



# Welcome to the third European ALMA Regional Centre *Virtual Community Assembly*



EUROPEAN ARC  
ALMA Regional Centre

ESO ARC, ARC nodes in UK, Netherlands, Sweden,  
Germany, Italy, Czech Republic, IRAM

- Gergö Popping – ARC network coordinator, moderator
- Martin Zwaan – ARC manager
- Evanthia Hatziminaoglou – Deputy ARC manager
- Carmen Toribio – Nordic ARC node representative





**BACK TO SCIENCE OBSERVATIONS**



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# Short recap of the last 12 months

- Science Operations suspended on March 19, 2020
- Cycle 8 postponed by one year
  - Operationally not possible to start Cycle 8
  - Cycle 7 runs until 30 September 2021
- Put health and safety of ALMA staff and community first
- ARCs and ALMA Santiago fully operational
- Much progress has been made, so that we can
  - **Resume Cycle 7 observing**
  - **Open the new Cycle 8 2021 Call for Proposals**





# Return to Operations

- Detailed plans and risk management protocols have been developed
  - ALMA observatory is a very remote site!
- Returning to operations carefully planned, at every step performance must be validated, safety assessed etc.
- All initial steps have been successfully completed
  - Reoccupation of Operations Support Facility, electricity, water, food
  - Monitor systems, maintenance, labs
  - Power high site, correlator, stability of the overall system
  - Power up antennas, cool down, distributed power network
  - Also: use of control room extension in Santiago
- Currently in Basic Science Operations Phase





# Return to operations - science

- Antennas inspected, performance verified, and integrated into the array
- Several end-to-end tests are being run
  - A selection of test observations are run from acquisition to quality assurance
  - The 12-m Array passed these end-to-end tests
- Decision made to **resume science observing** this month with
  - At least 32 antennas in 12-m Array
  - At least 8 antennas in 7-m Array
- In addition to resuming science observing, other priorities are:
  - Preparing for Cycle 8 2021, software testing
  - New observing modes and capabilities for Cycle 9+





# Back to Cycle 7 – early phase

- Projects in the Cycle 7 observing queue will be executed if suitable in terms of
  - Phase stability
  - Achievable angular resolution with the available number of antennas
- Execution time will be increased to account for lower sensitivity of reduced number of antennas
- Observations will run through data reduction pipeline and quality assurance ‘as normal’
- In case of doubts about QA, PIs may be contacted
- **Aim is to return to observing with the nominal number of antennas (at least 43 12-m, 10 7-m) as soon as reasonably possible**





# Back to Cycle 7

- What configuration are we starting in?
  - Currently in C43-4/C43-5
  - No antenna relocations yet
  - The configuration schedule for Cycle 7 is not completely certain yet
  
- See Science Portal for *planned* Cycle 7 schedule
  - Moving out, planning to reach C43-9/C43-10 in European summer
  - It is feasible that the configuration schedule will be adapted





# Your Cycle 7 projects

- All non-completed Cycle 7 projects (A,B,C) will remain in the queue until end of September 2021
  - For as long as there is a chance that they can be observed (configuration-wise); otherwise, they will be timed out
  
- Will there be carry over to Cycle 8 2021?
  - Grade A projects are carried over as normal
  
- What happens to the proprietary times?
  - Proprietary times of ALMA data sets that were not public on March 19 2020 were extended by three months
  - Further extensions on case-by-case basis





# Your Cycle 7 projects

- Will there be a VLBI session in 2021?
  - VLBI sessions planned for April (EHT first half, GMVA second half)
  
- What happens to DDTs and ToOs?
  - DDTs will stay in the queue
  - ToO PIs will be contacted
  
- What happens to uncompleted projects at end of Cycle?
  - As always, the aim is to complete projects and SBs
  - Uncompleted SBs are delivered as QA2 semi-pass
  - Not foreseen to have special treatment of grade B/C projects





# Your Cycle 7 projects

- What will happen to Grade A long-baseline projects that are not completed in Cycle 7?
  - Long baselines are not offered in Cycle 8 2021
  - Projects will **not** be carried over to Cycle 9, need to be resubmitted
- What happens if array recovery slows down
  - This will have to be assessed. Community will be updated in time!
  - Long-term goal is to keep Cycles that run from October to October
  - Doing long baselines this year is top priority!
- Need to submit change requests if configuration schedule changes?
  - Community will be updated in time!



