ALMA CYCLE 10

The Joint ALMA Observatory (JAO) will start Cycle 10 observations in October 2023. A Call for Proposals with detailed information on Cycle 10 was issued on April 12 and the deadline for proposal submission is May 10, 2023, at 15:00 UT.

GENERAL INFORMATION

ALMA Cycle 10 will start in October 2023 and will span 12 months. The JAO anticipates having 4,300 hours for approved science observations on the 12-m Array and 4,300 hours on the Atacama Compact Array (ACA), also known as the Morita Array. Antenna configurations C-1 to C-8 (with maximum baselines between 0.16 and 8.5 km) will be offered during this cycle. Projects with observations in the highest-frequency Bands 8, 9, and 10 are strongly encouraged. Proposers are encouraged to submit ACA stand-alone observations for targets that can be observed in the LST range of 20h to 10h.

KEY DATES

12 April 2023
Release of the ALMA Cycle 10 Call for Proposals and observing tool, and opening of archive for proposal submission

10 May 2023
Proposal deadline at 15:00 UT

August 2023
Result of the proposal review process sent to proposers

1 October 2023
Start of ALMA Cycle 10 observations (anticipated)

September 2024
End of Cycle 10 observations

PROPOSAL TYPES

- The proposal types in Cycle 10 will be the same as in Cycle 9. Principal Investigators submitting a proposal to ALMA for Very Long Baseline Interferometry (VLBI) observations in ALMA bands 1 or 3 made in concert with the Global mm-VLBI Array (GMVA) at 7mm and 3 mm must also have submitted a proposal to the GMVA network by 1 February 2023.
- In the main 12-m Array, antenna configurations C-1 to C-8, with maximum baselines between 0.16 and 8.5 km, will be offered.
- Large Program proposals can be submitted for a subset of the below Observing Modes, see the Call for Proposals for more details.

TECHNICAL CAPABILITIES

The anticipated Cycle 10 capabilities are:

Number of antennas

- At least 43 antennas will be available from the 12-m Array.
- At least ten 7-m antennas (for short baselines) and three 12-m antennas (for single-dish maps) will be available in the ACA.

Receiver bands

- Receiver Bands 1, 3, 4, 5, 6, 7, 8, 9 and 10 (wavelengths of about 7, 3.1, 2.1, 1.6, 1.3, 0.87, 0.74, 0.44 and 0.35 mm, respectively).

12-m Array Configurations

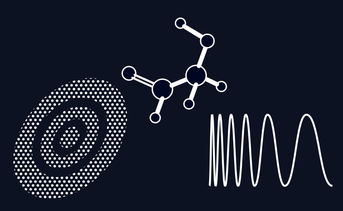
- Maximum baselines for the antenna configurations will vary from 0.16 km to 8.5 km.

The following technical capabilities will be available this Cycle for the first time:

- Band 1 on the 12-m Array and for Stokes I only (no Stokes Q/U/V), anticipated to be available from March 2024.
- Spectral scans that include Total Power observations.
- 4x4-bit spectral modes for improved sensitivity on the 12-m Array (dual polarization)
- Solar observations in full polarization in Band 3 using only the 12-m Array
- Phased array mode in Bands 1, 3, 6 and 7 (the total time available for this mode will be limited to 50 hours).
- VLBI in Bands 1, 3, 6 and 7, including flexible tuning for spectral lines
- New in Cycle 10 will be the availability of Joint Proposals with other facilities, including the Space Telescope Science Institute's James Webb Space Telescope, the National Radio Astronomy Observatory's Karl G. Jansky Very Large Array, and the European Southern Observatory's Very Large Telescope.
- Also new this Cycle, Band-to-band phase calibration will be available for high frequency observations on both the 7-m Array and all 12-m Array configurations. The total time available for projects needing band-to-band phase calibration will be limited to 65 hours for the 12-m Array and 85 hours for the 7-m Array.

NEW IN CYCLE 10

The following technical capabilities will be available this Cycle for the first time:



- Band 1

- Solar full polarization in Band 3 (12-m Array)

- VLBI in Bands 1, 3, 6 and 7, including flexible tuning for spectral lines

- Joint Proposals with other facilities

THE PROPOSAL REVIEW PROCESS

- All proposals requesting fewer than 50 hours on the 12-m Array, and ACA stand-alone proposals requesting fewer than 150 hours on the 7-m Array will be reviewed through the distributed peer review system.
- Large Programs will be reviewed by a panel of experts.
- All Cycle 10 proposals will be reviewed through a dual-anonymous procedure.

ALMA ESO NAOJ National Astronomical Observatory of Japan NRAO