



NRAO Status Update

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The big issue: NSF funding

- (2006) NSF “Senior Review”
 - Led to reduced budget for VLBA
- (2012) NSF “Portfolio Review”
 - Recommendation for divestiture of VLBA and GBT from NSF
 - VLBA put on sub-survival budget
 - Forced search for other funding opportunities
 - NSF willing to retain facilities as a minority partner
- (2014-2015) NRAO management recompetition
 - Only VLA, ALMA & CDL included in recompetition package
 - Existing agreement for NRAO extended to Oct 2016
 - AUI retains management of VLA and ALMA (good news)

VLBA fundraising

- USNO has been a significant partner for several years
- USNO set to become majority partner
- Ongoing contributions from other institutions will continue to be essential
- Additional commercial and government opportunities are being sought

GBT fundraising

- Success attracting funds from several sources:
 - Breakthrough Listen: next generation SETI experiment
 - Nanograv
 - West Virginia University
 - Government and commercial institutions

New organizations

- Increased non-NSF funding to keep both GBT and VLBA afloat
- NRAO does not include GBT and VLBA as of Oct 1, ...
- New organizations being formed to operate them
 - Long Baseline Observatory (LBO) to run VLBA
 - Green Bank Observatory (GBO) to run GBT
 - AUI to manage
 - NRAO, LBO, and GBO to interoperate through MoUs
- After two years the model could change again
 - Merge back to NRAO?
 - Re-compete VLBA / GBT operations?
 - Retain LBO/GBO structure under AUI?

Changes to be expected (VLBA)

- Minimal impact to external users
 - NRAO to continue to host calls for proposals, helpdesk, ...
 - nrao.edu will still host VLBA web resources, archives, ...
- Open skies time may be reduced
 - Goal is to keep above 50%
- Expect some increase in preempted USNO observing
- New flexible synthesizers (at KP and LA already)
 - To be deployed if Ka- and/or X-band Rx upgrade happens
- New receivers?
 - Ka-band (26.5 to 40 GHz) w/ X-band dual-frequency capability
 - New X-band (8 to 12 GHz)
 - Both based on EVLA receivers

Changes to be expected (GBT)

- NRAO to continue to host scientific, web services, ...
 - At least for next 2 years
- Paying customers to get scheduling priority
 - 30% of time already sold
 - Nanograv and Breakthrough Listen require nearly daily observing in short chunks
 - Availability of receivers to be impacted
- NSF sending mixed messages about continued support of high frequencies
 - 2 new receiver projects in the works, but...
 - High frequency is disproportionately expensive
- GBT wants to continue VLBI (including GMVA)

Regular business

- VLBA and GBT continue to offer same capabilities
 - RDBE w/ PFB or DDC personality
 - Mark5C recording
- JVLA: phased array modes compatible with both PFB and DDC available
 - Some are currently Shared Risk but will migrate to General Observing soon
- JVLA uncommissioned modes:
 - “Y1” (or eventually “Y4”?): Single dish(es) mode
 - Parallel VLBI + WIDAR correlation
 - NRAO seeking volunteers to visit Socorro to help implement!



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