



ALMA BOARD

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Subject: Draft Terms of Reference of the ASAC

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Purpose of Document: To provide the ALMA Board with an updated version of the Terms of Reference of the ASAC according to the changes brought by the Trilateral Agreement.

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ALMA SCIENCE ADVISORY COMMITTEE

TERMS OF REFERENCE AND OPERATING ARRANGEMENTS

1. The ALMA Science Advisory Committee

The Parties established the ALMA Science Advisory Committee (ASAC) as set out in Article 10 of the “Agreement Concerning the Operations of the Atacama Large Millimeter/submillimeter Array (ALMA)” also known as the ALMA Trilateral Agreement.

2. ASAC Role and Responsibilities

2.1 ASAC Role

- a) The ALMA Science Advisory Committee (ASAC) advises the ALMA Board on the scientific and technical perspectives of major issues affecting ALMA science capabilities.
- b) The ASAC’s advice will also be used when the ALMA Board needs to make decisions regarding prioritization of tasks and resources. Additionally, the ASAC’s scientific and technical advice will be used by the ALMA Board and the ALMA Director to make decisions regarding the ALMA Development Program.
- c) The ASAC may also provide scientific and technical advice to the ALMA Director upon his/her request.

2.2 ASAC Responsibilities

The ASAC shall discuss and report on permanent and ad hoc charges from the ALMA Board. In addition to responding to its permanent responsibilities and any ad-hoc charges, the ASAC will bring to the ALMA Board’s attention any issues that have the potential to impact the scientific productivity of ALMA.

2.2.1 The permanent charges are:

- a) Assessment of the performance of ALMA scientific capabilities: The ASAC shall indicate what information is required from the Joint ALMA Observatory (JAO) to perform this assessment.

- b) Assessment of the technical aspects of the ALMA system performance: The ASAC shall indicate what information is required from the JAO to perform this assessment.
- c) Assessment of the science outcomes from ALMA: Statistics on publications, citations, press releases, web sites, etc. collected by the Executives shall be collated by the JAO, and analyzed by the ASAC.
- d) Recommendation of ways to maximize ALMA's scientific impact: This includes review of the scientific effectiveness of the Proposal Review Process after each Proposal cycle.
- e) Reporting on operational or scientific issues raised by the wider community as communicated by the three regional Science Advisory Committees (ANASAC, ESAC and EASAC).
- f) Assessment of the scientific impacts of the ALMA Development Program, and particularly of new projects that are proposed.

2.2.2 The ALMA Board may provide the ASAC with ad-hoc charges in addition to its permanent charges as detailed above. Before each ALMA Board face-to-face meeting, the JAO Observatory Scientist together with the Integrated Science Team (IST, composed by the Executive's Program Scientists) shall collect input for the ad-hoc charges. This input shall be reviewed by the Board Science Committee, prior to the ALMA Board meeting, and combined with suggestions from the ALMA Board, if any. The Chair of the Science Committee will submit the ad-hoc charges to the ALMA Board, who shall approve them no later than 2 months after their meeting, either by teleconference or written procedure. Once approved, the ad-hoc charges shall be transmitted to the ASAC.

3. Membership

3.1 Composition and appointments

- a) The ASAC shall consist of up to 12 members to be appointed by the ALMA Board upon nomination of up to eight candidates by each Party. The ASAC shall contain at least two but not more than six members nominated by each Party.
- b) Chile is entitled to appoint one of the ASAC members from the Chilean astronomical community, with concurrence of the ALMA Board.
- c) The ALMA Board decisions regarding appointments of members to the ASAC shall consider the recommendations of the Board Science Committee and the

ALMA Director, ensuring a proper representation of the expertise and experience required to fulfill the ASAC charges.

- d) The Board shall decide the ASAC members' terms, to allow a single appointment process by the end of each calendar year. Each ASAC member shall be normally appointed for a three-year term and may be reappointed for a second full or partial term, following the recommendation of the Board's Science Committee and the ALMA Director.
- e) Appointments to ASAC shall be made in a way that balances the desire for turnover, providing the opportunity for community scientists to engage with ALMA, and continuity of membership and breadth of expertise.
- f) The Executives shall ensure that ASAC members who are nominated by their designating Party are represented in their respective regional SAC.

3.2 Expertise of members

Appointments of members to the ASAC shall be based on scientific and technical expertise and experience of the individuals in astronomy and astronomical instrumentation, maintaining a broad spectrum covering all main areas of ALMA related science and instrumentation. In particular, the expertise of the collective appointees shall cover, but not be limited to, radio astronomy at millimeter and sub-millimeter wavelengths.

3.3 Nomination procedure

- a) The ALMA Board Secretary shall notify the Parties or CONICYT of the expiration of an ASAC member's term at least six months before the end of her/his current term. The ALMA Board Secretary shall also send such notifications to the Board Science Committee and the ALMA Director, accompanied by a summary of the expertise of other members of ASAC maintained by the ALMA Board Secretary.
- b) The Board Science Committee, in consultation with the ALMA Director and JAO Observatory Scientist, shall provide the Board, at least four months before the end of the expiring term, with a recommendation on the areas of expertise or experience that are required to ensure that the ASAC is able to fulfill its charges.
- c) Based on the recommendation from the Board Science Committee, the Parties and CONICYT, if applicable, will propose a pool of up to eight candidates at least two months before the end of the current term.
- d) Nominations shall be accompanied by a brief summary of the candidate(s) scientific and technical expertise and experience.

