

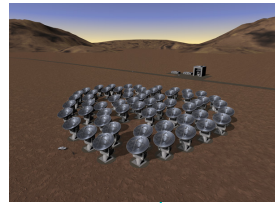


ALMA Operations the role of the European ALMA Regional Centre Plans for cycle 1

Paola Andreani



ALMA Operations Sites in Chile



Antenna Operations Site (AOS)

Operation Support Facility (OSF)

Santiago Central Office (SCO)

60 MB/s
(peak)

6 MB/s
(average)

issues of calls
PRC process
SB checks
pipeline data reduction
quality assessment
Population of the archive

array scheduling + operations
quick-look, maintenance and repair





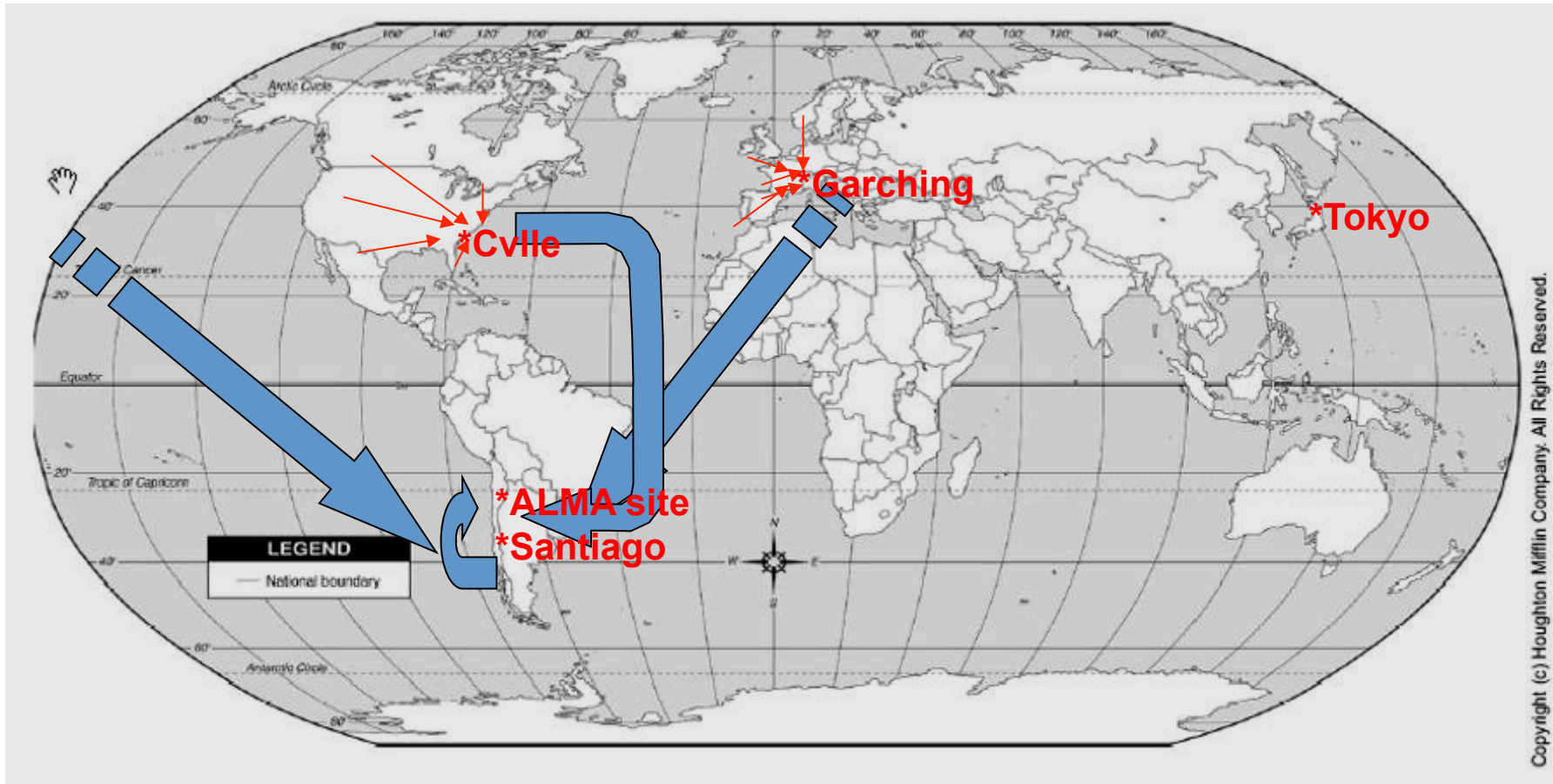
High-level concepts for Science Operations



- Observations **only** in service observing mode with flexible (dynamic) scheduling.
- Observations 24h/day interrupted by maintenance periods.
- All observations executed in the form of **scheduling blocks (SBs)**.
- Default output: reliable images, calibrated according to the calibration plan.
- The Joint ALMA Observatory (JAO) is responsible for the data product quality.
- All science and calibration raw data are captured and archived.

