Next Generation Very Large Array (ngVLA) Project Update

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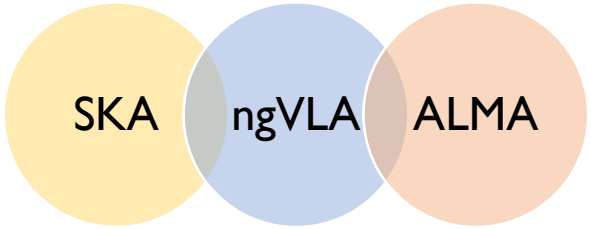
ngVLA Overview

The ngVLA will be a single interferometric array that replaces the NSF's Jansky Very Large Array (JVLA) and Very Long Baseline Array.

ngVLA concept

- Frequency span 1.2 – 116 GHz
- Resolution span 0.1 milliarcsec – 10 arcsec
- 10 x sensitivity of JVLA and ALMA
- 244 x 18m + 19 x 6m offset Gregorian antennas
  - At fixed locations in US, Mexico and Canada
  - Concentrated in US Southwest

ngVLA science bridges SKA/ALMA



Square Kilometer Array

Atacama Large Millimeter/submillimeter Array

ngVLA Community Engagement 2015-2023

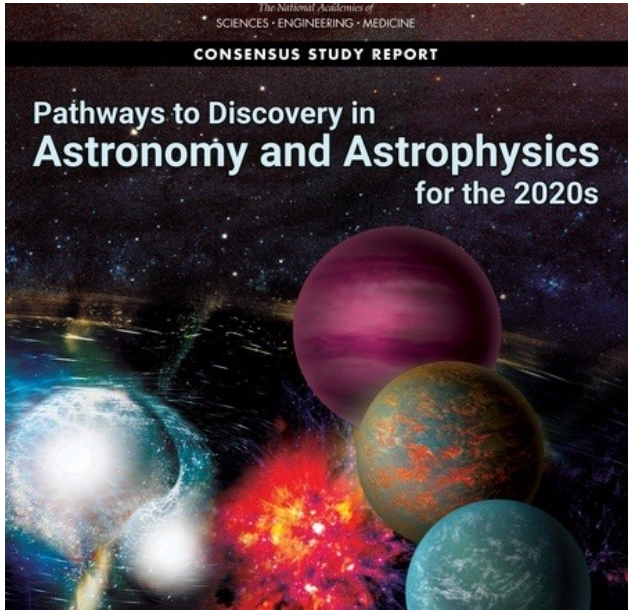
Proactively engage the worldwide scientific and technical community

- Science Advisory Council offers expertise, guidance and feedback, and leads Science Working Groups
- Technical Advisory Council offers expertise, guidance and feedback on engineering and computing topics
- Sought use cases, Science Book chapters, white papers
- Supported 50+ Community Studies
- Showcased 40+ scientific papers in NRAO eNews
- Supported 27+ scientific and technical conferences

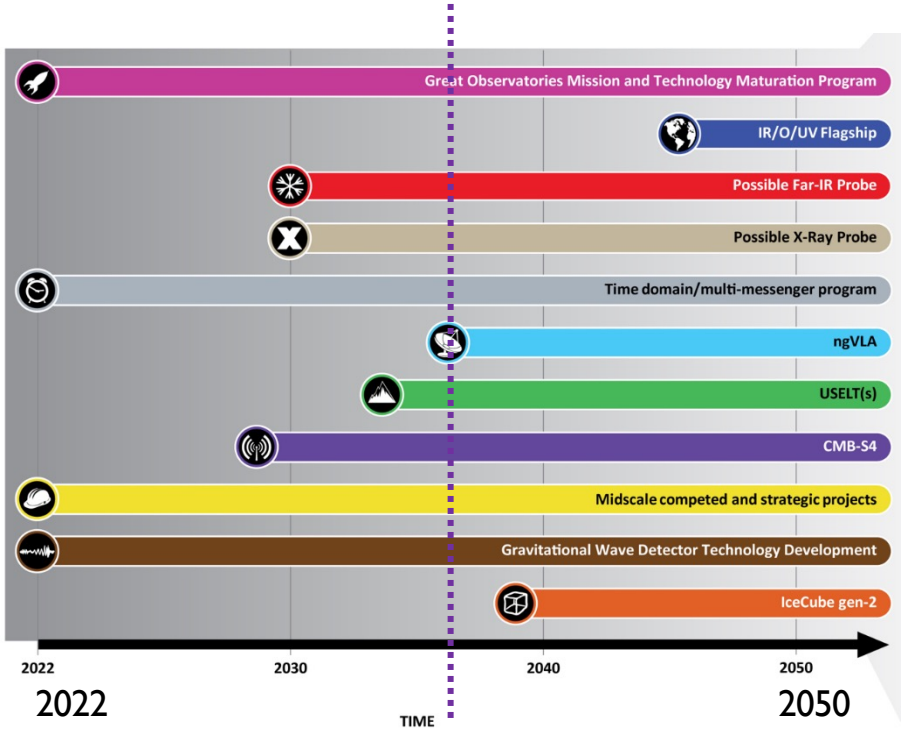
Credit: Brian Kent

ngvla
Next Generation Very Large Array

Astro2020 identified the ngVLA as a high-priority, ground-based large facility whose construction should start this decade.



Credit: The National Academies Press



ngVLA Status

- Cost Review in December 2023.
- Coming months: announce further design-phase funding
- Continue work on domestic/international partnership definition.
- System Preliminary Design Review in 2026.
- Everything made possible by strong community and NSF support.

Credit: Sophia Dagnelo, NRAO/AUI/NSF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