

第4回 ALMA 科学諮問委員会 議事概要

Date and time: October 16, 2025, 11:30 - 14:00

Participants:

- EASAC: Aran Lyo, Jongsoo Kim, Cheng-Yu Kuo, Lihwai Lin, Shigehisa Takakuwa, Shinya Komugi, Takuya Hashimoto, Yoichi Tamura, Hideo Sagawa, Fumi Egusa, Hanae Inami, Hidetoshi Sano, Kazuhito Motogi, Patrick Koch, Yoshito Shimajiri, Yuri Aikawa, Sasha Trippe, Aran Lyo, Patrick Koch, Toshikazu Onishi.
- Ex officio: Takuma Izumi, Misato Fukagawa, Bunyo Hatsukade, Atsushi Nishimura, George Kosugi, Seiichi Sakamoto

Agenda:

- EASAC: 11:30–12:40 (JST)
 - ALMA report (Fukagawa, Izumi, & Hatsukade)
 - Discussion
- JSAC: 12:40–14:00 (JST)
 - Domestic ALMA report (Fukagawa)
 - NRO report (Nishimura)
 - ASTE report (Sakamoto)
 - ngVLA report (Izumi)
 - Discussion

EASAC meeting:

1. ALMA report (Fukagawa, Izumi, & Hatsukade)
 - Cycle 11 finished, Cycle 12 started
 - Cycle 11
 - ❖ The best start in ALMA's history
 - ❖ Late-period slowdown due to unusually severe weather in the Chilean winter
 - ❖ Significant execution of high-frequency observations (Bands 9 and 10)
 - ❖ Smooth data delivery
 - ❖ Reasonably balanced regional executive fraction

- ❖ Observatory Project (An ALMA Band 1 Survey of the Hubble Deep Field South)
- Cycle 12 proposal statistics (oversubscription rate of 7.0)
- Wide Sensitivity Upgrade (WSU)
 - Parallel deployment with ongoing PI observations (current plan)
 - WSU System Preliminary Design Review held in July 2025
 - Hardware upgrade led by EA: Data Transmission System (DTS), Band 8v2, Total Power GPU Spectrometer (TPGS)
- Workshops
 - EA ALMA Science & Data Analysis Workshops (22-26 September 2025 in Kagoshima)
 - EA ALMA Development Workshop in 2026 (planned)
 - Pan-ALMA Science Conference in Taiwan in 2027 (planned)

2. Discussion

- Workshop style: EA ALMA Science Workshop in 2025 was held in person only. Hybrid may be helpful to maximize the number of participants.
- Observatory Project: The data release date should be announced well in advance of the release. It is important to avoid a time zone disadvantage for EA. Observatory Projects are intended to fill complete gaps and are given much lower than grade-C PI projects.
- WSU timeline: WSU is still in the planning stage, and the baseline schedule is being discussed.
- WSU parallel deployment: ASAC should monitor the impact on PI observations if there is still a possibility of a shutdown.
- Cycle12 proposal statistics: EA has done very well.
- Data Analysis Workshop: It was nice to see five young Indian researchers participate.
- Multiple accepted programs without execution across multiple cycles: There are multiple accepted programs without execution across multiple cycles, even in Grade A (especially polarization). EASAC proposed increasing the priority of executing such projects. The observatory is already advising the PI to relax the observation conditions to maximize the chance of execution. In addition, the CASA pipeline was improved for polarization. The observatory carefully

monitors the completion of Grade A programs.

JSAC meeting:

1. Domestic ALMA report (Fukagawa)
 - Great science: Seiichiro Naito started to work on the ALMA EPO press release
 - Users Meeting (with NRO 45m and ASTE) on December 15-17, 2025, at Mitaka Campus
 - NAOJ ALMA provides publication support
2. NRO report (Nishimura)
 - Programs in 2025B: 1006 hours of paid observation requests, including VLBI, and 98 hours of (non-paid) student proposals were accepted in 2025B.
 - Call for Proposals in 2025C: HINOTORI-TZ receiver and 7BEE receiver will be open.
 - Plan for 2026: Promoting sales to foreign countries, supporting NRO users in conducting crowdfunding, Refer-a-Friend program (draft)
3. ngVLA report (Izumi)
 - NAOJ Study Group activity
 - Science Advisory Council (SAC) face-to-face meeting (April 29, 2025)
 - Secured NAOJ leadership budget
 - Completion of the first prototype antenna construction at the VLA site
 - NRAO's draft defining partner's contribution
 - Technology advancement
 - Time/Frequency reference distribution system (test plan at NRO or NRAO)
 - Ultra low-cost antenna (prototyping and designing by MELCO)
 - Receiver (considering the involvement of university groups)
 - Scientific advancement
 - Domestic workshop in March 2026 (March 16-18, NAOJ)
 - Next international workshop at Sendai in Fall 2026 (planned)

4. ASTE report (Sakamoto)

- Three-year A project extension (until March 2028)
- New KAKENHI project for the focal plane correction for the thermal deformation of the main reflector was approved.
- New project manager (Seiichi Sakamoto; until September 2026)
- Backlogs of the FY2020 open-use program and the KAKENHI-funded projects were partially done.
- Two telescope site intrusions (July 13 and July 22)
- Snow and site blackout; associated telescope failures (July 31-)
- Antenna site shutdown (2025 Oct)

5. Discussion

- Future NAOJ's contribution to JCMT: Discussion with VLBI SAC
- NRO student proposals: Possibility of increasing the current 100-hour cap.