## SnooPI - The Snooping Project Interface

A software tool that allows PIs, Co-Is and Delegates to track the observational and processing status of their ALMA science projects

The screenshot shows the SnooPI web interface. On the left is a navigation sidebar with sections for NAVIGATION (Home, My Projects, My SBs), QUICK LINKS (User Manual, Science Portal, Archive Query, Helpdesk), and logos for ESO, NRAO, and NAOJ. The main content area displays project information for '2016.1.01234.S', including the project title 'A Supercalifragilisticexpialidocious proposal to observe the entire Universe', observing program 'SG OUS', and a list of member OUs. On the right, detailed scheduling and pointing information is shown, such as 'Scheduling Block Name: sz129\_a\_06\_TM1', 'Scientific Goal Name: SG OUS', and 'Array: 12m'. A table at the bottom shows execution details for 2017-07-15.

Use SnooPI to follow the progress of your ALMA Projects!

You can find SnooPI on the ALMA Science Portal under "Observing"

Please, send inputs and feedbacks at [amiotell@eso.org](mailto:amiotell@eso.org) or through the ALMA Helpdesk





# Cycle 7 DDT channel open

- ALMA is once again accepting proposals for Director's Discretionary Time (DDT).
- Procedures to submit a DDT proposal are described on the Science Portal ([almascience.eso.org](http://almascience.eso.org))
- DDT projects may be executed with fewer than the nominal number of Cycle 7 antennas.
- If the observations can only be performed with the nominal antenna numbers, this should be explicitly stated.





# ALMA updates

Check the ALMA Science Portal:

`almascience.eso.org`

Read our ARC Newsletter:

`https://www.eso.org/sci/facilities/alma/news/arc-newsletter.html`

And the regional ALMA Newsletters

Follow us on Twitter:

@EsoARC or @ALMA\_Europe and various ARC node handles



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# Cycle 8 – What's new

- Capabilities as originally advertised + 1
- 4300h on the 12-m, 3000h on the 7-m, 3000h on the TP Array
- Maximum baseline of 8.5 km (3.6 km for Bands 8, 9 and 10)
- Distributed Peer Review
- Double anonymous
- No Phase 2 deadline (applies to both Main and Supplemental Calls)
- No cap on Large Programmes (but up to 50% per LST range)

# Cycle 8 – Key dates

- **17 March 2021:** Cycle 8 2021 Call for Proposal and release of OT
- **21 April 2021:** Proposal submission deadline
- **6 May 2021:** Start of Stage 1 review
- **8 June 2021:** Start of Stage 2 review
- **15 June 2021:** Stage 2 review deadline
- **August 2021:** Results of proposal review sent to proposers
- **8 September 2021:** ACA Supplemental Call for Proposals
- **1 October 2021:** Start of Cycle 8 2021 observations
- **6 October 2021:** Supplemental Call deadline

# Cycle 8 - Capabilities

- Same capabilities as originally advertised (+1)
  - Solar observations in Band 5
  - VLBI observations of faint science targets (<500 mJy) in passive phasing mode
  - Mosaicking of continuum linear polarization observations (Bands 3 to 7)
  - High-frequency (Bands 9 and 10) stand-alone observations with the 7-m Array
  - Spectral Scans with the 7-m Array
  - **Up to a total of 75h of single-pointing on-axis linear polarization on the 7-m Array (Bands 3 to 7) in the main call only. Combined 12-m Array and 7-m Array observations not supported.**

# Cycle 8 – Proposal review

- Distributed peer review
  - Already used in Cycle 7 Supplemental Call
  - Larger community involvement in the ALMA review process
  - For each submitted proposal, the PI (or a designated Co-I) will review 10 proposals
  - Proposals requesting <25h on the 12-m Array and ACA stand-alone proposals of <150h
  - Large Programs (LPs) and normal proposals with >25h on the 12-m Array will be reviewed by panels
  - ALMA encourages the submission of more ambitious proposals:
    - No cap on the total time that can be allocated to LPs
    - LPs and >25h proposals (on the 12-m Array) will have priority for building the first 10% of the queue
  - Important notice: **please update your expertise area in the Science Portal!**



# Cycle 8 – Proposal review



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

About Science Proposing Observing Data Processing Tools Documentation Help

## Observatory News

ALMA Cycle 8 2021 Call for Proposals is Now OPEN!  
Mar 17, 2021

ALMA anticipates resuming science observations  
Mar 15, 2021

Array Recovery Status Update  
Jan 25, 2021

More...

