

第 5 回 ALMA 科学諮問委員会 議事概要

Date and time: March 1, 2024, 10:00 - 13:00 (online)

Attendees:

JSAC: Yuri Aikawa, Kotaro Kohno, Munetake Momose, Hideo Sagawa, Nami Sakai, Yoshito Shimajiri, Kengo Tachihara, Shigehisa Takakuwa, Yoichi Tamura

EASAC: Aeree Chung, Jongsoo Kim, Patrick Koch, Li-Hwai Lin, Wei-Hao Wang,

Ex officio: Saku Tsuneta, Satoru Iguchi, Misato Fukagawa, Bunyo Hatsukade, Ken Tatematsu, Takuma Izumi

Agenda:

JSAC: 10:00 - 11:00

1. Report from the Director General of NAOJ
2. NRO report
3. ngVLA report
4. ALMA report

EASAC: 11:00-13:00

1. ALMA report
2. Discussion

JSAC meeting

1. Report from the Director General of NAOJ

Saku Tsuneta, the Director General of NAOJ, explained the progress of the TMT project and the budget status of NAOJ.

2. NRO report

Ken Tatematsu explained the publication status related to the Nobeyama 45 m telescope.

- 35 refereed publications in 2023. Constant for the last few years.
- High citation rates for legacy programs.
- Refereed publications by staff are almost constant despite reduced staff.

JSAC members asked about the method of surveying the number of papers and suggested that it would be good to ask users to cooperate.

3. ngVLA report

Takuma Izumi provided the status of the ngVLA Study Group.

- Study Group activities:
 - A one-year extension was approved in NAOJ, extending the term to the end of FY2024. Charges from NAOJ should be resolved by the end of this term.
 - ◇ Science Working Groups are making a white book as one of the charges.
 - Satoru Iguchi joined the Study Group.
 - A strategy to achieve external budgets is being discussed.
 - The liaison meeting with SKA-1 is continuing.
 - Study Group members restarted to frequently communicate with members in ATC/NAOJ to discuss the strategy and synergy plans regarding ngVLA.
 - Conceptual Design Review of Time/Frequency transfer system is planned to take place in April 2024. Relevant documents for the review were delivered to NRAO.
- ngVLA Science Advisory Council was held on March 5th.
- ngVLA-related conferences in FY2024:
 - IAU (South Africa) in August
 - International Science Conference (Mexico) in November
 - Joint workshop with SKA-1 about low-frequency technology

There was a question and answer about the activities of the Science Working Groups.

4. ALMA report

Misato Fukagawa provided the updates from ALMA, mainly on domestic matters.

- Updates on the management in the Joint ALMA Observatory
 - Two ALMA Deputy Directors: Norikazu Mizuno as Deputy Director of Operations, and Alvaro Gonzalez as Deputy Director of Development (from January 2024)
- Updates on the management in NAOJ ALMA
 - Two leads, Satoru Iguchi and Misato Fukagawa, were appointed Director and Project Manager, respectively.
 - Shun Ishii will be the Development Manager (effective on April 1).
 - Takuma Izumi will be the ARC Manager (effective on TBD).
- Publication status
 - The number of ALMA papers is reaching a plateau. ARC will continue to provide user support to improve the situation.
 - Many requests (about 40) for publication support were received this fiscal year.

There were questions and answers regarding user support.

JSAC members commented that universities cannot afford the cost of publishing papers without external funding, and the importance of supporting paper publication was recognized. JSAC members also pointed out the importance of an advanced course in data analysis tutorials, which provide opportunities for students and others outside the field to gain a better understanding of interferometry.

EASAC meeting

1. Misato Fukagawa provided the status of ALMA.
 - Updates on the management in the Joint ALMA Observatory and in NAOJ ALMA.
 - Status of the Wideband Sensitivity Upgrade (WSU)
 - The plan and schedule are being extensively discussed.
 - Re-prioritization of operational activities, including new observing capabilities, is required except for prior development commitments such as Band 1.
 - The WSU is being implemented to sustain scientific operations, but impacts on observation and operations can be expected.
 - ALMA will let the community know once the impact on science observations is known.
 - WSU preparations in East Asia
 - Band 8v2:
 - ✧ Project Proposal was approved by the ALMA Board in November 2023.
 - ✧ Developments of components and subsystems are moving forward.
 - Data Transmission System (DST):
 - ✧ Successful demonstration of performance in 80-km optical fiber link between Koganei and Otemachi in collaboration with NICT.
 - Total Power GPU Spectrometer (TPGS):
 - ✧ Study of a new spectrometer for the TP Array in the WSU era has begun.
 - Cycle 10 status
 - Very high observing efficiency in December 2023 and January 2024.
 - PI science observations started after the February maintenance.
 - Delay of antenna relocations between C-8 and C-7 in late October. Antenna moves started in early November and are now back to the original configuration schedule.
 - Encouraging the community
 - Observatory recognizes the negative side of the high oversubscription for proposals.
 - More than one-third of ALMA papers used archival (non-PI) data.

- Band 1 capabilities will be added.
- EA will organize the EA-wide Science and Data Analysis workshops in July 2024.

There were questions and answers regarding the publication status, and EASAC members suggested checking the authorship in terms of diversity. EASAC members also asked about WSU plans and EA tasks.

2. Discussion

EASAC discussed the balance between Large Programs and regular proposals, the high oversubscription rate, the regional balance of Large Programs, and the proposal review process. EASAC commented that short/small proposals are also important in addition to the Large Programs and that diversity of research fields should be ensured. EASAC pointed out that it is good to know statistics, such as the observing time of Large Programs allocated to each region as PIs or co-PIs. Regarding the proposal review process, EASAC noted that it is important to encourage the Observatory to continue improving the algorithm used in the reviewer-proposal matching for the distributed peer review process and to discuss the effective way to minimize the number of low-quality review comments that misinterpret the content of proposals. It was also suggested that it would be good to allow the review panel of the Large Programs to look at the organization of the proposing team in a non-anonymous form.