

第 5 回 ALMA 科学諮問委員会 議事概要

Date and time

EASAC: March 11, 2026, 10:00-12:00 (online),

JSAC: March 11, 2026, 15:30-17:00 (online)

Participants

EASAC members: Yuri Aikawa, Fumi Egusa, Jongsoo Kim, Patrick Koch, Shinya Komugi, Lihwai Lin, Hau-Yu Liu, Aran Lyo, Kazuhito Motogi, Hideo Sagawa, Hidetoshi Sano, Shigehisa Takakuwa, Yoshito Shimajiri, Yoichi Tamura, Sasha Trippe,

Ex officio: George Kosugi, Bunyo Hatsukade, Takuma Izumi, Atsushi Nishimura, Seiichi Sakamoto

EASAC meeting

Introduction and new membership

Two new members officially joined EASAC:

- George Kosugi (NAOJ): New EA ALMA Program Manager
- Hau-Yu Liu (National Sun Yat-sen University): New member from Taiwan

Presentations on the Distributed Peer Review (DPR) system evaluation (Carpenter)

Prior to the regular EASAC discussion, John Carpenter and Andrea Corvillón (JAO) from the Proposal Handling Team gave a presentation on the evaluation of the ALMA proposal review process. They presented comprehensive Distributed Peer Review (DPR) survey results comparing DPR with panel review processes across 5 DPR cycles and 8 panel cycles, addressing community concerns about DPR effectiveness.

There were questions about how rankings are assigned, variance, outlier handling, and Stage 2.

ALMA report (Kosugi/Izumi/Hatsukade)

- Updates on Management
 - EA ALMA Program Manager: George Kosugi
 - NA ALMA Program Manager (acting): Paulina Bocaz
 - NAOJ Chile Director: Munetake Momose
- Cycle 11 operations:
 - Achieved record observing time: 4,496 hours on 12-m array, 4,201 hours on 7-m array, 3,240 hours on TP array
 - 51% of total observatory time used for PI science observations
 - Efficient data acquisition despite the February maintenance shutdown and blackout issues in Chile
 - High-frequency observations (Bands 9 and 10) surpassed previous cycles on both 12-m and 7-m arrays
 - Band 2 commissioning completed: science verification data now available
 - ✧ Band 2 will be available for the 12-m array regular observations from Cycle 13
- Cycle 12 operational status and new capabilities
 - New capabilities in Cycle 12: full polarization in Band 1 on 7-m array (no approved projects), improved active phasing for VLBI, multi-epoch EHT monitoring, Band-to-Band calibration for large programs
 - Data delivery efficiency maintained at >90% from November onward, meeting KPI
 - Auto-delivery is working well for the compact configuration of 12-m and the 7-m arrays
 - Total Power auto-delivery to be deployed in May 2026
 - 54% of total observatory time used for PI on-source time, better than Cycle 11's 51%
 - Fast Feedback Project testing - major workflow modification to calibrate each EB after execution rather than at the MOUS level
 - DDT data now has zero proprietary period (effective October 1, 2025)

EASAC raised a question regarding the possibility of further increasing PI science time.

- Cycle 13 timeline and confirmed capabilities
 - Pre-announcement already made with key dates, new capabilities, large program modes, and configuration schedules

- Band 2 on the 12-m array confirmed as a new capability for Cycle 13
- Web-based OT will be used for proposal preparation from Cycle 13
- ESO GTO up to 24 hours allocated for the Band 2 development team
- Call for Proposals opens March 19, documents ready with minor user policy updates
- No expected impact on Cycle 14 operations based on current WSU schedule estimates

EASAC raised questions regarding the GTO framework, data products with self-calibration, and the rationale for removing DDT proprietary period. There was a discussion about the importance of understanding the ESO GTO and exploring the possibility of implementing it in EA.

- East Asia development program updates

- Data Transmission System (DTS) is in the critical design phase. Phase 2 proposal for full production to be submitted to the Board in April 2026.
- Band 8 version 2 PDR planned for April 2026 at Mitaka. First prototype receiver assembly and testing in preparation
- Total Power GPU Spectrometer (TPGS) passed PDR in January 2026

- EA science activities

- “East Asian ALMA Community Workshop: ALMA2040 Science and Technology Perspectives” scheduled July 15pm-17, 2026, at NAOJ Mitaka
 - ✧ Serves as a kick-off for the EA community to explore long-term perspectives for future mm/submm interferometers
 - ✧ First announcement made on March 5
- EA ALMA Data Analysis Workshop scheduled July 13-15 am (first half of the same week)
- Pan-ALMA science conference "ALMA at 15 years: Science, Synergies, and the Road Ahead" scheduled February 22-26, 2027, in Taipei
 - ✧ Conference will highlight the latest results, discuss future prospects, include WSU updates, and provide archive/CARTA tutorials
 - ✧ First announcement in March, registration opens in May
- Collecting ALMA2040 science white papers from the EA community under discussion

Discussion on ASAC materials

The chair requested input on the ASAC materials for discussion at the ASAC meeting the following week. There was a brief discussion regarding WSU implementation approaches, which will be discussed in detail at the next ASAC meeting in the fall.

