



RESPONSE TO ASAC REPORT

April 2011

Lewis Ball, Richard Hills, Lars-Ake Nyman - 12 April 2011

At its meeting on April 6-7, 2011 the Board recorded the following resolution:
16. [The Board] Noted the presentation of the ASAC report by Kelsey Johnson, ASAC vice chair, and thanked her for a clear and well-written report.

The JAO also thanks ASAC for its very helpful advice during and following the February / March face-to-face meeting in Santiago, and for its report. The response below is structured in accordance with the sections of the ASAC Report, with content from the report itself in bold and italics.

II.1) Charge 1

Scientific Capabilities to be Offered for Cycle 0

Numerous recommendations.

The Announcement of the Call for Proposals for ALMA Early Science Cycle 0 was consistent with all of ASAC's advice regarding the scientific capabilities to be offered.

Status of Construction and CSV

... computing latency remains a serious concern, ... it would be prudent to set a specification on the tolerable amount of computing overhead, which is not currently defined. In addition, the current capabilities of the OT do not allow for sensible mosaic patterns, and this should be rectified as soon as possible.

Reducing the computing overheads is one of the major objectives of the latest software releases – R8.0 and R8.1. Tests with R8.0 show that mosaics with at least 30 pointing positions can now be observed with adequate efficiency.

The ASAC is specifically concerned about the shortage of southern calibrator sources and supports the CSV efforts to identify and monitor further sources as part of the CSV activities. Work on enlarging the catalogue of calibrators has been delayed, mostly because the software to support the catalogue is only now becoming available. A reasonable number of compact objects with accurate positions which would be suitable as phase calibrators are available from low-frequency surveys so the only requirement is to find which are strong enough at higher frequencies. Pilot surveys have been done but it is helpful to have this reminder that we need to increase the focus on this over the coming months.

The ASAC continues to have serious concerns about the status of the archive.... the ASAC again highlights the archive as requiring adequate deployment of personnel within Computing, as well as active monitoring and supervision by project management.

The readiness of the archive will continue to be a high priority for ESO, which is responsible for its delivery and which is devoting additional resources to ensure that it is available as and when required, for the Computing IPT, and for JAO management. Archive progress is being carefully tracked and managed through the Towards Early Science subproject.

The ASAC recommends that a diversity of science verification projects be observed, specifically taking into account the four proposal science categories. Careful thought should

be given to how the SV data will be publically distributed, in particular what the path will be if the necessary archive functionality is not in place and tested.

We are following this advice. The range of observations planned for Science Verification can be seen in the first list of targets which is available at

http://wikis.alma.cl/twiki/pub/CSV/ScienceVerification/Sci_Ver_List0.pdf

It is anticipated that it will be possible to use the archive for the distribution of SV data but if not, then an ftp site or equivalent will be provided.

Preparations by the DSOs and by the ARCs

The Call for Proposals should clearly state how the technical assessment will be used in the proposal review. The ASAC would appreciate having the opportunity to review this document as well.

Done.

The ASAC agrees that there are significant advantages to an unannounced opening of the User Portal (UP) and offers assistance in early tests of the UP availability and usability.

Done. Thank you for the feedback provided.

The ASAC remains concerned about the availability of the archive for ingesting proposals on June 1 and recognizes that any delay would be very public and prominent. The ASAC therefore recommends that a backup plan be in place for accepting proposals in the case that the full archive is not ready.

A backup plan is in place. Tests of proposal submission to the SCO archive will take place at the end of April.

II.2) Charge 2

The Principles of the ALMA Proposal Review Process is very good but lacks specifics on the handling of duplications, a gap that the implementation plan needs to fill. While some level of judgment clearly will be required on a case-by-case basis for potential duplications, it is important to establish guidelines to aid proposers in determining reasonable requests.

Guidelines will be developed in consultation with the Chairs of the APRC and the ARPs.

Requesting users to submit a Letter of Intent will not be effective.

ASAC's advice is noted. However, after discussions with the Chairs of the APRC and the ARPs the JAO decided to proceed with asking for simple 'Notices of Intent' to provide an indication of the likely spread of proposals across the different science categories and the relative demand for the compact and extended configurations offered. The JAO will provide information on the likely availability of the two configurations on May 15, after analyzing the Notices of Intent.

The implementation plan is also thorough and there were no major concerns. In regard to Appendix B on workload reduction, the consensus (not only in the ASAC) is that there will be substantially more than 320 proposals and the ASAC recommend triage along the lines proposed in Appendix B. The ASAC favors the triage system proposed as "Alternative 3" due to its relative simplicity and transparency.

This will be developed as part of the implementation plan, and following the Board meeting two additional members will be appointed to each ARP for Cycle 0 which will also assist in minimizing the workload.

The ASAC is not in agreement with the suggestion that the committee members be made public at this stage...

ASAC's advice is noted. However, discussions with the Chairs of the APRC and ARPs do not reflect the same level of concern. The JAO will provide a possible approach to the Chairs for consideration, and seek their agreement before proceeding.

II.3) Charge 3

The JAO should maintain a high level of vigilance on antenna delivery.

The JAO will continue to work very closely with the Executives' Project Managers to track antenna delivery schedules.

Insufficient contingency funds may require a prioritization of construction needs.

In the event that contingency funds prove insufficient the JAO will ensure that ASAC has the opportunity to provide advice on the prioritization of capabilities that may impact on science.

The ASAC recommends the definition of an "Observatory Scientist" role in full operations.

The ALMA Director will prepare a proposal regarding an "Observatory Scientist" position for consideration by the Board.

The ASAC would like the opportunity to review the "Development Principles" document when it becomes available, in particular with regard to "guaranteed time".

The Development Principles document is being revised following input from the latest Directors Council meeting, and will be provided to ASAC for information and comment.

The ASAC is concerned that it has not been presented with an updated version of the Operations Plan and Budget, in which there are a number of issues that potentially have a strong scientific impact.

ASAC will be provided with these key documents when they are available.

Informal Charge 1: (Community Expectations)

The ASAC encourages the Project to maintain regular and transparent communication.

The JAO will continue to do its best in this regard.

Informal Charge 2: (Power and Environmental Impact)

- *The ASAC remains committed to the recommendations made in previous reports. In particular:*
- *Negative publicity regarding the carbon footprint of ALMA could adversely affect the public's support.*
- *The investment in a combined-cycle power generator should be made as soon as possible, and every effort should be made to locate funding that could be moved forward in the budget.*
- *A working group should be established to investigate potential energy alternatives.*
- *Additional avenues for the capital investment in low carbon footprint energy generation should be investigated, including partnerships with providers and philanthropic organizations.*

The Board and the JAO agreed to establish a working group to investigate and provide advice on sustainability issues, and the Deputy Director has been charged with implementing this initiative.

There was considerable support from the Executives to develop a plan for the implementation of combined cycle technologies to complement the new multi-fuel generators, and the intention from the JAO is to develop such a plan for consideration as soon as possible.