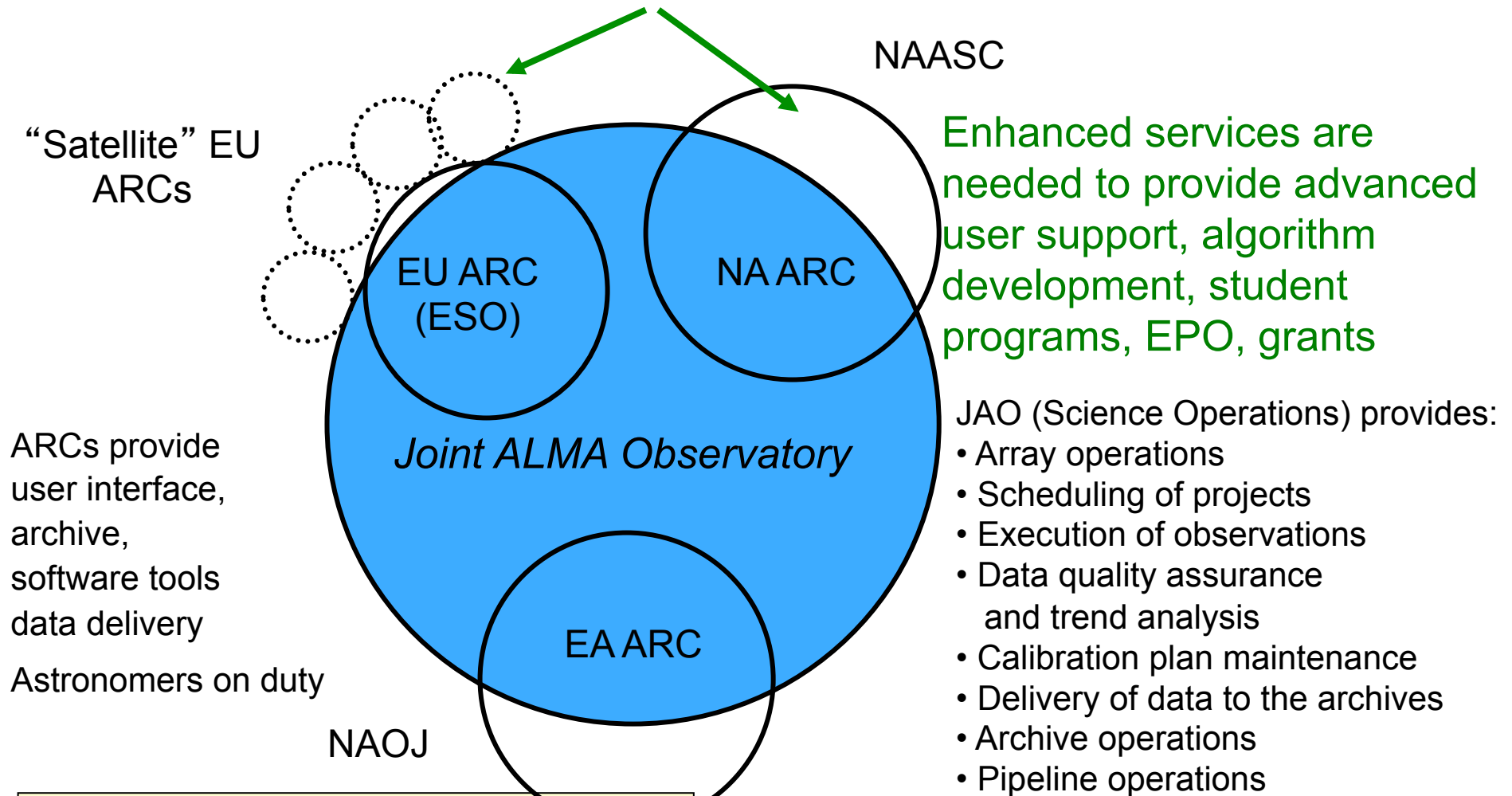
Users interface is provided by the ALMA Regional Centres (ARCs)

