Strategic Vision for NRAO from the EVLA-II Proposal Review Exercise

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Abstract: The NSF panel's review of the EVLA-II proposal suggested various scientific improvements that would extend its reach into other spectral regimes. From these I develop visions of NRAO's future community roles and. perhaps, a broader core mission.

EVLA-II: take-home messages

1. The EVLA-II panel wanted to praise the proposal, not bury it. However, we didn't feel that the broader US astronomical community would recognize its science potential based on the content of the proposal. We urged that the proposal be rewritten and resubmitted quickly.

EVLA-II: take-home messages

2.* If NRAO is to join in projects that exploit opportunities for truly transformational science, and if it is to cultivate broad community support for future facility proposals, it must broaden the reach of its scientific activities and expertise over the next decade.

* My opinion. Note that the panel's report said much the same thing in various contexts.

EVLA-II: take-home messages

3.* NASA's Great Observatories are dying and many of their capabilities will not be replaced. The opportunity to exploit the GOs for designed survey science programs is closing. A full-community workshop is urgently needed to plan multi-spectral projects.

And then there's the future (LSST, etc.)

EVLA-II: take-home messages

3. (ctd.)

Hence NRAO Management should be prepared to seriously consider

- committing a pool of telescope time to deliver a share of essential data,

- encouraging their interested scientific staff to join collaborative planning teams and anchor participation in the radio-related science.

Panel's Evaluation Criteria (partial list)

+ potential for predictable transformational science (including the "grand challenges" identified by the last decadal committee)
as well as serendipitous discoveries

+ enduring utility to entire astronomical community with broad scientific applications

+ highest and best use of scarce national capital funds for major new science facilities

Strategic visions from the EVLA-II Proposal Review

Some of the following concepts and visions are already strategic priorities at NRAO.

Strategic visions from the EVLA-II Proposal Review

+ *Enhance NRAO's national visibility & influence*
  - *workshops, workshops, workshops*
  - *staff "face time" in the community*
  - *thoughtful support for novice users*
  - *pipelines, archives, & interfaces!*

Strategic visions from the EVLA-II Proposal Review

+ Collaborate to integrate!

Imagine: ten years hence EVLA2 is a leader in some surveys (e.g., E-array survey of HI in the halos of local-group spirals) and a critical complement in others (e.g., NM Array deep time-domain surveys in collaboration with LSST)

Multi-Spectral Surveys @ NRAO

A roaring start…

www.vla.nrao.edu/astro/prop/largeprop

- The Coordinated Radio and Infrared Survey for High-Mass Star Formation (UKIDSS near IR)
- MOJAVE (Monitoring of Jets in Active Galactic Nuclei with VLBA Experiments) (EGRET/VLA/VLBA)
- Cosmic Explosions (optical/SWIFT)
- The HI Nearby Galaxy Survey (Spitzer/X-ray)

Multi-Spectral Surveys @ NRAO

…with more in the pipeline

www.vla.nrao.edu/astro/blankfield/blanklist.shtml

- A Deep & Unbiased Probe of Star Formation in the GOODS Northern Field
- The SWIRE Deep Field at 90cm: A Steep Spectrum MicroJy Radio Population?
- Follow-up of the COSMOS 1.4 GHz Imaging Survey: Identification of Dusty Massive Starforming Systems
- Nature of the Faint 24-Micron Spitzer Sources and 1100 Micron AzTEC Sources in the FLS Verification Strip

Strategic visions from the EVLA-II Proposal Review

+ ALMA and EVLA science centers are encouraging informal, ongoing dialogue with visitors outside the traditional radio community

+ A web of facility partnerships with national-scale observatories in other spectral domains is up and running.

Conclusion: A Broader Strategic Science Mission?

(changes in yellow)

+ **The *(strategic)* mission of the National Radio Astronomy Observatory (NRAO) is**
  - **to design, build, and operate large radio telescope facilities for use by the *entire* scientific community…**
  - **to foster *and support* the *broadest possible* user community…**
  - ***to engage in strategic partnerships for grand-challenge research programs across the electromagnetic spectrum***

Words are Cheap.
Action is Difficult.
Persistence is the key.

Thanks!

- Rick Perley
- Jim Condon
- Jim Ulvestad
- Rogier Windhorst