



AST Divestment and New Partnerships

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Outline

- “New Worlds, New Horizons” Recommendations
- Our reality - AST Budgets
- Astronomy and Astrophysics Advisory Committee Recommendations
- Divestment Status & Future of Facilities



“New Worlds, New Horizons” Decadal Survey Status

Funding circumstances are substantially below those assumed in NWNH

1. **Large Synoptic Survey Telescope (LSST):** construction approval in MREFC line was secured, with award made on August 1, 2014 (survey begins 2022)
2. **Mid-Scale Innovations Program (MSIP):** proposals evaluated, and first awards have been made
3. **Thirty-meter class telescope:** NSF and community participating in Thirty Meter Telescope (TMT) Board, Science Advisory Committee, via planning award
4. **Only Cerenkov Telescope Array (CTA) & CCAT opportunity - MSIP**
5. **“Small” recommendations: TCAN (Theoretical and Computational Astrophysics Network)** started with NASA, no funds available for other recommended increases
 - Portfolio review carried out in 2011-2012
 - NRC/CAA Optical/Near-infrared System Study under way

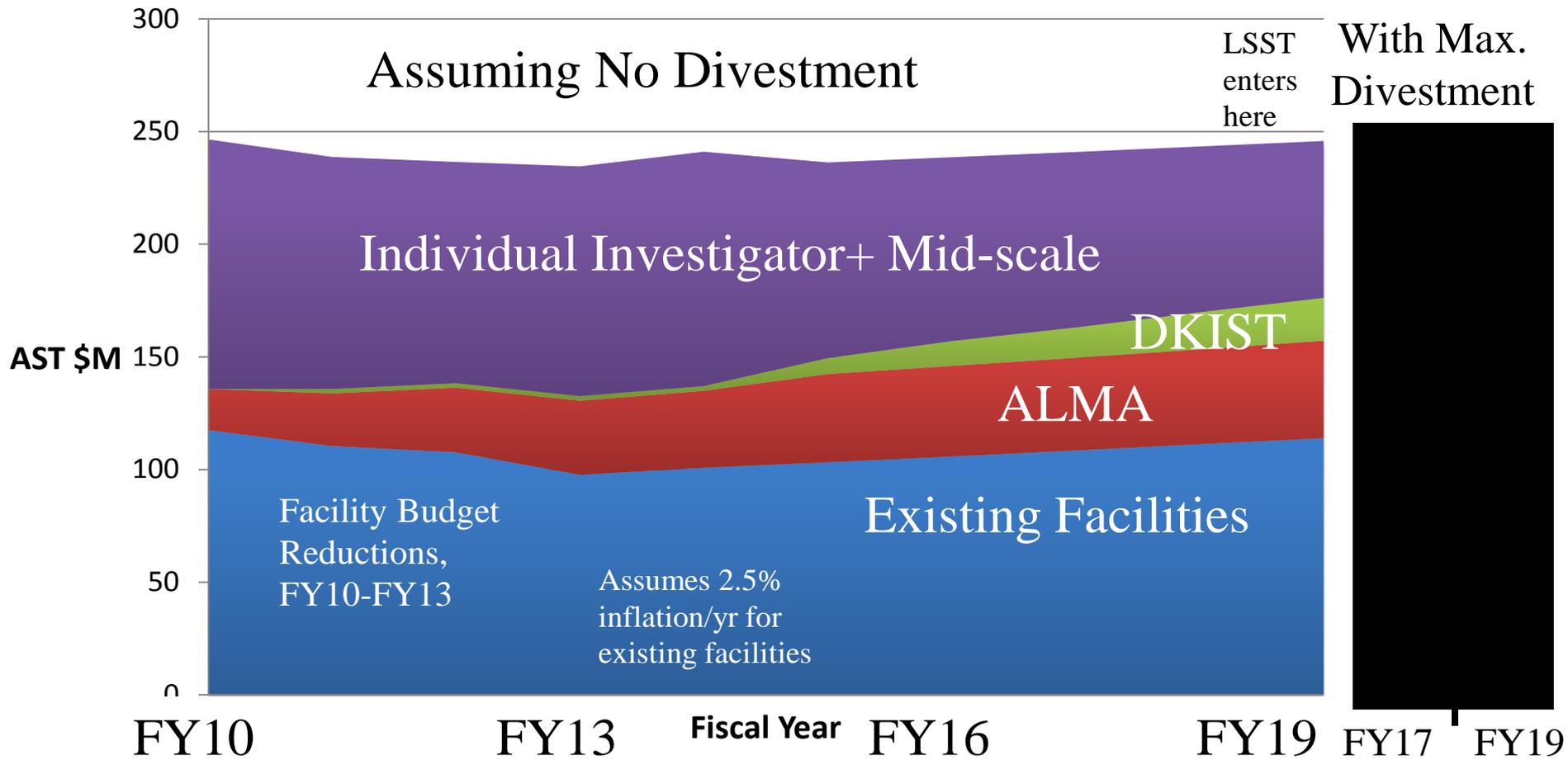


Our reality

- AST Division budget remains stagnant
 - President's Budget Request of \$236 million for FY 2015, compared to \$246 million appropriated in FY 2010
- Astronomy and Astrophysics Research Grants (AAG) budget went from \$49.4 million in FY 2010 to \$43.7 million in FY 2014, with funding rate falling from 22% to 16%
- Ended University Radio Observatories and Telescope Systems Instrumentation Program as standalone activities, folded into MSIP
- "Open Access" time headed for reductions in both optical and radio regimes



AST Portfolio Scenarios



AST budget assumption: FY15=Request, 1%/yr growth thereafter



Astronomy & Astrophysics Committee (AAAC) 2013-2014 Annual Report

- Recommendations to NSF
 - Use newly drafted “Principles for Access to Large Astrophysics Projects and Facilities” in negotiating future agreements (also NASA, DOE)