ALMA Science Operations sites OSF, Santiago and the ARCs



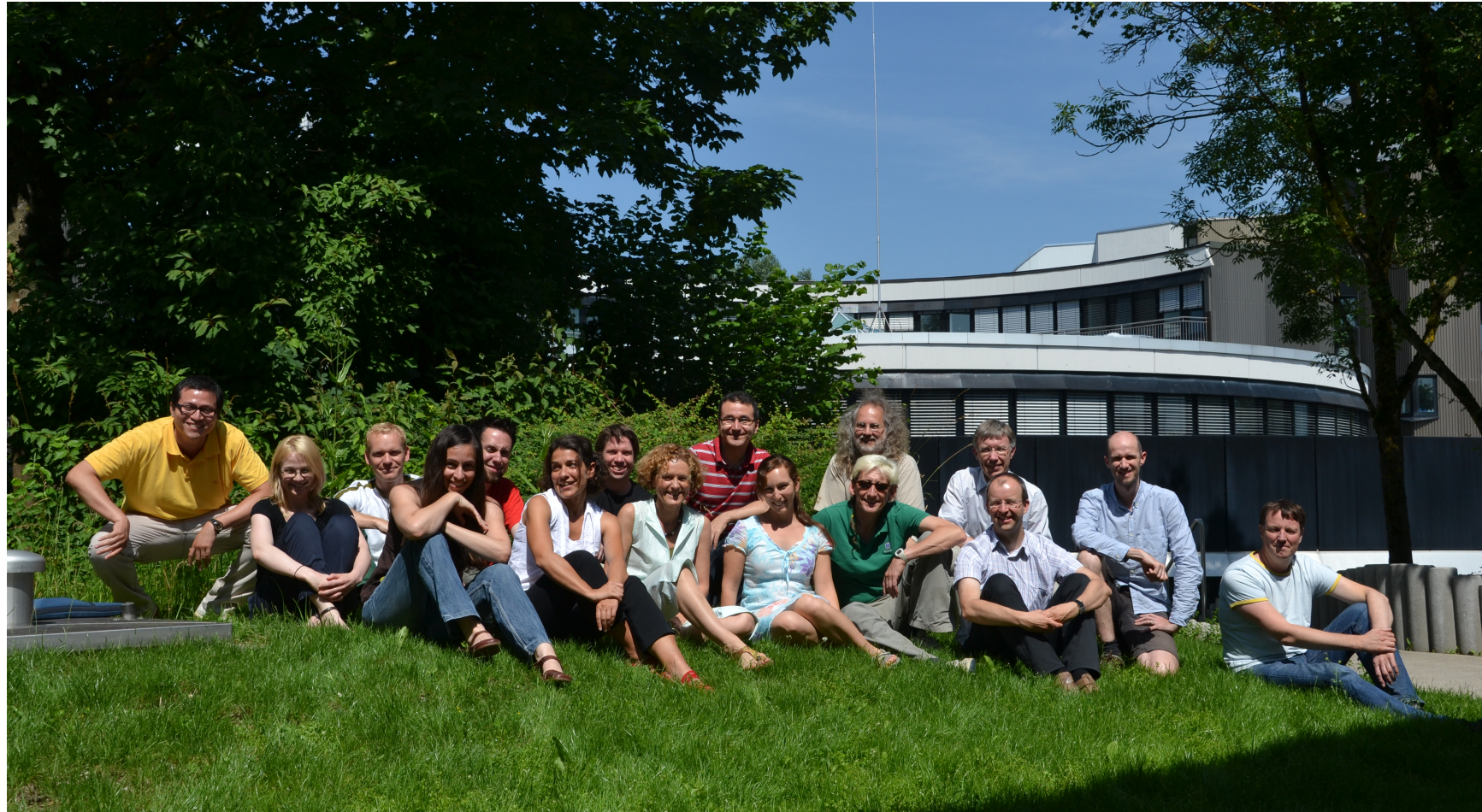
ALMA Operations: Three ALMA Regional Centres - ARCs

