



Science Community Outreach

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Lead – Science Community Interface Team

ANASAC f2f Meeting – 17 May 2016



Science Community Interface Team

Main Responsibilities include:

- ALMA “Community Day” Events
 - Data reduction and proposal preparation events
- ALMA Helpdesk management and oversight
- Contact Scientist support and oversight
- Science Web and ALMA Science Portal Improvements, enhancement and content review
- End user documentation
- Face-to-face visitor support
 - Data reduction visitors (both as individuals and for hosted workshops)
 - Visiting scientists
 - Sabbatical visits
- Coordination with ODI and diversity initiatives and broadening participation
- Coordination with EPO and Science Communication offices

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NRAO Live! Events

- Rebranding of ALMA Community Day events: the NAASC and NRC hosted 10 events from early March to Mid-April:
 - McGill University, Montreal, Canada - Feb 18 - 19, 2016
 - University of Massachusetts at Amherst - March 3, 2016
 - Boston University - March 7 - 8, 2016
 - University of Texas, Austin, Texas - March 10, 2016
 - University of Wisconsin, Madison - March 15 -16, 2016
 - LASP Space Sciences Building, Boulder, CO - March 18, 2016
 - NRAO DSOC, Socorro - March 21, 2016
 - Carnegie Observatories, Pasadena, California - March 31, 2016
 - McMaster University, Hamilton, ON, Canada – March 31, 2016
 - DAO, Victoria, BC, Canada – April 8, 2016
- NAASC events typically hosted 25-30 participants of varying expertise
- Topics covered include: overview of NRAO telescopes (including recent science results), basics of radio interferometry, proposal preparation (use of the OT, available documentation, Helpdesk), imaging techniques

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NRAO Live! Events

Lessons Learned:

1. The workshops are very well-received across the board. Participants appreciate the mix of hands-on tutorials and presentations as well as being able to ask “common sense” questions (i.e. typical length of a successful proposal, best practices for specific observing modes). **But ...**
2. The events have to be run all at once, all at the same time but NAASC/NRC staff cannot be everywhere in the country at the same time.
3. To have enough time for multiple events, most events happen too early before the observation preparation tools are ready. We show the representative tools (OT, Project Tracker, SnooPI) but the final tools are not ready.
4. End user Documentation is not available – not until after 24 March do the users get access to the final capabilities.
5. The proposal demographics clearly show that the workshops have an impact on the number of submissions from those regions. Gaps in the US participation indicate regions we are not reaching ...