 - *Should budget situation improve, make more aggressive progress on decadal survey priorities (also NASA, DOE)*
 - *Pursue divestments in most expedient possible manner to enable decadal survey progress*
 - *Where possible, leverage divested facilities for community access*
 - AAAC and agencies work together to clarify and quantify questions related to individual investigator grants and mid-scale programs (also NASA, DOE)
- Recommendations to Congress and Executive Branch
 - Recognize importance of basic research and prevent funding decline
 - Stabilize funding environment



Divestment Status

- AST issued Dear Colleague Letter NSF 14-022 on December 20, 2013
 - Lays out future steps for all telescopes that were either recommended for divestment in the near term or for future consideration
 - NSF has begun engineering/environmental feasibility studies for a number of telescopes, while consideration of some others awaits specific external milestones
 - Expect next steps of environmental review to begin in FY 2015, as appropriate
- Congress continues to express interest in implementation



Facility Futures-I

- Kitt Peak 2.1m open availability ended in FY 2014
 - Proposals to take over 2.1m under evaluation
- Mayall 4m leaves NOAO base budget after FY 2015
 - Continued operation for special projects funded outside NOAO base
 - Expect some community access continuing during 2016-2018 transition to DOE DESI project
- NOAO share in WIYN 3.5m telescope
 - Joint NASA/NSF exoplanet program is under development
 - Includes development of Extreme Precision Radial Velocity Spectrograph under NASA solicitation



Facility Futures-2

- GBT and VLBA removed from NRAO management competition
 - Engineering and environmental baseline review taking place for both
 - Similar to NOAO Kitt Peak, these are outside NRAO base budget in competition, with any operations to be funded separately
 - Partnerships under development
- DKIST will supplant open-access NSO observatories
 - Partnership discussions for GONG, Sac Peak, McMath-Pierce
- Arecibo undergoing baseline review similar to GBT
 - Will lead to decision about status post-2016