Enhanced User Services





The ARC @ ESO



ALMA Community days, Garching June 25-26 2012

Paola Andreani



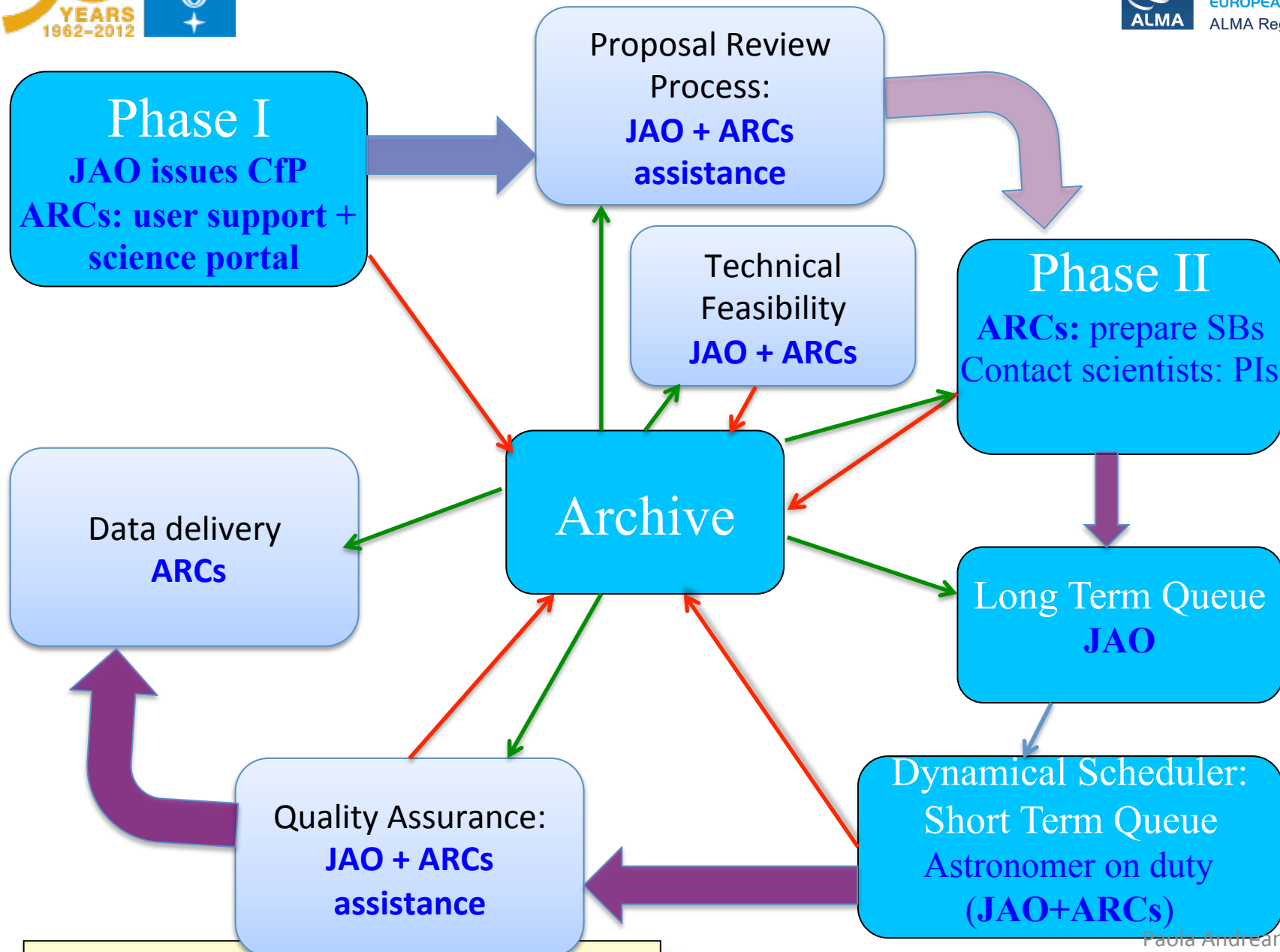


ARCs duties

- Commissioning/Astronomers on duty turnos (observing ES cycle 0 and on)
- Phase I: science portal, helpdesk, users documents, emergency helpdesk 72hrs before submission
- Proposal Review Process:
 - Technical assessment (Chile workshops)
 - Technical secretaries
- Phase II: preparation of SBs (+documents, policies), contact scientists
- Data quality process:
 - Assistance during quality assurance 2 (QA2)
 - QA3 (feedback to JAO)
- Archive + Data delivery
- PI data reduction help



