# 第4回 ALMA 科学諮問委員会 議事概要

Date and time : September 30, 2021 9:30 - 12:30 This meeting will be held online.

#### Attendees:

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

EASAC: Aeree Chung, Jongsoo Kim, Cheng-Yu Kuo, Patrick Koch, Li-Hwai Lin, Aran Ryo, Sasha Trippe, Wei-Hao Wang

Ex officio: Misato Fukagawa, Alvaro Gonzalez, Daisuke Iono, Takeshi Kamazaki, Masao Saito, Ken Tatematsu, John Carpenter (jmc), Andrea Corvillon

#### Agenda:

EASAC agenda (9:30-11:00)

- 1. Cycle 8 report (Carpenter, Corvillón)
- 2. ALMA/EAARC report (Gonzalez, Fukagawa, Iono)
- 3. ASAC charges
- 4. EA-ALMA Science Workshop 2022 (Iono)
- 5. EA-ALMA Development Workshop 2021 (Iono)

#### JSAC agenda (11:00-12:30)

- 1. ALMA/EAARC report (Japan specific items, if any) (Gonzalez, Fukagawa, Iono)
- 2. NRO report (Tatematsu)
- 3. ASTE report (Kamazaki)
- 4. ngVLA report (Iono)
- 5. ALMA-Subaru Joint proposals (Iono)
- 6. AOB

### **EASAC meeting:**

- 1. John carpenter presented the statistics of the cycle 8 outcome. This was an extremely competitive cycle with the number of accepted proposals down by a factor of two compared to cycle 4 due to the higher average number of requested hours. There were some issues with conflict of interest in the panel. Survey regarding the distributed proposal review (DPR) process returned with both negative and positive opinions. Despite the implementation of DPR and double anonymous review, the systematics pertaining to EA rankings still exist. The analysis and systematics will be made public when they are fully ready.
- 2. A. Gonzalez gave an update on ALMA operations and Future Development. The observatory was shut down in March, 2020 and reopened a year later in March 2021. After a one-year delay, the observatory is now back in operation and aiming for the smooth start of Cycle 8 with the planned configuration on October 1. The ALMA project has been communicating with the community using various channels (website, community gatherings, monthly updates, email distribution list, newsletter). Cycle 8 call for proposals received highest request in observing time since early science. The overall oversubscription was 7.0 worldwide, 5.9 in EA, with six new Large Programs. The deadline for the supplemental call for ACA standalone is October 6<sup>th</sup>. The total number of publications is 2,470 (as of 2021 Sept 29th), where ~26% of the ALMA papers use the ALMA archive. Development program in EA is moving forward:

Band 1: Integration restarted in May 2021 and successfully achieved first light/fringes in August

Band 2: NAOJ will contribute the production and testing of receiver optics (horn, transition and OMT) to be delivered to ESO. Eight full assemblies during pre-production, four optics assemblies have been already shipped to ESO.

ACA spectrometer: Currently in the integration and commissioning phase. PI science is planned from Cycle 10 which would start in Oct 2023.

The team in OPU and NAOJ has successfully demonstrated simultaneous observation in CO lines of J=2-1 and J=3-2 transitions toward Orion KL using a newly developed wideband receiver system installed on the Osaka 1.85 mm-submm telescope.

- 4. The EASAC discussed the ASAC charges. ASAC will only discuss permanent charges this time.
- 5. D. Iono explained the plans for the EA ALMA Science Workshop. The proposal is to hold a virtual workshop in Feb-March of 2022 (for 3-5 days). There are several options for the program, including a general meeting that covers all ALMA fields, focused meeting of one or two fields, or a combination of both.
- 6. D. Iono explained the plans for the EA ALMA Development Workshop. The proposal is to hold a virtual workshop in Feb-March of 2022 (for two half days). The topic this year will be the ALMA archive.

## **JSAC Meeting:**

- 1. A Gonzalez presented Japan specific publication statistics, and an update on the NAOJ ALMA project.
- 2. M. Fukagawa presented updates of the EAARC. EAARC provided the mock-proposal opportunity before the proposal deadline (end of March), and received 11 proposals. English editing service was also provided, with a deadline one week before the proposal deadline. EAARC now offers a revised publication support and added English editing support. Users can also request financial support for creating PR images.
- 3. D. Iono presented the proposed agenda for the ALMA/45m/ASTE users' meeting 2021
- 4. D. Iono presented the final report of the Radio/Interferometer Summer School.
- 5. K. Tatematsu presented the Nobeyama 45m report. 1400 hours is provided for open-use time including GTO and supplemental time. All observations are basically carried out through remote observation from Mitaka, ASIAA/Taiwan, KASI/Korea and universities /institutes in Japan. This call is the last one for free-of-charge open-use observing proposals. In JFY2022, the telescope time charging will be introduced. A total of 26 proposals (10 international) submitted to Regular, and one to GTO.
- 6. K. Tatematsu presented the Charge for the 45m telescope time from June, 2022. The proposal is slightly modified from the one previously presented to JSAC. NRO will have a new project associate professor from Oct 1st, but shortage on manpower is still serous. JSAC and NRO discussed the possibility of including Ph.D. students for the eligibility of the free-of-charge time.
- 7. T. Kamazaki presented the ASTE report. The open-use program in FY2021 was cancelled, and the ASTE site was closed on August 8th. Site will be reopened in late October for the recovery of the sub-reflector. All open use program in FY2021 is cancelled. Carry over will be determined/informed on a later date. ASTE has released the ASTE band 10 demo science data of OMC-1 in August. System upgrade of XFFTS+IFDC and Band 8 with IF=4-18GHz are ongoing. The plan is to install XFFTS and IFDC in November, and upgraded Band 8 will be installed in December. However, this will depend on the COVID-19 situation.
- 8. D. Iono presented the updates of the ngVLA study group. Various activities related the MP2023 are ongoing. The project book is in the final stages of editing, and it will be published very soon. A successful technical workshop (ngVLA-J Development Days 2021) was held on July 15-16, 2021. An SKA-ngVLA synergy workshop ("Linking the science of large interferometers in the 2030s") will be held on Nov 30-Dec 1, 2021.
- 9. D. Iono initiated the new discussion related to ALMA joint proposals. Joint proposals were considered and discussed at EASAC/ASAC several times over the past years. EU is considering the joint proposals with VLT, and NA is considering JWST/VLA. The JSAC discussed if the framework of an ALMA-Subaru joint proposal be scientifically appealing, especially to the Japanese community. JSAC is interested in a joint proposal framework between ALMA and Subaru overall, but details will need to be discussed further.