; (2) detailed design and construction projects
 - Maintain balance between large and small projects
 - Funding should be set to do ~7 projects over the decade
 - Build up to ~\$40M/year by mid-decade

Funding circumstances are substantially below those assumed in NWNH. Typical annual AST investment in mid-scale type activities had been ~\$20 million/year



What we've done: MSIP and Open Access

- Two previous programs provided “open access”
 - TSIP (Telescope Systems Instrumentation Program) provided fixed number of nights per dollar, typically \$3-4 million/yr in ~2010
 - URO (University Radio Observatories) provided 30-50% of observing time typically \$6-10 million/yr in 2008-2014
 - Each got 3-6 proposals per competition, funding rates of 25-50%
- MSIP subsumed these programs as a component of MSIP program, which also has open access to data as a goal (NWNH assumed URO + TSIP would continue separately)
 - FY 2013 solicitation was for FY 2014 and 2015 funds
 - Total AST MSIP budget started at ~\$14 million/yr, hence with ~\$28 million available through first solicitation
 - Also attracted several million dollars in co-funding and made small out-year commitments, for total of ~\$35 million
 - Expect similar FY 2015 solicitation for FY 2016 and 2017 funds



MSIP Solicitation

- From Synopsis
 - “The MSIP will emphasize both strong scientific merit and a well-developed plan for student training and involvement of a diverse and inclusive workforce in instrumentation, facility development, or data management”
- From Solicitation Specific Merit Review Criteria:
 - “All proposals must show the project’s value and benefit to the US astronomical community. Examples of benefit include, but are not limited to, open-access observing time on the facility, access to data products and software, and cooperation and sharing of technology with other projects.”
 - “Except for those in Category 4 [open access] with no instrumentation, proposals must include, and will be evaluated on, a substantial component of student training and involvement of a diverse and inclusive workforce in instrumentation, facility development, or data management/analysis”



MSIP First Results

- 38 pre-proposals, requesting \$400 million (12 full proposals invited)
 - Between a quarter and half classified their proposals as “Open Access” (could specify multiple categories)
 - Observing time/access offered relative to funding (aka cost/benefit) varied widely compared to either TSIP or URO standards
 - Most other proposals (and some with Open Access) involved instrumentation development
 - Community benefit criterion meant that panel had to weight the value per dollar of open access time against the value per dollar of, for example, student training in instrumentation
- MSIP Awards
 - Three full awards, so full-funding rate is below 10%
 - Two offer open data access
 - Seed funding or co-funding expected for 2-3 other awards