ALMA DATA FLOW





ALMA Road Map



- Proposal Planning
 - Help from documents in the SP (Primer, Technical Handbook, Guides, etc)
- Proposal Preparation (Phase I)
 - Use of the ALMA Observing Tool
- Proposal Review Process
 - Ranked according to scientific merit up to regional share
 - No carryover from cycle 1 to cycle 2
- Observing Preparation (Phase II)
 - Observing plan (SBs) prepared by ARCs according to PIs' wishes
- Observations
 - Schedule (according to weather/configurations/etc)
- Post-observing/Data Reduction
 - Quality assurance (JAO/ARCs)
 - CASA package (-> ARC nodes)



The Science Portal: entry point to ALMA operations and users support



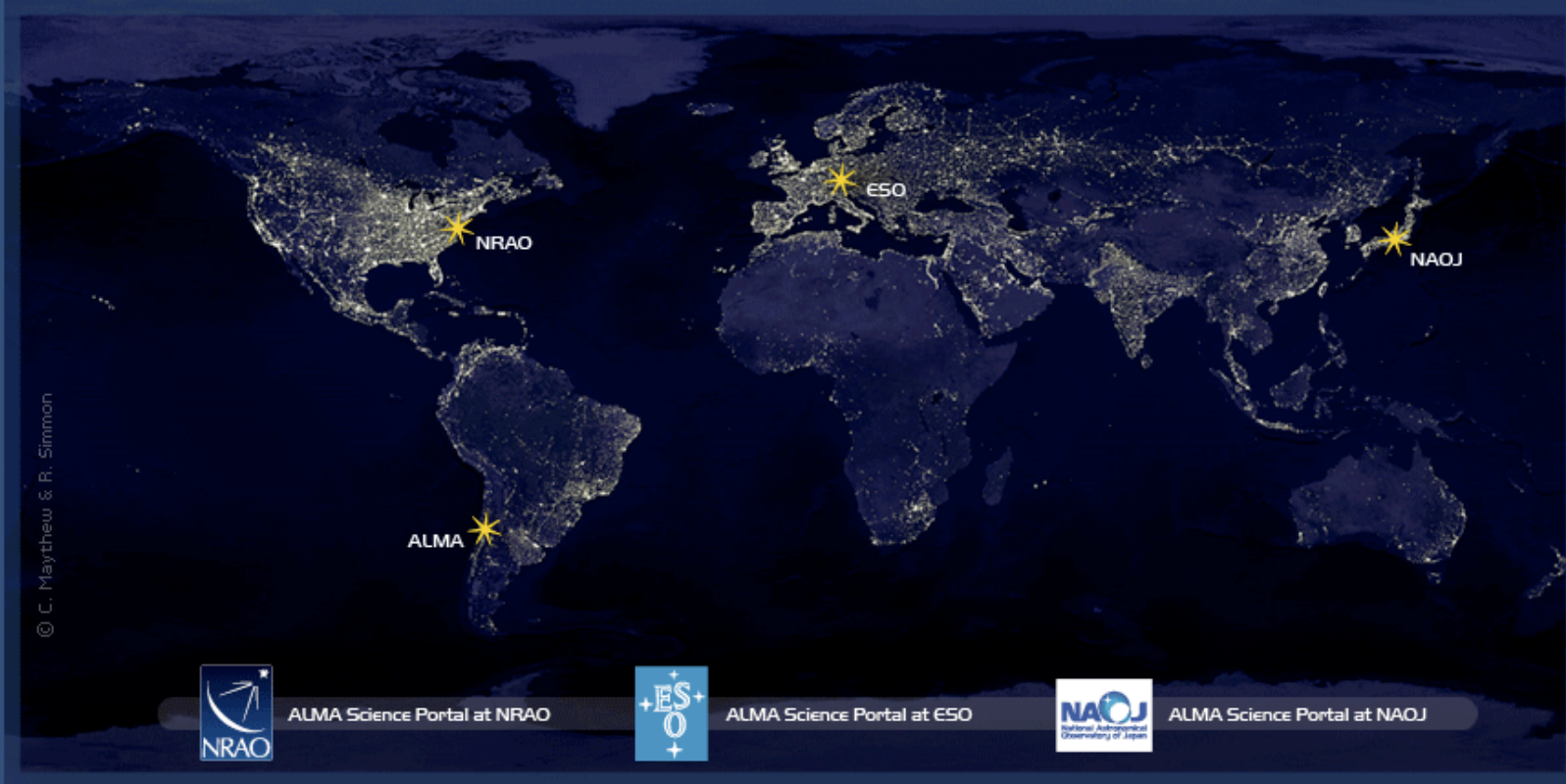
EUROPEAN ARC
ALMA Regional Centre



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

User automatically re-directed to regional SP

Please select your preferred ALMA Regional Centre (ARC). Alternatively you will be redirected in 8 seconds to the closest ARC which in your case is at



