

第 6 回 ALMA 科学諮問委員会 議事概要

Date and time: July 1, 2024, 13:00 - 15:30

Attendees:

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

Ex officio: Satoru Iguchi, Misato Fukagawa, Bunyo Hatsukade, Ken Tatematsu, Atsushi Nishimura, Takuma Izumi

Agenda:

- NRO report
- ALMA report
- ngVLA report
- Discussion
 - Sharing of discussions at ASAC in March
 - JSAC charge for this term

NRO report

Atsushi Nishimura provided the NRO report.

- NRO offers charged 45-m telescope time with three submission deadlines:
 - A) hands-on tutorials or development programs (deadline June 1st)
 - B) science observations - General, EAVN, or student programs (deadline August 1st)
 - C) science observations later than February - General, EAVN programs (deadline December 1st)
1. 2024A request statistics
 - For A programs, NRO accepted 168 hours for 6 submitted proposals.
 - For the hands-on tutorials, NRO started three types of programs.
 2. 2024B schedule
 - Call for proposals for science observations during winter time opened on July 2nd.
 - Full capability of NRO45m will be provided for 2024B.

3. Proposal for securing CSV manpower

- NRO calls for collaboration observers who conduct facility receivers CSV for 24 nights (18:00 – 2:00) in Sep-Oct.
- Collaboration observers will get 4 hours of telescope time for their study per night (allocation will be a second priority).
- Training for students will be provided (lectures or documentation would be helpful for students to understand the observations).

JSAC supports the implementation of the proposed plan.

ALMA report

Misato Fukagawa and Bunyo Hatsukade provided the ALMA report.

1. Wideband Sensitivity Upgrade (WSU)

- All the ALMA systems, except for antennas, will be significantly upgraded.
- A factor of 2-4 increase in the IF bandwidth.
- The last statement was released in November 2023 (more announcements for the community and the general public would be important).
- EA's hardware includes Band8v2, Data Transmission System, and TPGS (Total Power GPU Spectrometer).

2. Operations

- Cycle10 PI Science observations continue without serious issues.
- Cycle11 Call for Proposals had a server access issue just before the deadline.
- Publication Support for FY2024
https://www2.nao.ac.jp/~eaarc/DATARED/support_publication_en.html

3. Cycle11 proposal submission statistics

- 1712 proposals were submitted, including 87 ACA standalone proposals, 69 joint proposals, and 42 Large Programs.
- Average oversubscription rate is 7.4 (EA is 6.9).

ngVLA report

Takuma Izumi provided the ngVLA report.

- NAOJ Leadership Budget FY2024 will be used to support technical advancement and scientific activities.

- NAOJ Study Group reported the progress in the SAC meeting (March 5th) and the ASJ meeting (2024 Spring).
- Time/Frequency transfer system (ATC) has passed the Conceptual Design Review (CoDR) of NRAO and proceed to the NSF's CoDR in September 2024.
- A workshop on the “future of the radio astronomical technology” is being considered by ALMA staff. ngVLA will also join this opportunity to discuss low-frequency technologies and their applications.
- ngVLA Science Working Groups (SWGs) are organizing domestic workshops to collect/update scientific demands from the Japanese community and preparing a white book during FY2024.

Hideo Sagawa explained the ASTE report on behalf of Tetsuhiro Minamidani (absent).

Discussion

Hideo Sagawa shared ASAC report in March

- ASAC is happy to see successful Cycle 10 operation and the start of Band 1 observations.
- ASAC recommends that science verification data must become available to all users at the same time to maximize scientific output through fair competition.
- ASAC encourages ALMA to be open and provide updates to the community on the schedule and progress of WSU (e.g., website, emails, etc.).
- ASAC points out a growing concern that the high oversubscription rates of ALMA proposals may discourage new users.
- ASAC is concerned with the increasing publication fees, which could affect the publication of ALMA results.

Hideo Sagawa explained the JSAC charge for this term.

- There are 4 long-term charges (L1-4) and 7 Ad hoc charges (A1-7).
- JSAC report will be submitted to the NAOJ Director General.

JSAC members discussed the charges.

- L1: The rising cost of paper submission and publication fees is a major concern, especially for young researchers. Some JSAC members shared examples of how they have addressed this issue (e.g., asking for a publication fee discount from the publisher when a manuscript is submitted, or selecting new journals without a publication fee, such as The Open Journal of Astrophysics).
- L3: Support for archival data users will be important in the coming years (i.e., the

WSU phase). Comparing EA ARC support with other ARCs' support would be tricky because user support should be optimized for individual communities.

- A2/3/6: JSAC needs to discuss these charges more.

Bunyo Hatsukade reported ALMA papers and proposal statistics.

- JSAC requested statistics for researchers whose affiliation is a Japanese institute or university.

Ken Tatematsu reported Japanese NRO papers.

- The number of papers and citations peaked in 2019 when special issues were published.

Misato Fukagawa commented on the material on the fraction of Large Programs in each region was shared.