

## 第 6 回 ALMA 科学諮問委員会 議事概要

Date and time: June 20, 2022 9:00 - 12:00

Attendees:

**JSAC:** Akio Inoue, Kotaro Kohno, Munetake Momose, Kazuhito Motogi, Tomoharu Oka, Toshikazu Onishi, Hideo Sagawa, Nami Sakai, Hiroko Shinnaga, John Silverman, Kengo Tachihara

**Ex officio:** Saku Tsuneta, Misato Fukagawa, Alvaro Gonzalez, Daisuke Iono, Takeshi Kamazaki, Ken Tatematsu,

Agenda:

1. Report from the NAOJ Director General
2. ALMA report
3. NRO report
4. ASTE report
5. ngVLA report
6. Future of mm/submm time allocation committee
7. JSAC report
8. From the Project Manager

1. Report from the NAOJ Director General

The NAOJ Director General Saku Tsuneta explained the recent budgetary situation in NAOJ.

2. ALMA Report

- Alvaro Gonzalez provided the ALMA report. ALMA is back to quasi regular operation, with staff back at the Santiago offices (with telework arrangements) and with quasi-full-scope staff/contractor activities at the observatory. Entry requirements into Chile are now relaxed.
  - Cycle 8 2021 news:
    - Typically, ~45 antennas are available in the 12m array.
    - There were some slow down due to weather downtime. Currently, about 400h behind schedule.
    - Data reduction is very smooth; 90% of data delivered to users within 30 days.
  - Cycle 9 news:
    - A total of 1769 proposals were submitted, surpassing the number submitted for cycle 8, and a record amount of time on all three arrays.
    - 40 large programs were submitted.
    - The overall oversubscription rate is 6.5.
    - Some members of the JSAC raised the concern regarding the algorithm to assign proposals during the DPR process, and whether the proposals are properly sent to the researchers with right expertise and free of conflicts.
  - Future development:
    - Band 1: AIV is proceeding smoothly, and CSV will start soon. Production in Taiwan is approaching completion. 3D printed horns fabricated at NAOJ being integrated in final Band 1 receivers.
    - Band 2: CDR was held on April 25-28. No major issues with optics design by NAOJ.
    - Total Power Spectrometer: CSV phase 1 completed in April, 2022. CSV phase 2 on-going in June, 2022. Acceptance scheduled in early September, 2022
    - A detailed communication to the community regarding the capability improvements and science cases of the ALMA 2030 Wideband Sensitivity Upgrade (WSU) is being planned in FY2022.
  - Publication rate
    - Total publication is 2818 (as of June 17, 2022)
    - 423 (15%) from Japan and 540 (19.2%) from EA
  - A new computing manager and a new EPO Officer were appointed. Press releases have resumed.
  - Call for ALMA workshop 2022a is out. The deadline is June 30, 2022.
- Joint proposals with JWST are being planned

Misato Fukagawa presented an EA ARC update. Cycle 9 proposal preparation meeting was held on March 29-30, hosted by the EA ARC. Some changes are expected in the publication support for FY2022. Two data reduction tutorials are planned in FY2022; one in July 5-7 for beginners, and an advanced course later in FY2022.

Daisuke Iono provided a presentation on the science case for the wideband sensitivity upgrade of ALMA.

### 3. Nobeyama Report

Ken Tatematsu provided an update on the Nobeyama 45m operation. The NRO offered 1400 hours for the open call. Out of 26 submitted (10 from international community) regular proposals, 10 were accepted (3 from international community), and one GTO proposal was accepted, offering 1032 hours of observing time in total. The number of proposals over the past three years (2019-2021) have been almost constant, but the number of foreign proposals have increased. The percentage of successful observation is 67.6%. For the CSV/tutorial time, 7 proposals were submitted, and all were accepted. The deadline for general observations is Aug 1 and student proposals will be evaluated by the JSAC. A total of 35 refereed journal papers were published on the basis of observations with the Nobeyama 45 m telescope in the fiscal year 2021.

### 4. ASTE Report

Takeshi Kamazaki gave an update on the ASTE operations. ASTE operation is still suspended. The open-use program for 2022 is canceled and the information is communicated to the users. As for the plan for 2022, the project is now discussing the details of the recovery work of the sub-reflector work. If the problem is resolved, ASTE will start test observations to confirm the sub-reflector operation followed by CSV for new Band 8 receiver and new spectrometer (XFFTS) together with new IF downconverter (IFDC).

### 5. ngVLA Report

Daisuke Iono gave a report on the ngVLA study group. Science and technical highlights for the FY2021 were presented. This includes the publication of the ngVLA project book, presentations at the ASJ, synergy workshop with the SKA1 study group, and public outreach activities. On the technical side, a technical workshop was held in July, 2021, and good progress was obtained on antenna studies, 3D printing, waveguide components, and photonic technologies. The study group plans to continue the initial studies, science activities, and contribution to NRAO-led activities in FY2022.

### 6. Future of mm/submm time allocation committee

Ken Tatematsu gave a presentation on the future of mm/submm TAC. NRO finished its open use program, and thus science assessment is no longer necessary. In addition, ASTE cancelled open-use program in FY2022, and it is difficult to foresee a call for proposals in near future. Therefore, the proposal is to discontinue the NAOJ Millimeter and Submillimeter Time Allocation Committee beyond August 31, 2022. If necessary, ASTE will organize a specific TAC in the future. JSAC approves the proposal.

### 7. JSAC report

Kotaro Kohno presented the contents of the draft JSAC report.

### 8. From the Project Manager

Alvaro Gonzalez gave a final speech to express appreciation for the committee's contribution over the past two years, especially to the departing members.