© C. Mayhew & P. Simmon



ALMA Science Portal at NRAO



ALMA Science Portal at ESO



ALMA Science Portal at NAOJ

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ALMA Community days, Garching June 25-26 2012





The helpdesk is the entry point to the EU ARC (ESO+nodes)



Science Portal » Helpdesk Home » Submit a Ticket » General Queries (EU)

How do I use the helpdesk?

> Submit a Ticket

If you can't find a solution to your problem in our [knowledgebase](#), you can fill in the fields below with as much detailed information as possible and send it to our agents.

General Information

Priority:

General

Sub-categories:

Please specify areas of concern

- Science Portal/Registration
- Documentation
- Webpages
- Proposal reviews and assessment (science and technical)
- Project tracking
- Proposal Change Request (accepted proposals only)
- Other

Message Details

Subject: *

> My Account [Logout]

Logged In: Paola Michela Andreani

> Search

-- Entire Support Site --

See Evanthia's presentation

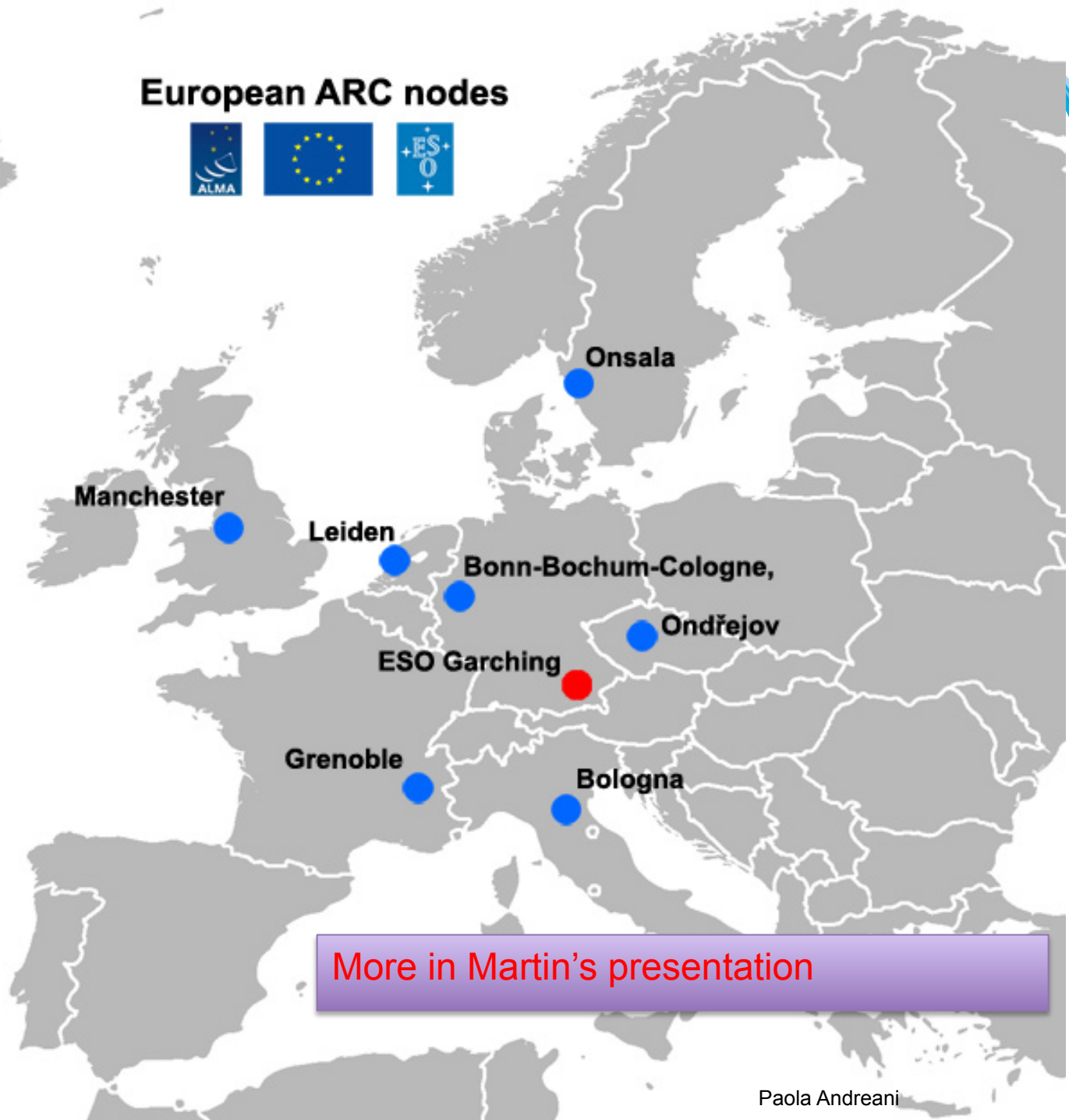
Contacts with the users done through the helpdesk.
i.e. need face-to-face support?
Use the Helpdesk.





