



ALMA BOARD

ALMA EDM Document	AEDM 2016-046-O Rev.1
Distribution	Ordinary Session

Subject: ALMA Board Response to ASAC Report

AUTHOR(S): ALMA BOARD SCIENCE COMMITTEE

Purpose of Document: To provide the ASAC with the response of the ALMA Board to its Report issued in April 2016 (AEDM 2016-013-O)

Status: To be approved by the Board by written procedure pursuant to Art. 11 of the Board Rules of Procedure

ALMA Board Response to ASAC Report AEDM 2016-013-0

- The Board accepts the ASAC Report with thanks to the ASAC members for their hard work. The ASAC gathers and represents the opinions from the community on the operations of ALMA. Their feedback is always very valuable.

General Considerations:

ASAC notes that the presentation files were received well in advance of their Face-to-Face meeting, and credits the efforts of the Observatory Scientist.

- The Board is glad to learn of this, and acknowledges the efforts from JAO and the Observatory Scientist.

ASAC strongly encourages the JAO to raise the fraction of A-ranked proposals to 50% in Cycle 5.

- The Board notes that Cycle 4 aims to have 33% of A-ranked proposals. The Board agrees that Cycle 5 can aim at 50% of A-ranked proposals as long as the completion rate is good in Cycle 4.

ASAC expects to have the opportunity to comment on the Terms of Reference before it is finalized. ASAC also wants to understand its relation to the Science Committee of the Board.

- The Board approved the ASAC ToR at the April 2016 Board Meeting, and has passed the document to the ASAC. Both JAO Director and SC Chair attended the subsequent ASAC telecon in order to explain both the ASAC ToR and the relation between ASAC and the SC. In particular, SC, as a subcommittee of the Board, is tasked to interface closely with the ASAC and to develop charges for ASAC. The SC also advises the ALMA Director on areas of expertise that are needed on the ASAC and also comments on the qualifications of possible ASAC members nominated by the Parties. The entire ALMA Board then considers the recommendations of the SC and takes appropriate actions.

Charge 2: Assessment of science output.

ASAC recommends (1) close monitoring of the use of ALMA Archive, (2) survey PIs for the reasons for slow publications, (3) survey the community for hurdles to scientific breakthroughs.

- The Board accepts the ASAC recommendations, and notes that JAO is already following the suggestions.

Charge 3: How to maximize ALMA's scientific impact.

ASAC suggests coordinated proposals with other major facilities such as the upcoming JWST, such as coordinated observations.

- The Board notes that coordinated observations are proposed normally, but that perhaps special programs with special requirements may be possible. JAO agrees to pay attention to these possibilities.

Charge 4: Issues raised by the regional SAC and the wider community.

ASAC recommends that (1) implementation document for mm VLBI should be made public, (2) VLBI expertise is represented on the review panels, (3) evaluations of VLBI proposals is transparent and fair, (4) AVCC to be responsible for scheduling of VLBI experiments, (5) duplication check tool be ready, (6) JAO be ready for large number of Large Programs in Cycle 4.

- The Board accepts the ASAC recommendations, noting that the implementation procedure for VLBI proposals were made clear with the Cycle 4 call for proposals, and that the evaluations of the VLBI proposals should be done properly as for all ALMA proposals. The Board notes many detailed advices from the ASAC on the VLBI proposals, and tasks JAO to consider all the advices carefully in implementing Cycle 4 review process. The Board also notes that JAO is working on a duplication tool in time for Cycle 5 proposals. In Cycle 4, the JAO received a total of 27 Large Programs and is finalizing the review procedures..

Charge 5: Advice on scientific priorities of the ALMA Development Program.

ASAC recommends strongly the use of external experts in the Development Working Group, and notes the good progress in Solar Observation study, and Band 5 receiver development. ASAC also endorses the idea that Development calls follows the priorities as outlined in ALMA2030 plan.

- The Board notes that JAO Director considers the job of the ALMA Development Working Group to be to turn the ALMA2030 suggestions into a vision of ALMA in 2030 and a roadmap to implement that vision. JAO Director also will consult widely at various opportunities to seek further community inputs. The Board agrees with the ASAC that the recent ALMA images of the solar chromosphere were indeed very impressive, and that Band 5 progress has been very good.

Charge 6: Advice on the highest priorities for the 5-year plan for operations and development in order to maximize scientific impact of ALMA.

ASAC recommends the following high priority items: (1) overall observing efficiency to increase on-source time, (2) polarization commissioning for long awaited magnetic field studies, (3) rapid data reduction focused on system diagnosis in order to enable better project completion and system tracking, (4) combined array mode in order to increase sensitivity and image fidelity while improving calibration, (5) 3- and 4-bit re-quantization in the correlator for 10% increase in sensitivity. ASAC also endorses (6) spectral scans for chemistry and high-z science, (7) 90-degree phase switching for efficient side-band separation in bands 9 and 10, (8) artificial beacon to improve polarization calibration.

ASAC also commented on the medium and low priority items.

ASAC emphasize again the duplication tool for proposers, even though it is not an upgrade item.

- The Board accepts the well-considered recommendations from the ASAC, and tasks the JAO to consider these recommendations in developing their 5 year plan.

Charge 7: Advice on current scheduling procedures with respect to overall science output from ALMA.

ASAC recommends (1) assignment of grades based on science ranking and scheduling feasibility, (2) assignment of grade to include the likelihood of accomplishing all proposed science goals, (3) project completion to be part of the selection criteria for execution. ASAC also endorses the continuation of the policy of releasing “stale data” when scheduling of the remaining observations are not clear.

- The Board is glad to see that the ASAC endorses the grading procedure from JAO for proposals, which includes the consideration of scheduling feasibility. The Board tasks JAO to make sure that the grading criteria are clearly explained to the community.

Charge 8: Advice on the efforts of JAO and the Observatory Scientist to improve the scientific environment at the JAO.

ASAC recommends JAO to (1) develop the metric to measure JAO staff scientific productivity, (2) include scientific productivity as one of the criteria in staff evaluation, (3) encourage visits to ARCs, (4) advertise visits by researchers to JAO, (5) implement support for students to work with JAO staff, (5) encourage staff to publish technical data to increase their visibility.

- The Board discussed with the JAO and the Observatory Scientist, and finds that various efforts are underway in earnest to encourage and improve the scientific productivity of the JAO staff. It is not entirely clear whether the problem is completely understood. However, the Board agrees with the ASAC recommendations, and encourages the JAO and the Observatory Scientist to continue their efforts.