



# ALMA BOARD

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**Subject:** Science Committee Response to the March 2026  
ASAC Report

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**Status:** Approved by the Board, as certified by the Corporate Secretary.

## **Science Committee (SC) Response to the ASAC March 2026 Report Prepared for the ALMA Board – April 2026**

### **1. Introduction**

The ALMA Science Committee (SC) thanks the ASAC for its comprehensive March 2026 report, for the clarity of the issues raised, and for the constructive dialogue during the ASAC meeting held on 16–18 March 2026. The SC also acknowledges the thoughtful presentation by the ASAC Chair Hideo Sagawa at the April 2nd Science Committee meeting.

This document outlines the Science Committee’s consolidated response to the ASAC recommendations, organised by the major themes and Permanent Charges (PC) in the report.

### **2. Some General Considerations**

The SC is pleased to see the strong start to Cycle 12 and echoes ASAC’s appreciation for the sustained operational improvements across the Observatory. The ASAC’s recognition of the DPR survey and publication analysis as important contributions to transparency and community understanding is well-founded. The SC also concurs with ASAC’s view that such studies meaningfully strengthen the scientific robustness of ALMA operations.

Regarding the Wideband Sensitivity Upgrade (WSU), the SC notes ASAC’s support for the hardware manufacturing proposals (WIFP and DTS) and welcomes the Committee’s intention to play an active role in assessing deployment strategies, especially given the implications for scientific continuity. The SC recognizes, however, that detailed scenario development is still underway and that discussions of deployment options—particularly shutdown-based models—must be grounded in a full cost, schedule, and risk analysis that is not yet available.

### **3. Charge 1 – Assessment of Scientific and Technical Capabilities**

#### **3.1 Cycle 12 performance and operational efficiency**

The SC agrees with ASAC’s positive assessment of Cycle 12’s smooth start and high observing efficiency. Improvements such as the Fast Feedback System and enhanced guidance for time-critical projects are welcomed. The SC supports ASAC’s request for JAO to report on Fast Feedback impact at the next ASAC meeting, but recognizes that it may be too early for a deep assessment. Nevertheless, a preliminary report is appropriate and feasible.

#### **3.2 Completion rates for A-ranked and polarisation projects**

The ASAC notes that only ~6% of A-rank projects remain incomplete after two cycles, while still advocating for a target of 100% completion. The SC appreciates this aspiration but notes, as reflected in meeting discussions, that achieving 100% completion may not always be realistic due to weather, technical issues, or programme-specific complexities. It is appropriate that the Observatory continues to monitor causes of non-completion and mitigate them where feasible, without setting unrealistic expectations.

#### **3.3 Band 2 verification and inclusion in Cycle 13**

The SC strongly supports ASAC’s congratulations to the Observatory for the successful deployment of Band 2 and likewise welcomes its inclusion in the Cycle 13 CfP.

## **4. Charge 2 – Ways to Maximize ALMA’s Scientific Impact**

### **4.1 Distributed Peer Review (DPR) and Stage-2 Participation**

The SC acknowledges ASAC’s repeated recommendation that Stage 2 become mandatory. However, the SC does not support mandating Stage-2 participation at this time, for the following reasons (as extensively discussed in the meeting):

#### **(1) Lack of evidence for substantial impact**

JAO’s analysis shows that only 8% of Stage-2 reviewers modify their comments, and most changes are minor (median modifications of 34 characters). Even in panel-based systems, Stage-2 style interactions reduce ranking dispersion by only ~9%. This marginal improvement does **not** justify the administrative and user burden of mandatory participation.

#### **(2) Difficulty defining meaningful compliance**

As SC members noted, a reviewer could “participate” by simply logging in and clicking a button, without engaging meaningfully. There is no clear, enforceable definition of what constitutes valid Stage-2 activity.

#### **(3) No clear problem statement or success metric**

ASAC's own discussions revealed no consensus within the ASAC on what the specific objective is—e.g., reducing standard deviation, improving review quality, ensuring fairness. Without clarity on the goal, mandating participation is premature.

#### **(4) Risks of unintended consequences**

Mandatory requirements may alienate users, especially during oversubscribed cycles, and create inequities if penalties must be applied for non-compliance.