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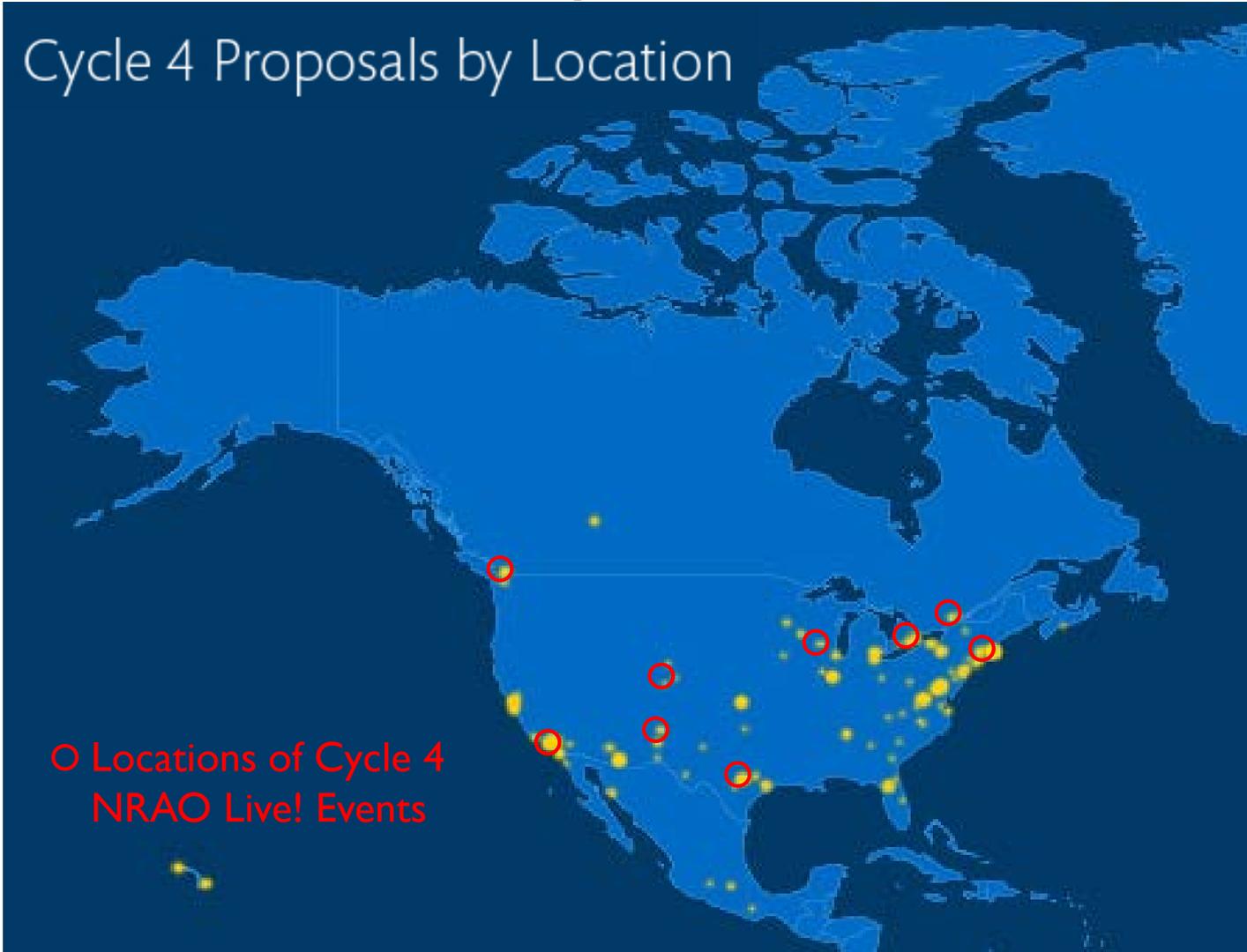
Cycle 4 Proposals by Location



<http://www.almaobservatory.org/en/press-room/announcements-events/940-over-1600-proposals-received-in-the-alma-cycle-4-call>

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NRAO Live! Events

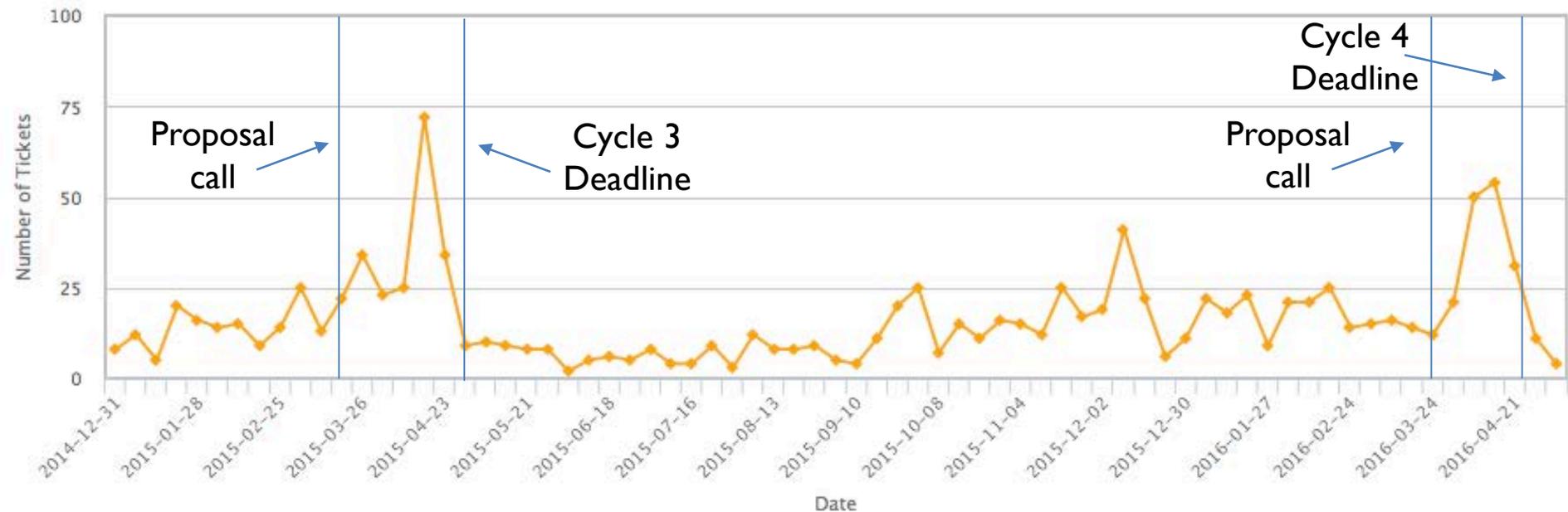
Planning for Cycle 5 to address **all** of these issues at once:

- To run the events concurrently, closer to the deadline, and in more geographic regions, we will launch a “training the trainer” program (used by NASA, NOAA, CDC and K-12 education efforts).
- ALMA Ambassadors program for postdocs or early career scientists to visit the NAASC and receive training to run proposal workshops at their home institutions
- Benefits to participants: gain firsthand experience and professional training in the use of ALMA from start to finish, funded visits to the NAASC to discuss/present their related research, opportunities to present as experts at their home institutions.
- Added benefits to the NAASC: visits by early career researchers add to a scientifically dynamic environment, a broader reach for the workshops will lead to the inclusion of a broader community

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North America ALMA Helpdesk

- For Cycle 3, 15-20 NA Helpdesk questions answered per week
- Nearly 25% of Helpdesk tickets are submitted in the time period between the Call for Proposals and the Proposal Deadline
- Typical response time within 24 hours (always within 48 hours)



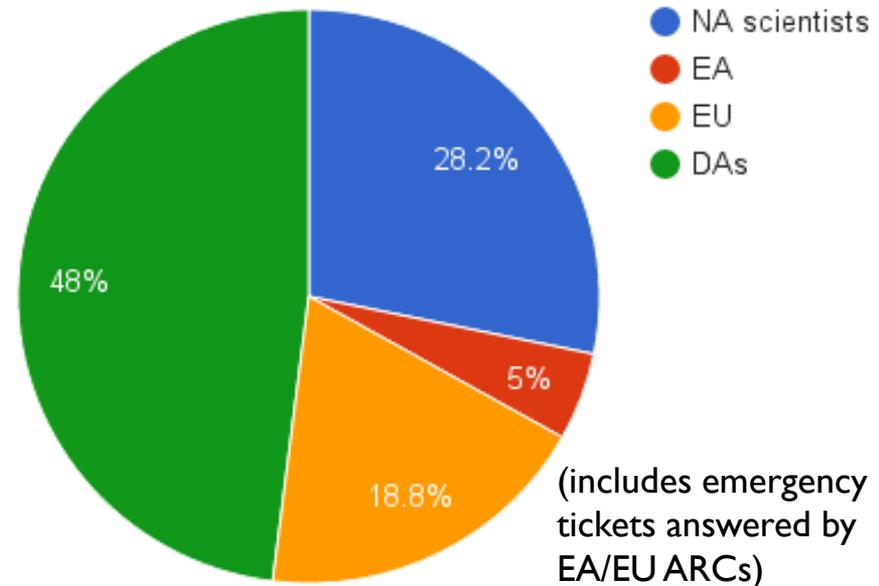
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North America ALMA Helpdesk

- 67% of (non-emergency) NA Helpdesk questions leading up to Cycle 4 were answered in the period immediately leading up to the proposal deadline (March 1 - April 21, 2016) by DAs
- **Planning for Cycle 4/5: Database of Expertise**

NA Ticket Owners Mar 1 – Apr 21

- We have built a database linking NAASC scientific staff to their areas of scientific & technical expertise
- Benefits to users: ensures quick, consistent responses to questions with the most accurate/up-to-date information
- Additional benefits to the NAASC: encourages interaction between the DAs and the rest of the scientific staff



