ANASAC Face to Face Meeting

September 16-17, 2013 - Charlottesville

NAASC / NA ALMA Operations Status

P. R. Jewell, NA ALMA Project Director

Atacama Large Millimeter/submillimeter Array
Karl G. Jansky Very Large Array
Robert C. Byrd Green Bank Telescope
Very Long Baseline Array

Outline

- Committee Charges
  - ANASAC Standing Charges
  - ASAC
- NAASC Science Operations Status & Highlights
- Other NA ALMA Operations Activities & Highlights
- Looking Ahead – Future Initiatives

Charges

ANASAC Standing Charges

1. To assist ASAC in presenting a North American view with respect to ASAC

2. To lead community outreach through leadership of workshops.

3. To provide a mechanism for widening ALMA's base within the community and feedback to the NAASC on community perception of ALMA.

ASAC Charges

1. Pursuant to standing charge 1, ASAC should continue to **assess the scientific outcomes and impact from Cycle 0.** This should include some preliminary quantitative assessments, such as numbers of papers published and quantitative impact metrics, along with a qualitative assessment. Coordinate with the JAO and the regional ARCs, who would collect the necessary information.

2. [Original Charge:] Pursuant to standing Charge 2, ASAC should **assess the status of Cycle 1 observations and progress made towards the Cycle 2 call for proposals.** For Cycle 1, are the data meeting user expectations, modulo the best efforts approach to early science? Are the data being released to the PIs in a timely fashion? For Cycle 2 preparations, is the OT keeping up with the capabilities of the array likely to be listed in the call? Does the support from the ARCs continue to meet users' needs? [NB. The ALMA Board Science Subcommittee is currently revising the Charge to better reflect the current situation, given that very few Cycle 1 programs have been completed. The change under consideration is that ASAC should comment on the timeline in addition to the other aspects of Cycle 1 and 2. This revision is expected early this week.]

ASAC Charges – cont'd

3. With Cycle 0 and Cycle 1 proposal evaluation cycles completed, it is now of high importance to have a clear policy in place regarding the definition of duplicate observations for Cycle 2. The ASAC should work with the JAO and other interested parties to **define what constitutes a "duplicate" observation**.
4. The regional project scientists and the JAO will provide ASAC with materials, such as summaries, status updates, and other information of the completed and ongoing **Development studies**. ASAC should **assess the scientific merit of these studies** (e.g. discuss the uniqueness for ALMA, the advantages and drawbacks of each capability, etc.), which will serve as a basis for further dialogue of the ALMA Development Plan.
5. As of December 2012, data from Cycle 0 are entering the archive for community use. ASAC should **comment on the utility of the archive and also the usefulness of current user software, such as CASA**. How easy is it to access and use data from the archive? Are there critical functionalities missing from CASA? ASAC should also comment on data management plans for large data sets.
6. Now that Early Science observations have been underway for well over a year, it is important to have a systematic assessment of the reproducibility of the array. The ASAC should **comment on a plan from the JAO to test the reproducibility** through repeated observations of well characterized targets with a range of relevant properties.

ALMA Highlights - Overview

- Strike recovery in progress
  - Strike settled on Sept 7; all staff back at work on Sept. 9;
  - site ops returning to normal Sys integration tests have resumed; PI obs by first of Oct.
- ALMA Cycle 0 & Science Verification publications steadily increasing
  - 68 publications to date, roughly equally distributed by region
- Recent ALMA Press Releases
  - "ALMA Opens Another Window on the Universe with Band 8 Receivers" – Sekimoto ea. (Sep 2)
  - "ALMA Observations Give New Insights into Protostars" Arce ea. (Aug 20)
  - "Astronomers ID Suspect Behind Dearth of High-Mass Galaxies" – Bolatto ea. (July 24)
  - "ALMA Detects the Chilly Beginnings of a Young Solar System" – Qi / Oberg ea. (Jul 18)
  - "Dust Trap around Distant Star may Solve Planet Formation Mystery" – der Marel ea. (Jun 6)
- Data Reduction Pipeline in commissioning
  - Will use in parallel with manual reduction for C1
- First Cycle 1 data shipped to PIs
  - 4 data sets to PIs, (3 NA)
- Cycle 2 Preparations well underway
  - Preannouncement of call imminent
- New Development Study and Project Proposals Received
  - 9 Study, 8 Project proposals received at calls this summer