## EU ARC News

Second European ALMA Regional Centre community assembly on 18 December 2020  
Dec 10, 2020

I-TRAIN with the European ARC Network  
Nov 30, 2020

Research Associate at the UK ARC Node  
Jun 15, 2020

More...

## Status

Cycle 8 Call for P  
Proposer's Guide  
ALMA Primer

Refereed publications: 2267  
Last observed source: HerBS-152  
Current configuration: C43-4

More...

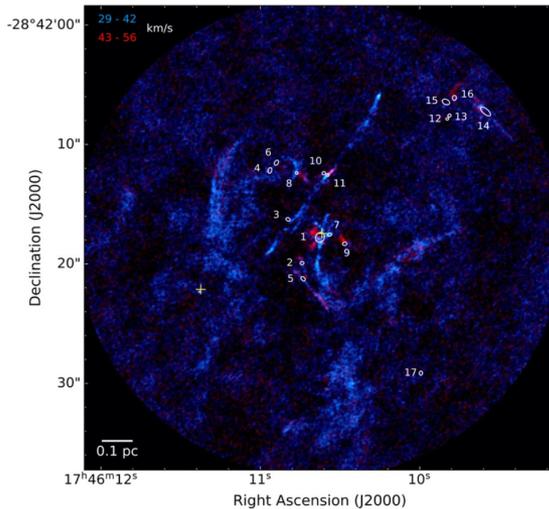
Evanthia Hatziminaoglou

Profile

Log out



## Science Highlight: An Active Protocluster in the Massive, Dense Galactic Center Cloud G0.253+0.016



High-resolution ALMA observations are a great probe for star formation in the Galactic Center. In a recent paper, Dr. Walker and his collaborators made use of high-resolution ( $\sim 1000$  AU resolution) Band 6 observations with ALMA to detect dust continuum sources and SiO outflows in G0.253+0.016, one of the most massive ( $> 10^5$ ) and dense ( $> 10^4$  cm $^{-3}$ ) molecular clouds in the Central Molecular Zone (CMZ). The CMZ is notable in having a substantially lower star formation rate than one would expect based on that measured in nearby galactic disk environments. Eighteen continuum sources are detected, and despite the high density of molecular cloud, no high-mass protostars were detected. Indeed, the median mass of the detected continuum sources is  $2 M_{\text{sun}}$ . However, 9 of the continuum sources have outflows traced in SiO(5-4) (see Figure 1) with properties similar to intermediate to high-mass star formation. The dynamical ages of the outflows are estimated to be  $10^3$  yr old. Thus, these source are young and may accrete sufficient mass to ultimately form intermediate-to-high-mass stars. The authors discuss the importance of thermal fragmentation relative to large-scale turbulence and magnetic fields at the scales of these protostars, and they conclude that star formation on these scales is similar to that in Galactic disk environments.

[ALMA Science](#)

Figure 1. Band 6 continuum sources and SiO(5-4) outflows in G0.253+0.016. SiO emission in the velocity range 29-42 km/s is shown in blue, and redshifted emission in the range 43-56 km/s is shown





# Cycle 8 – Proposal review



- Account info
- Project delegation
- Account linking
- Demographics
- Expertise**
- Confirm

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## Expertise

Please select at least 3 category/keyword pairs that best match your scientific expertise. You may select keywords in more than one category. If you are a reviewer for Distributed Peer Review (DPR) you will preferentially be assigned proposals that match your selected keywords.

- > Cosmology and the High Redshift Universe
- ▼ Galaxies and Galactic Nuclei
  - Starbursts, star formation
  - Active Galactic Nuclei (AGN)/Quasars (QSO)
  - Spiral galaxies
  - Merging and interacting galaxies
  - Surveys of galaxies
  - Outflows, jets, feedback
  - Early-type galaxies
  - Galaxy groups and clusters
  - Galaxy chemistry
  - Galactic centres/nuclei
  - Dwarf/metal-poor galaxies
  - Luminous and Ultra-Luminous Infra-Red Galaxies (LIRG & ULIRG)
  - Giant Molecular Clouds (GMC) properties
- > ISM, star formation and astrochemistry