The European ARC

European ARC nodes



More in Martin's presentation



ALMA Community days, Garching

Cycle 1 Operations

- [Early Science through Cycle 1](#) (until construction and commissioning complete)
- Priority is given to [completion of the array](#): the time is shared with Commissioning activity.
- Projects [not carried over](#) from Cycle 1 to later cycles
- [12-month proprietary rights](#) applicable to all ALMA data but Cycle 1 projects will not block later observations of the same targets with enhanced capabilities.
- Scheduling of SBs done by the [dynamic scheduler](#), used in manual mode
- Data quality assurance done on [best effort basis](#)
- [No guarantee](#) that the project will be completed

Cycle 1

- Start of Cycle 1:
 - Jan 1, 2013
- Length of Cycle 1:
 - Nominally 10 months (finishes on Oct 31, 2013, followed by 2 month engineering period)
- Number of hours for observations:
 - Propose that the percent of time dedicated to science operations increases from 33% in Cycle 0 to 60% in Cycle 1, i.e. 60% of the available time after subtracting engineering time and time lost due to weather and technical problems - in total about **800h + 800h ACA (maximum)**.
- Note: Inauguration is expected to take place in March 2013 during Cycle 1

Cycle 1 observing modes

- the two main observing modes will be:
 - single-field interferometry
 - mosaics.
- **Single-field interferometry :**
 - enhanced capability for dealing with multiple sources in a given region of the sky
- **Mosaic:**
 - Maximum number of points: 150 per SB (150 per science goal)
- **Spectral sweep: not offered**

Additional Limitations

- **Maximum number of sources per proposal (surveys):**
 - users can request to observe up to 15 individual sources in a single Science Goal, provided that the sources:
 - (1) are not separated by more than 15 degrees on the sky (If sources are separated by more than 15 degrees on the sky there will be only one source per science goal)
 - (2) can be observed with one spectral setup (placement and properties of spectral windows),
 - (3) can be observed with no more than five separate velocities that all fall within the same receiver band.

Additional Limitations

- Maximum number of spectral setups per proposal (spectral surveys):
 - Maximum 5 setups per Science Goal (SG)
 - Maximum 5 SG's per proposal, i.e. in total a maximum of 25 spectral setups per proposal
 - This gives a maximum number of 75 sources per proposal (if they are within 15 degrees in the sky) or 5 sources per proposal for sources separated by more than 15 degrees.



Cycle 1 Programmes

- Standard Programmes
- ToO
- DDT
- Time critical observations can be done with a scheduling fuzziness of 1-2 weeks
- Large Programmes will NOT be offered in Cycle 1
- Highly rated Cycle 1 projects not observed in Cycle 1 will NOT be transferred to Cycle 2





Cycle 1 timeline



- April 3 : Announcement
- May 15: Deadline for submission of Notices of Intent
- May 31: Call for proposal and opening of the archive
- July 13: Proposal submission deadline
- July 25-September 13: science assessments
- October: Meeting of the science panels
- Mid October: Technical assessment
- Mid November: PI notification and start of Phase II
- January 1st: start of cycle 1 observations
- February: Engineering period
- End October: end of cycle 1



Questions?