#### **SC Recommendation:**

Rather than mandating participation, the SC encourages JAO to continue strengthening communication about the value of Stage-2 and emphasise that high-quality reviews require community engagement. The SC also supports exploring low-overhead improvements to reviewer guidance and quality monitoring, and this is already underway.

### **4.2 Reviewer interaction proposals**

The SC does not support the ASAC suggestion to add anonymous “responses to reviewers” within Stage 2. Past attempts in other facilities have shown this yields minimal ranking changes while greatly increasing burden. The Committee agrees that this idea had been previously considered and rejected, and sees no evidence to revisit it.

### **4.3 Publication statistics**

The SC appreciates the comprehensive study presented by Stoehr et al. (PASP) and agrees that ALMA continues to produce world-leading results. We concur that such analyses should continue periodically, though not necessarily at the depth of the recent major publication, which required multiple years of effort. The SC acknowledges limitations on comparability with other facilities and supports cautious, meaningful use of metrics such as ADS citation data.

The SC also encourages exploring additional indicators of scientific breadth and community health—e.g., PhD theses, newcomer participation, and activity levels across regions—while recognising resource limitations.

## 5. Charge 3 – Community Issues from Regional SACs

### 5.1 ESO Guaranteed Time Observations (GTO)

The SC notes that the concerns raised by EASAC primarily stemmed from timing: the relevant policy documents had been released *after* the ASAC meeting. The SC confirms that:

- ESO GTO occupies **only European** share time
- GTO proposals undergo peer review and technical assessment
- Execution may extend over up to five cycles, consistent with ESO policy

The SC therefore sees no major policy issues requiring Board action, but agrees that clarifying the treatment of potential duplications in future user documentation would be beneficial.

## 6. Charge 4 – ALMA Development Program and WSU Implementation

The SC shares ASAC’s enthusiasm for the scientific potential of the WSU and supports the endorsed hardware proposals.

However, the SC has significant reservations about ASAC’s request for JAO to present detailed documentation on FTE requirements, risks, and timelines for all deployment options by the next ASAC meeting. As Sean Dougherty explained during the Science Committee meeting, the deployment landscape is still being explored and several critical analyses—particularly cost modelling, risk evaluation, and operational impacts—are ongoing.

The SC notes:

1. The “shutdown scenario” presented to ASAC was premature and insufficiently contextualised, leading to misunderstanding.
2. A range of intermediate deployment strategies—not simply “parallel” vs. “17-month shutdown”—is now under active study by the WMAC and JAO.
3. Cost-effectiveness analysis must include staff impacts, which are non-trivial and may make a long shutdown *more costly*, not less.
4. A comprehensive assessment will not be mature before the Board’s upcoming cost review cycle.

### SC Recommendation:

The SC supports providing ASAC with updates as scenarios evolve, but believes that requesting fully developed, cost-validated deployment plans by the next meeting is unrealistic. The SC instead recommends staged reporting aligned with the internal WSU governance schedule.

## 7. Charge 5 – Beyond ALMA 2030 / ALMA 2040 Initiatives

The SC supports ASAC’s recommendation for a dedicated “Beyond ALMA 2030” session at the 2027 Taiwan conference and agrees that Board endorsement will enhance visibility and community engagement. The SC looks forward to further regional updates in ASAC’s Fall 2026 report.

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## 8. Summary of Key Science Committee Positions

- **Stage-2 Been Made Mandatory:** Not supported; unclear benefit and impractical implementation.
- **Reviewer Interaction Tools:** Not supported; low impact and high overhead.

- **WSU Deployment Scenarios:** ASAC's desire for detail is understood, but the timing is premature; SC requests staged, realistic reporting.
- **Publication Metrics:** Support continuation with reasonable resource limits.
- **ESO GTO Policy:** Already well-defined; only clarification in documentation required.
- **Operational Improvements:** SC supports ASAC's recognition of progress and JAO's ongoing initiatives.

## **9. Concluding Remarks**

The Science Committee very much values ASAC's dedication and recognises the shared goal of strengthening ALMA's scientific productivity and fairness. The SC will continue to collaborate with ASAC, JAO, and the Board to ensure that ALMA maintains its status as a world-leading observatory while navigating the challenging transition toward the Wideband Sensitivity Upgrade.