[↻ Reset](#)



# Cycle 8 – Proposal review

## ■ Dual anonymous review:

- For distributed and panel reviews alike
- Aims at minimizing the systematics and unconscious biases
- Reviewers will not see the names of the Investigators
- Reviewers' names will be unknown to proposers
- **Guidelines on the Science Portal**, Proposing → ALMA Proposal Review → Dual anonymous Guidelines
- Details and FAQ resources available on the ALMA Science Portal

# Cycle 8 – No Phase 2 for PIs

- PIs will not submit their Phase 2 Science Goals
  - Triple-check Science Goals in Phase 1!
  - Usual Contact Scientist (CS) assignments
  - Scheduling Blocks (SBs) will be generated automatically
  - PIs responsible for accuracy of info in their SBs **prior to the first execution**
  - Minor changes can be requested directly on the project ticket (Helpdesk)
    - Shift position by up to 0.5 x the primary beam
    - Change central frequency on sky up to 0.2 x width of spectral window
  - For major changes PIs will need to open a dedicated Helpdesk ticket
  - In case of doubt, ask your CS
  - Follow your project via SnooPI

# European ARC nodes

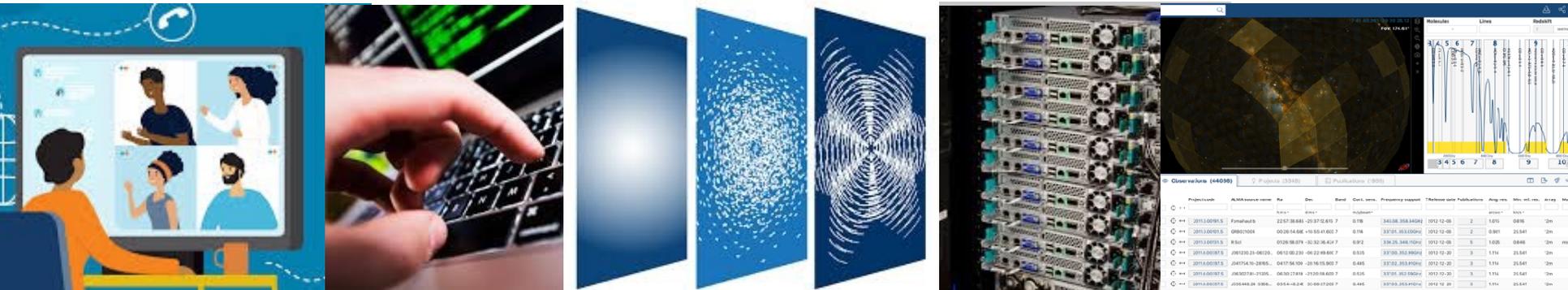


## All ARC nodes are open for (remote) user support

- assistance with your ALMA data
- help with exploiting the ALMA Science Archive
- data processing (calibration, imaging, post-processing & analysis)
- consultation via:
  - e-mail
  - videoconference
  - remote access to computing
- contact your ARC node for details



[www.eso.org/sci/facilities/alma/arc.html](http://www.eso.org/sci/facilities/alma/arc.html)





## European ARC nodes



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# Cycle 8 2021 Proposal Preparation Workshops

UK ARC Node	ALMA Virtual Workshop: <b>March 22 – 26</b> <a href="http://alma.ac.uk">http://alma.ac.uk</a>
Italian ARC Node	Proposal Preparation Community Meeting: <b>March 22 (11:00 CET)</b> <a href="https://www.alma.inaf.it">https://www.alma.inaf.it</a>
Nordic ARC Node	Proposal Preparation Events: <b>March 22 (10:30 CET) &amp; March 24 (15:00 CET)</b> <a href="http://nordic-alma.se">nordic-alma.se</a>
Allegro Node	Proposal Preparation Day: <b>March 29</b> <a href="http://alma-allegro.nl">alma-allegro.nl</a>
German ARC Node	Proposal Preparation Community Meeting: <b>April 7 (11:00 CEST)</b> <a href="http://astro.uni-bonn.de/ARC">astro.uni-bonn.de/ARC</a>

- **Complemented with videos and materials online**
- **All nodes are open for virtual individual 1-to-1 proposal preparation support**
- **Contact your node for details**





# Questions?

Please use Q&A in Teams