JSAC Meeting

ALMA report (domestic) (Kosugi/Izumi/Hatsukade)

- Operational status
 - Cycle 11 sets a record for observation time, and Band 2 integration is complete.
 - Cycle 13 Call for Proposals is scheduled to start on March 19.
 - Cycle 14 science observations will not be affected by the WSU implementation.
- Workshop and user support
 - ALMA/NRO 45m/ASTE Users Meeting was held in December 2025 with more than 140 participants.
 - Cycle 13 Proposal Preparation Meeting to be held on April 2.
 - East Asia Data Analysis Workshop to be held in Mitaka in July (3rd time).
 - User support programs were provided as usual.
 - In 2026, two ALMA Joint Research Program projects were adopted.
 - Three ALMA workshops were selected in FY2025.

JSAC raised questions regarding publication support and the ALMA Workshop Program. JSAC requested a continuation of the publication support and provided comments on the maximum amount and the intended use of the funds.

NRO report (Nishimura)

- 2025 statistics
 - In FY2025, a total of 2,150 hours of observation were accepted.
 - From the 2025C semester, 7BEE and TZ receivers were newly offered, 2 proposals each.
 - Allocated schedules completed smoothly because there was little snow this year.
- Development status
 - Three KAKENHI proposals accepted for FY2026

- Plan for the 2026 season
 - Hiring specially appointed assistant professors from Yamaguchi University and Gifu University through cross-appointment from 2026
 - Pointing catalog will be updated by survey observations of SiO maser objects.
 - Planning to call for crowdfunding projects using NRO45 in late April.
 - Considering starting the Refer-a-Friend program, which will be implemented next season

There was a question-and-answer session on crowdfunding and the Refer-a-Friend program. JSAC asked for consideration of expanding the free tier for students, and Nishimura responded that it would be easier to address JSAC's recommendations.

ASTE report (Sakamoto)

- CSV was conducted on a three-cartridge receiver in FY2025, and observations began in June.
- Two thefts occurred in July
- Observations suspended due to a lightning strike on July 31; restoration work is currently underway.
 - 4 servo amplifiers, 3 motors, and an R/D converter for resolvers failed
 - Servo amplifiers and R/D converter to be sent back to Japan for repair
 - Motor repairs itself with spare parts
 - Generators, switchboards, LANs, receiver controllers, etc., have also been repaired.
- Plan for FY2026
 - Observations will resume as soon as they are restored
 - Call for Proposals for Chilean time will be postponed
 - Stabilize operations, conduct backlog scientific observations and experiments, and provide observation time to support operations.
 - Work to share the power supply with NANTEN2
 - Large-scale Grants-in-Aid for Scientific Research plans to install TIFUUN
 - Considering joint operation with Nobeyama and Mizusawa

A JSAC member suggested installing a low-ion-capacity lightning rod.

ngVLA report (Izumi)

- NAOJ Study Group activity
 - Submitted a research plan proposal to the NAOJ Science Roadmap Committee (2025 Jan)
 - The ngVLA project has been selected as the highest-priority program in the NAOJ Science Roadmap. Start a detailed implementation plan in FY2026.
 - Submitted a proposal (application) to 未来の学術振興構想 (the Science Council of Japan).
 - NRAO circulated a draft document that defines the form of contribution to the ngVLA project, including the kind of budgetary contribution and the corresponding reward. Japanese SAC and Study Group members will carefully assess the content and give feedback to NRAO (and users when appropriate).
- Technical advancement
 - Joint research with Waseda and Nagoya Institute of Technology on the development of a time- and frequency-based signal distribution system
 - FY2025 charged study on the ultra-low-cost antenna to MELCO is mostly over.
 - ✧ Prototyping an antenna panel with the structure designs already in hand, designing a new panel, and evaluating
 - Plans to outsource receiver development to universities, in discussions with Osaka Metropolitan University
- Scientific advancement
 - ngVLA-Japan Joint Science Working Group meeting held in Mitaka, 2026, March 16-18.
 - International ngVLA general conference to be held in Sendai, Nov 10-13, 2026

Discussions

The Chair explained that the JSAC Report must be finalized by August. Committee members were asked to review the agenda. He proposes holding a JSAC meeting in June and holding a joint meeting with VLBI SAC.

Finally, the Chair reported that the recommendation was submitted to the Director General regarding the successive retirements of NAOJ Advanced Technology Center staff, taking into account their impacts on the field of radio astronomy in Japan as a whole and on the implementation plan for ALMA WSU.