

New Capabilities and Observing Modes for Cy6

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What's new in Cy6?

- Circular polarization will be accepted for Bands 3, 4, 5, 6, and 7. The minimum detectable degree of circular polarization, defined as three times the systematic calibration uncertainty, is currently 1.8% of the peak flux for both TDM and FDM observations.
- Band 8 standard mode
- Band 8 ACA Standalone
- Band 6 IF extension: The Band 6 IF bandwidth has been increased by 0.5 GHz to extend from 4.5 to 10 GHz.

General Information

- ALMA Cycle 6 will start in **early October 2018** and span **12 months**. It is anticipated that **4000 hours of 12-m Array time** will be available for successful observations of approved projects, and **3000 hours will be available on the Atacama Compact Array (ACA)**, also known as the Morita Array.

18 December 2017	Cycle 6 pre-announcement
1 February 2018	Additional information on configuration schedule
20 March 2018	Release of the ALMA Cycle 6 Call for Proposals and Observing Tool, and opening of archive for proposal submission
19 April 2018	Proposal deadline
18-23 June 2018	Proposal Review meeting
End of July 2018	Result of the proposal review sent to Proposers
6 September 2018	Deadline for Phase 2 submission by Proposers
October 2018	Start of ALMA Cycle 6 observations
September 2019	End of Cycle 6 observations

Proposal Types

- Same as in Cy5
- Regular Proposals may request up to 50 hours of 12-m Array time or up to 150 hours of ACA stand-alone time.
- Large Programs may request more than 50 hours of 12-m Array time or more than 150 hours of ACA stand-alone time. Up to 600 hours of 12-m Array time and 450 hours of ACA stand-alone time will be allocated to Large Programs.
- Proposals will be accepted for Very Long Baseline Interferometry (VLBI) observations with ALMA in Bands 3 and 6 (wavelengths 3 mm and 1.3 mm) in the continuum only.

Anticipated Capabilities

- \geq forty-three antennas in the 12-m Array
- \geq ten 7-m antennas and three 12-m antennas in the ACA
- Receiver bands 3, 4, 5, 6, 7, 8, 9 and 10 (wavelengths of about 3.1, 2.1, 1.6, 1.3, 0.87, 0.74, 0.44 and 0.35 mm, respectively)
- Spectral line, continuum, and mosaic observations
 - Spectral line and continuum observations with the 12-m Array and the 7-m Array in all bands
 - Single field interferometry (all bands) and mosaics (Bands 3 to 9) with the 12-m Array and the 7-m Array
 - Single dish spectral line observations in Bands 3 to 8

Anticipated Capabilities

- 12-m configuration
 - Maximum baselines for the antenna configurations will vary from 0.15 km to 16 km
 - Maximum baselines of 3.6 km for Bands 8, 9 and 10
 - Maximum baselines of 8.5 km for Band 7
 - Maximum baselines of 16 km for Bands 3, 4, 5 and 6
 - Antenna configuration file for CASA simulations will be made available on the ALMA Science Portal by 1 February 2018
- Single pointing, on axis, linear and circular polarization for both continuum and full-spectral-resolution observations in Band 3, 4, 5, 6, and 7 on the 12-m Array. The field of view of both linear and circular polarization observations is limited to the inner 1/3 of the primary beam.

Standard / Non-standard modes

- Standard mode observations will be calibrated with the ALMA Pipeline while non-standard by manual.
- Up to 20% of the observing time will be allocated to non-standard.
 - Band 9 and 10 observations (**Band 8 is standard!**)
 - Band 7 observations with maximum baselines > 5 km
 - All polarization observations
 - Spectral scans
 - Bandwidth switching projects (less than 0.9375 GHz aggregate bandwidths over all spectral windows)
 - Solar observations (Bands 3 and 6)
 - VLBI observations
 - User-specified calibrations
 - Astrometry