



## ALMA BOARD MEETING April 19-21, 2017

### PUBLIC SUMMARY

The ALMA Board convened at the OSF between the 19<sup>th</sup> and the 21<sup>st</sup> of April, in the following composition:

Chair	Toshikazu Onishi (EA)
Vice-Chair	Linda Tacconi (EU)
Board Members	Phil Puxley (NA) Tim de Zeeuw (EU) Masa Hayashi (EA) Patrick Roche (EU) Sean Dougherty (NA) Rafael Bachiller (EU) Ethan Schreier (NA) Neal Evans (NA) Paul Ho (EA) Luis Chavarría (CL)
Board Assessors	Tony Beasley (NA) Daniel Weselka (EU) Hideyuki Kobayashi (EA)
Observers	Xavier Barcons (EU)
JAO	Pierre Cox (ALMA Director) Stuartt Corder (ALMA Deputy Director) John Carpenter (Observatory Scientist) Frank Ruseler (Head of Administration) Serge Guniat (Head of Engineering) Jorge Ibsen (Head of Computing) Lars-Åke Nyman (Head of Science Operations) Ivan Lopez (Safety Manager) Rafael Mena (Human Resources Manager)
Executives	Paulina Bocaz (AUI Legal representative in Chile) Seiichi Sakamoto (NAOJ Legal Representative in Chile) Wolfgang Wild* (ESO ALMA Programme Manager) <i>*Could not attend.</i> Phil Jewell (NRAO ALMA Operations Manager) Satoru Iguchi (NAOJ ALMA Operations Manager) Andreas Kaufer (ESO Director of Operations) Nikolaj Gube (ESO Legal Service)
Board's Secretary	Alejandra Voigt (JAO Executive Officer)

## **PUBLIC SUMMARY**

The ALMA Board held its April 2017 meeting, at the Operations Support Facility (OSF) in San Pedro de Atacama, Chile. The Board's Chair welcomed Dr. Luis Chavarría, Director of Astronomy in Conicyt, the new Board Member appointed by Chile. He also welcomed Dr. Xavier Barcons, who attended the meeting as an ESO observer.

### **ALMA Overview**

The Board noted the presentations given by the ALMA Director and Deputy Director, regarding the latest activities, achievements and challenges for ALMA since November, 2016, including:

- The successful conclusion of the Cycle 3 observing period and the smooth start of Cycle 4
- The unfavorable weather conditions that occurred at the beginning of 2017, and the impact on observing time,
- The increase in the number of Antennas available for science, which is now approaching the steady state level
- A steady increase in the number of observing hours
- The first successful VLBI observing campaign
- A highly successful maintenance period
- The nearing of completion of the Residencia
- Continued increases in the number of refereed papers published
- Science results regarding solar observations, a distant outer solar object, a triple system formed via fragmentation, a full spectral survey of IRAS 16293-2422, and the detection of a redshift 8.3 gravitationally lensed galaxy.
- A successful opening to the Cycle 5 Call for Proposals
- A description of the new capabilities being offered in Cycle 5
- Performance results for the first half of Cycle 4
- The goal to have full operations capabilities by ~Cycle 7
- Efforts to improve efficiency targeted at improving time-on-sky

### **Financial Matters**

The ALMA Board noted the reports of the ALMA Budget Committee and the Joint ALMA Observatory (JAO) Head of Administration regarding the financial results of 2016, the 2017 budget execution and projections and the long-term planning preparation. The Board was also updated in some infrastructure activities, like the upcoming completion of the Residencia for the staff at the OSF, progress in restoration of parts of the site following the completion of construction activities, and the future multi-purpose enclosed sports facility that will be built by Associated Universities Inc. (AUI) on behalf of the National Science Foundation.

The Residencia was formally handed over to JAO by the ESO Director General at a ceremony during the Board meeting. It is anticipated that it will be fully furnished and ready for use around the middle of 2017. This represents an important landmark, as the Residencia is the final major component of the observatory infrastructure.

## **ASAC Report & Scientific Matters**

The Board noted the report of the ALMA Science Advisory Committee (ASAC) and the Board's Science Committee, who discussed, among other scientific issues:

- The possibility of releasing raw data in certain circumstances
- Data delivery rates
- The completion rate of rank A programs and the requirements for carry-over into subsequent cycles
- Observation Efficiency
- High frequency operations for the ALMA Compact Array (ACA)
- Technical Aspects of ALMA System Performance, especially related to Large Programs
- Science Outcomes from ALMA
- Issues raised through regional Science Advisory Committees
- The plans for an additional call for stand-alone ACA observing proposals
- The Vision for ALMA's development over the next 10-15 years.

The Board also noted the Observatory Scientist's presentation regarding the status of the data processing and the improvement in the delivery of data due to the increased staffing levels and software developments both at the JAO and the ALMA Regional Centers.

## **Safety**

The Board noted the JAO Safety Manager's presentation regarding the latest events since November 2016, along with the encouraging statistics for 2016. The Board expressed its appreciation to the JAO for the substantial progress that had resulted from its efforts over the past year, and noted the resilience of the OSF and the response of the staff in the face of very poor weather in January 2017.

## **Operations Plan**

The Board noted the status of the Operations Plan, which is described by more than 30 living documents, almost all of which are fully approved and implemented, and approved an Annex to the Principles of Operations which contains the list of Critical Services to be provided by the ALMA Support Centers managed by the Executives.

The Board also approved a revised version of the Principles for the ALMA Development Program, and noted that the Implementation Plan is currently being drafted by the ALMA Management Team (AMT), the Observatory Scientist and the Observatory Systems Engineer.

## **ALMA Development Program & Vision**

The ALMA Board noted the presentations by the ALMA Deputy Director, on behalf of the AMT, regarding the status of the ALMA Development Program, which covered the on-going projects and studies, the projects that will be submitted for approval in the near future and a summary of the scope of upcoming calls for proposals within the three regions.

The Board also noted the Observatory Scientist's presentation on behalf of the ALMA Director and the Working Group regarding the draft Development Vision for the long-term future of ALMA. The Board endorsed the identification of the highest priority directions for the development program proposed in the report, and discussed the next steps for its completion and implementation.

### **Governance Issues**

The Board also discussed some policy and procedural ways to improve the communications with the ALMA staff, which include this public summary of the meeting.