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Contact Scientist Support

- All of NAASC scientific staff involved in supporting ALMA PIs through Contact Scientist (CS) work
- Currently a CS is involved mostly at the initial stage of reaching out to PIs to review their scheduling blocks and confirm that observations are ready to be observed (but not before in SB generation or afterward as telescope status changes)
- **Planning for Cycle 4:** CS involvement in SB generation will evolve as do the plans for PI vs P2G involvement
- **Planning for Cycle 4 and beyond:** In an effort to provide users more consistent support, to more efficiently address issues unique to specific projects, and to promote more CS involvement (i.e. cut out the “middle person” status), CS will track projects through to completion. For example,
 - Tracking project ready status throughout array configuration changes
 - Monitoring whether data passes quality assurance tests
 - Keeping the user informed so that the process is more transparent

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End User Documentation/Science Portal

- Proposer's Guide, Technical Handbook, Primer, Did you know article all updated for Cycle 4 call for proposals
- Online data reduction tutorials (i.e. "casaguides") now automatically checked against each new CASA release and more in depth updates to text currently underway in preparation for Synthesis Imaging Summer School (June 2016)
- **Planning for Cycle 5:** undergoing an effort to make the overall language and terminology usage more cohesive as well as highlight areas that will need primary attention when the time comes for updates for Cycle 5 capabilities, etc.
- **Planning for Cycle 5:** further development of video tutorials linked to Knowledgebase Articles (i.e. converting single dish fluxes to ALMA sensitivity estimates)

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End User Documentation/Science Portal

- **Planning for Cycle 5:** Science portal also being streamlined in a cross-ARC effort to ensure consistency and limit repetition
- **Planning for Cycle 5:** News items, telescope status will be dynamically rendered via the Science Portal (including current view of where the telescope is pointing)

Atacama Large Millimeter/submillimeter Array
In search of our Cosmic Origins

Home About Science Proposing Observing Data Tools Project ARCs Help Login Search

General News

Announcement of intent to release a new installment of test data
Sep 14, 2015

ALMA Status Report: August 2015
Aug 10, 2015

ALMA Cycle 3 user survey
Aug 06, 2015

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More...

NAASC news

Postdoctoral positions in mm astronomy at IRAM
Jul 20, 2015

Astronomer/Sub-mm Instrument Scientist
May 11, 2015

2015 Call for 5 PhD Fellowships
Mar 02, 2015

More...

Status

Call for Proposals Cycle 4 : **spring 2016**
DDT call Cycle 3: **open**

Refereed publications: **308**

Last observed source: **NGC1016**
Current configuration: **C43-4**
PWV: **1,2mm**

More...

Science Highlight



The dynamics of HCN and HCO+ in the inner few hundred parsecs of the nearby Type-1 Seyfert galaxy NGC 1097 have enabled the authors to determine a supermassive black hole (SMBH) mass of $1.4 \times 10^8 M_{\odot}$. The measured SMBH mass is in good agreement with the SMBH mass and bulge velocity dispersion relationship. This result showcases ALMA's potential for deriving accurate SMBH masses, especially for nearby late-type galaxies.

Top links

Proposer's guide
Pipeline User's Manual
Observing Tool
Archive query

Sitemap Accessibility Contact Privacy Statement

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Tracking of NA Publications & Impact (see AI's talk)

- By number of publications, EU is leading the other ARCs, and so a more detailed assessment of publication impact and number of publications per dataset is warranted.
- At first glance:
 - In Cycle 2, **2 of 3** highest cited papers are from NA: *The comet-like composition of a protoplanetary disk as revealed by complex cyanides* (Oberg et al. 2015, Nature) and *Star Formation and the Interstellar Medium in $z > 6$ UV-luminous Lyman-break Galaxies* (Willott et al. 2015, ApJ)
 - In Cycle 1, **2 of 4** highest cited papers are from NA: *Galaxies at redshifts 5 to 6 with systematically low dust content and high [CII] emission* (Capak et al. 2015, Nature) and *ALMA reveals the molecular medium fueling the nearest nuclear starburst* (Leroy et al. 2015, ApJ)
- **Planning for Cycle 4:** Instate standard quarterly updates on current ALMA publications from NA and other ARCs. Track NA projects that have not published results and reach out to PIs to offer additional user support.