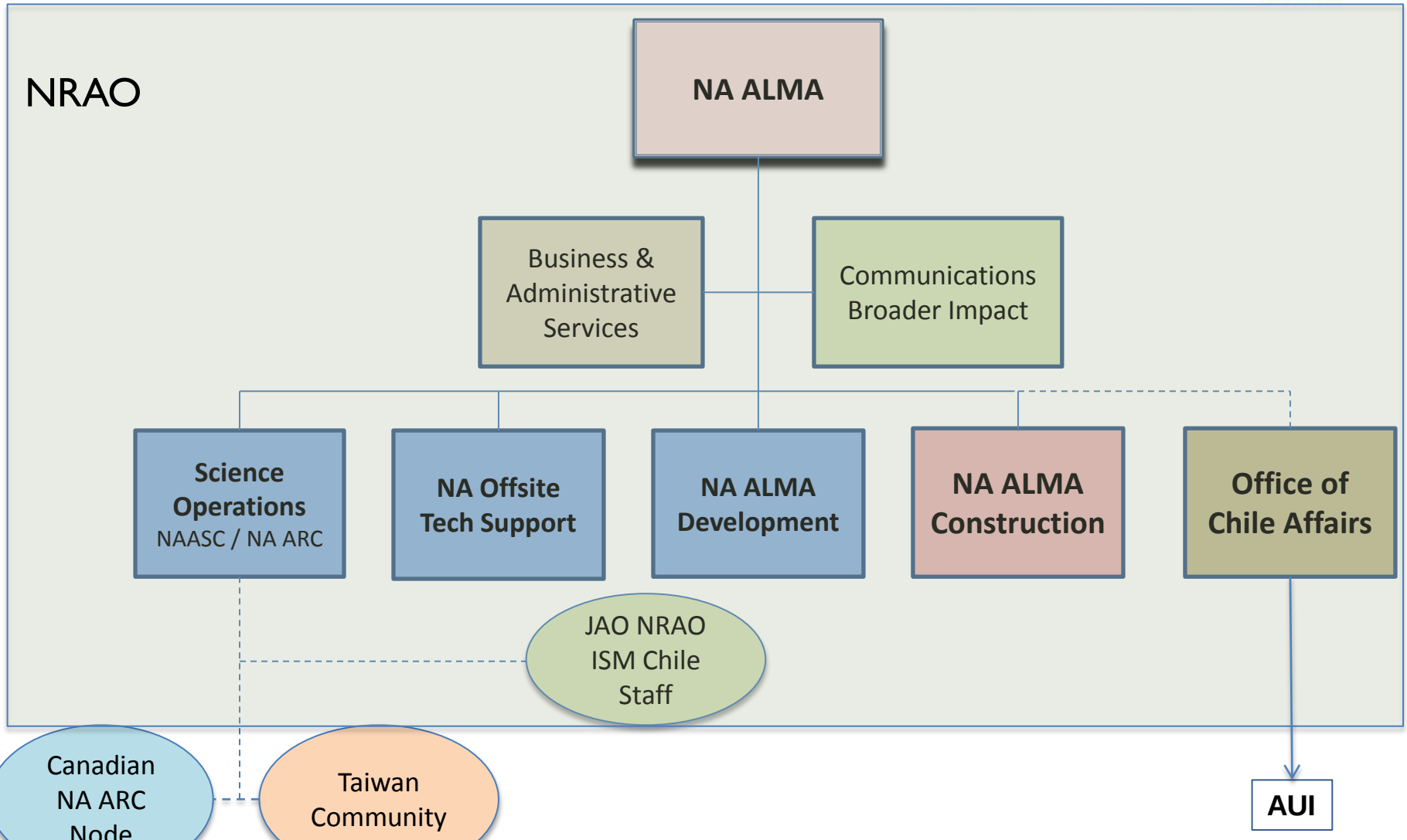
Cycle 1 Support Highlights

- Proposals
  - NA had 69 "high priority" projects selected for Cycle 1
- Phase II support
  - Most scheduling blocks generated & approved except total pwr & extended config
- Data Reduction
  - 10 NA C1 data sets processed internally; 3 passed QA2 and were delivered to PIs
- Visitor Support:
  - 11 visitors to NAASC for data reduction support this year
- Pipeline Testing
  - Pipeline tiger team has expedited CASA pipeline development, now in commissioning
- Helpdesk Support
  - CASA offline helpdesk tickets are processed as received
- Commissioning and Science Verification support in Chile
  - The NAASC has deployed several of its most experienced staff to Chile to expedite commissioning; will continue through 2014

Cycle 2 Preparation Highlights

- Cycle 2 Announcement & Process Dates:
  - Pre-announcement: expected this week
  - Call for Proposals: October 24 (provisional)
  - Proposal Deadline: December 5 (provisional)
  - Panel Review: March 10-14, 2014 (Toronto)
- Documentation & Tool updates (project-wide unless noted)
  - Primer update (Canadian NA ARC node)
  - Proposer's Guide & Technical Handbook
  - Observing Tool (& testing)
- Value-added Efforts
  - Community-Day Events
    - 5 planned before end of the calendar year (Howard Univ, DPS Meeting, Goddard, UC-Irvine, UWisc)
    - Video tutorials (w/ Canadian NA ARC node)
    - SimALMA

NA ALMA Organization & Responsibilities



Offsite Technical Support Highlights

- NA ALMA Offsite Hardware Support
  - Commissioning and training visits to OSF from Photonics, Back End, and Front End groups all occurred between May-August
  - Completed commissioning of both Front End Test Stands and Band 6 Cartridge Test Stand at OSF
  - First Thermal Interlock Module functionality verified in Front End Assembly at OSF
  - Continued work on procurement and qualification of spare modules for all groups
  - Front End Group procuring spare ALMA cryostat for improved offsite support at NTC labs
- NA ALMA Offsite Software Support
  - Includes CASA offline and pipeline development and support and realtime system support. Matrix managed through NRAO's Data Management & Software Department (Glendenning)

NA ALMA Development Program Highlights

- 3 Major Projects Currently Active from previous call
  - ALMA Phasing Project (millimeter-wave VLBI phasing)
  - Fiber Optic Link (OSF to Calama, replace microwave link)
  - Band 5 Warm Cartridge Assembly (in collaboration with EU)
- New Development Studies
  - 9 Study proposals received (8 PIs, 17 institutions, 5 NRAO PI, 4 external, including one from Taiwan, one from NRC-Herzberg)
  - $1.2M requested, $1M available, $200k cap per proposal
- New Development Projects
  - 8 Proposals Received, 32 PIs/Co-Is from 11 institutions including 5 US, 3, Canadian, 1 Taiwanese
  - $7.5M requested from $4.5M pool, w/ $1.5M cap per proposal.
- Status of Process –
  - Studies are out for review by external panel; Projects soon to be out.

A Potential Strategic Initiative

- Adam Leroy

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