



Announcement of the ALMA Cycle 0 Call for Proposals

1. Introduction

The ALMA Director, on behalf of the partner organizations and all the personnel in Chile, East Asia, Europe and North America involved in bringing ALMA to Early Science readiness, is pleased to issue the first ever Call for Proposals with ALMA. We invite members of the astronomy community to propose for scientific observations to be scheduled within the ALMA Early Science Cycle 0 period which we expect to start on 30 September 2011 or shortly thereafter. This provides an important opportunity for first science from this cutting edge facility.

ALMA Early Science Cycle 0 will span 9 months. It is anticipated that 500-700 hours of array time will be available for Cycle 0 projects. Any astronomer may submit a proposal for ALMA Early Science Cycle 0.

2. Purpose

The purpose of ALMA Early Science Cycle 0 is to deliver scientifically useful results to the astronomy community and to facilitate the ongoing characterization of ALMA systems and instrumentation as the capability of the array continues to grow. Early Science will continue through Cycle 1 and until construction and commissioning of ALMA is complete.

3. Capabilities

The ALMA Early Science Cycle 0 capabilities will comprise sixteen 12-m antennas, receiver bands 3, 6, 7 & 9 (wavelengths of about 3, 1.3, 0.8 and 0.45 mm), baselines from 18m to 125m (the compact configuration) and from 36m to 400m (the extended configuration), single field imaging and mosaics of up to 50 pointings, and a set of correlator modes that will allow both continuum and spectral line observations. Polarization and total power capabilities will not be available in Cycle 0, but are expected to be available from Cycle 1 onwards.

4. The ALMA Science Portal

The science portal at www.almascience.org is now open, and is the principal resource for information for scientific users regarding observing with ALMA. Astronomers registered through the ALMA science portal may submit proposals for ALMA observing. We encourage proposers to take close account of the detailed information available on the ALMA Science Portal, and to check the portal regularly for updates.

5. Best Efforts

Proposers should be aware that because scientific observations will be conducted on a best efforts basis in parallel with the ongoing construction, commissioning and verification of the whole ALMA system, a range of constraints will apply during Cycle 0. The completion of the full array of 66 antennas with the full

set of scientific capabilities will continue to be the highest priority.

Projects will not be carried over from Cycle 0 to later cycles (even if they have not been completed in Cycle 0). PIs will have the same 12-month proprietary rights applicable to all ALMA data but Cycle 0 projects will not block later observations of the same targets with enhanced capabilities.

ALMA staff will conduct quality assurance on ALMA data, and will provide processed data products through the respective ARCs. However, it cannot be guaranteed that the characterization and quality of the data and data reduction will meet the standards expected when ALMA is in full scientific operations.

Proposers should expect that significant experience in radio (in particular, millimeter) interferometry will be an advantage in working with the data products during ALMA Early Science. PIs and observing teams should anticipate the need to invest their own time and expertise in the reduction and analysis of ALMA Early Science data products, including the possible need to visit the relevant ARC to get help and to assist with quality assurance and data reduction. Requests for help should be directed through the Helpdesk available from the ALMA Science Portal.

Astronomers who are interested in establishing collaborations are welcome to contact scientific staff from any of the ALMA organizations, though of course this is not required. The principal scientific interests of ALMA staff at the Joint ALMA Observatory (JAO) are summarized at *JAO Staff*, others are available at their local websites.

6. Submitting a proposal for ALMA Early Science Cycle 0

All proposals to use ALMA must be submitted using the ALMA Observing Tool (OT) software. The ALMA OT is available for download now from the ALMA science portal and can be used to start preparing proposals. The ALMA archive will open for proposal submission on June 1, and until then proposals can be stored on the user's own disk.

The Cycle 0 Proposers Guide, the Early Science Primer, and the Cycle 0 Technical Handbook (available May 15, 2011) will be especially relevant sources of information for proposers. For specific information not provided on the Science Portal, proposers may submit a Helpdesk (see *User Services at ARCs* in left sidebar) enquiry to the ALMA Regional Centers.

7. Notice of Intent

To help ensure that the Cycle 0 review process is set up in a way that allows proper handling of the set of proposals to be assessed, and to assist the JAO to schedule the two configurations offered, prospective Principle Investigators are strongly encouraged to submit a notice of intent by April 29 using a simple web form on the science portal (NoI). One form should be completed and submitted for each planned Cycle 0 proposal. This should not require more than a few minutes since the information to be provided is minimal: PI's name and affiliation, science category of the proposal, observing bands and whether the compact or extended configuration will be required.

8. Opportunities for public promotion of ALMA

Opportunities for public and media interest in ALMA science will be very important during Early Science Cycle 0. Proposers are requested to consider the potential media "appeal" of proposed observations, with regard to scientific content and/or the quality of the visuals that could be produced and to include a brief statement on the likely potential for publicity arising from the proposed scientific observations. This information will not be used in the assessment of the proposal which will be based solely on scientific merit and technical feasibility.

Successful PIs will be required to commit to working with the ALMA Education and Public Outreach (EPO) team on products such as press releases and related material if their project is selected for publicity purposes. The observatory will provide outreach-related expertise and advice, including support in the preparation of visuals if relevant.

9. Access to the first ALMA data

The first release of ALMA test data to the astronomy community will be through the Science Verification program. Science Verification will involve observations by JAO staff of objects designed to test ALMA systems and confirm their performance. More information on the observations planned for the ALMA Science Verification program is available at: [ALMA Data – Science Verification](#).

The first ALMA Science Verification data are not available yet, primarily because of the effects of an unusually severe Altiplanic winter. We expect to release the first Science Verification data in June 2011.

10. Proposal Review Process

All proposals for the scientific use of ALMA, including Cycle 0 proposals, will be subject to peer review by a single committee. Panels of international experts, independent of the Joint ALMA Observatory and the ALMA Regional Centers, will carry out the review. The assessments from those panels will be synthesized by ALMA's Proposal Review Committee, responsible for the overall ranking of all ALMA proposals, chaired by Professor Neal Evans of the University of Texas.

Proposals will be ranked strictly on the basis of scientific quality and feasibility with respect to the scientific capabilities offered. Proposals that best demonstrate and exploit the advertised ALMA Early Science Cycle 0 capabilities, producing scientifically worthwhile results from relatively short observations (averaging a few hours), will be given preference. The aim will be to ensure that each region receives its share of ALMA time.

Chile has yet to decide its level of participation in this single ALMA Review Process.

11. Key dates

The key dates in the current plans for Cycle 0 are given below. Changes in circumstances may make it necessary to alter them.

31 March 2011: Release of this Call for Proposals for ALMA Early Science Cycle 0 and release of offline Observing Tool.

29 April 2011: Deadline for submission of Notice of Intent.

15 May 2011: Release of Cycle 0 Technical Handbook and intended schedule of compact and extended configuration availability.

1 June 2011: Opening of archive for proposal submission and release of the online version of the Observing Tool.

30 June 2011: Proposal submission deadline.

September 2011: Feedback to proposers on the results from the proposal review process.

30 September 2011: Start of ALMA Cycle 0 observing.

February 2012: One month engineering shutdown during the 2012 Altiplanic winter.

March/April 2012: Expected deadline for proposal submission for Cycle 1

30 June 2012: End of ALMA Cycle 0.