- e) The Board will appoint the new members, in consultation with the Board's Science Committee and the ALMA Director, any time before the expiration of the current term.
- f) In the event that an ASAC position becomes vacant before the expiration of the term, the ALMA Board Secretary will immediately notify the Parties, or CONICYT, as applicable, accompanied by a summary of the expertise of the departing member. The nomination process to replace the departing member will follow the above provisions.

4. ASAC Chair and Deputy Chairs

4.1 The ASAC Chair shall be elected by the ASAC from among its members, taking into account the advice of the ALMA Director. ASAC members who have previously served as Deputy Chair shall be given priority in the election of a new Chair.

4.2 The ASAC members shall elect up to two Deputy Chair(s) from among the members of the ASAC.

4.3 Elections of the Chair and Deputy Chair(s) shall follow the principle of rotation of the roles among members nominated by the Parties, and shall be subject to the concurrence of the ALMA Board.

4.4 The term of office of the Chair and Deputy Chair(s) shall be two years, with the possibility of reappointment for one further term in accordance with the procedure above.

4.5 In the event that neither the Chair nor the Deputy Chair(s) are able to attend an ASAC meeting, the longest serving member shall open the meeting by immediately inviting the ASAC members to elect an ad-hoc Chair. The ad-hoc Chair shall then preside over the meeting while the Chair and Deputy Chair(s) are absent.

4.6 If the position(s) of the Chair and/or the Deputy Chair(s) become vacant prior to the expiration of his/her term, the ASAC shall elect at its next meeting a new Chair and/or new Deputy Chair(s), according to the preceding provisions.

5. ASAC Interactions

5.1 The JAO Observatory Scientist will be the prime point of contact between the ASAC and the JAO. He/she shall coordinate the interactions of the wider community with the ASAC through the IST.

5.2 The ALMA Board will designate a liaison to the ASAC from the members of the Board Science Committee, who will have the primary interaction with the ASAC on behalf of the ALMA Board.

5.3 The JAO, through the JAO Observatory Scientist, shall keep the ASAC informed of progress and all relevant issues of ALMA operations, and provide the information required for ASAC to fulfill its charges.

5.4 ASAC members, in coordination with the IST, shall endeavor to keep the ALMA community in their respective regions informed of developments in ALMA science, and shall ensure that relevant issues raised through the regional SACs are discussed by ASAC.

5.5 The ASAC members represented in the regional SACs shall keep the ASAC informed about the prospective projects and priorities for the ALMA Development Program.

6. Meetings and Operating Arrangements

6.1 The ASAC will normally meet face-to-face before each face-to-face meeting of the ALMA Board. The JAO Observatory Scientist and the IST shall participate in these meetings, as will other persons whose presence is required, upon invitation of the ASAC Chair.

6.2 Upon the request from any of the ASAC members, the ASAC may hold additional video/teleconferences, as it deems necessary.

6.3 The ASAC Chair in consultation with JAO Observatory Scientist and the ASAC Deputy Chair(s) shall prepare a draft agenda for each meeting. It shall be made available no less than two weeks before each meeting to the ASAC members, who may suggest other items.

6.4 The JAO Observatory Scientist, in consultation with the ASAC Chair, may request the ASAC to meet via teleconference to seek the advice of the ASAC on particular scientific or technical matters.

6.5 The ASAC shall seek to reach conclusions by consensus. Where dissenting opinions apply to written recommendations in ASAC reports, they shall be clearly indicated.

6.6 The presence of two-thirds of the members of the ASAC shall be required to constitute a quorum at any meeting of the ASAC, including at least one ASAC member from each region.

6.7 Each Party shall assume the travel expenses of those ASAC members attending the meetings of the ASAC whom the Party nominated. The JAO and the Executives shall assume the travel expenses of its respective staff attending the meetings of the ASAC. The hosting organization will assume the costs of the respective face-to-face meeting arrangements.

6.8 The ASAC Chair shall provide a report on the recommendations and conclusions from the ASAC to the ALMA Board in person at every face-to-face ALMA Board meeting. The written report to the ALMA Board shall cover all of the ASAC charges and responsibilities.

6.9 The Board Science Committee will preview the ASAC report and draft a written response to each ASAC Report for approval by the ALMA Board. Informal interaction with the ALMA Board Liaison and the Science Committee will facilitate the formal interaction. In addition, the ALMA Director will provide input to the Board Science Committee for preparing the response to the Board on the implications of the ASAC recommendations. The ALMA Board Secretary will transmit the final response, as approved by the Board, to the ASAC Chair.

6.11 Unless matters are explicitly designated to be confidential, the ASAC report and the response to it shall be made available to the ALMA community after the ALMA Board has accepted the report.

7. Transitional and Supplementary Provisions

7.1 From the date these Terms of Reference and Operating Arrangements enter into force they shall take precedence over all prior rules and terms of references approved by the Board concerning the ASAC.

7.2 ASAC members, who were appointed to ASAC before the entry into force of these Terms of Reference, and whose terms are still unexpired, will continue to serve on the ASAC until the end of their term according to the previous ASAC's Terms of Reference.