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f2f Visitor Support: Individuals

- In Cycle 3, the NAASC supported 26 f2f visitors on individual visits
- In the past, most advertising of f2f support has occurred during AAS meetings, NRAO Live! events and over NRAO eNews email blasts
- **Planning for Cycle 4/5:** More targeted advertising. Efforts have begun to reach out personally to PIs with unpublished datasets as well as students (including those with official SOS funding from the NAASC)

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f2f Visitor Support: Data Reduction Workshops

- The NAASC hosted a Data Reduction Workshop (i.e. a group f2f visit) over January 27-29, 2016 in Charlottesville, Virginia for 10 participants (graduate students, postdocs, professors) from institutions across the US
- Low level of input required for large return
 - Data analyst effort to stage datasets in advance; DA and scientist effort on and off throughout the three day event
 - Users receive highly individualized support and share information upon return to their home institutions. Most note getting the most value from being able to interact with NAASC staff.
 - The workshops appeal to users with a range of expertise, users learn from each other, and ultimately more science gets out.
 - Efforts are more streamlined/condensed but without a loss of individual attention/support
- **Planning for Cycle 5:** aim for two workshops per cycle including an Interferometry School on the off years from the Socorro SISS.

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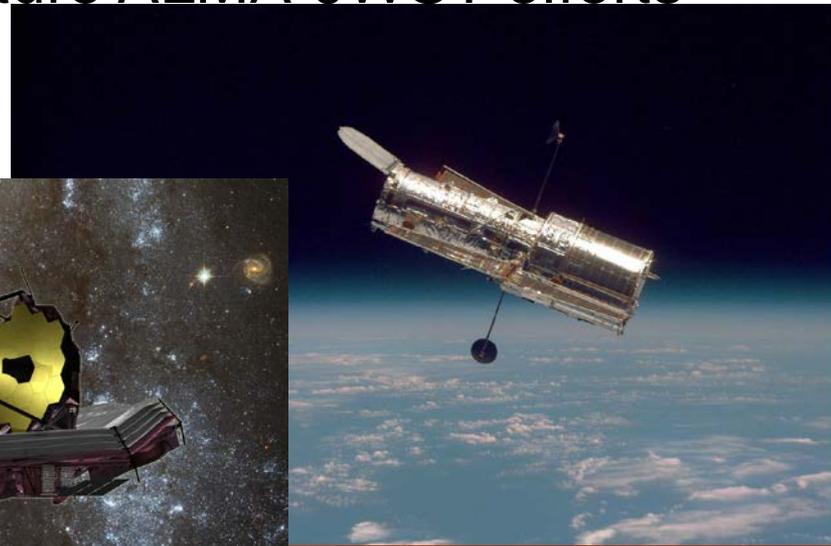
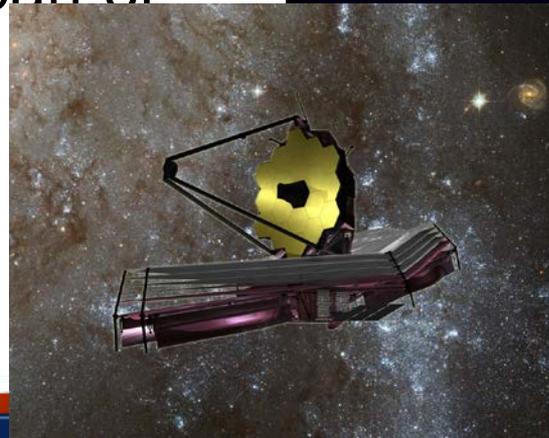
Collaboration with ODI

- Our team organized an Imposter Syndrome workshop led by Johanna Teske in coordination with the Office of Diversity and Inclusion on March 2, 2016
- Attended by 71 NRAO staff members (including 19 NAASC staff, graduate students, postdocs, scientific staff, administrative staff, managers)
- The same workshop that has met with success at the AAS winter meetings and was well-received at NRAO (rare opportunity for reflection upon working styles and self-evaluation across all career stages)
- Johanna will return in Summer 2016 to host a similar workshop for the NAC and REU students

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Joint ALMA - HST/JWST Proposals and Workshops

- **Planning for Cycle 5 and beyond:** We have begun discussions with JWST and HST advisory boards to discuss the potential for offering joint proposals in upcoming cycles
- Initial feedback from STScI suggests that a joint ALMA-HST proposal (using current VLA-HST as a foundation) is favorable to set the stage for future ALMA-JWST efforts
- Looking to opportunities for joint efforts will be a part of upcoming workshop planning





www.nrao.edu
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