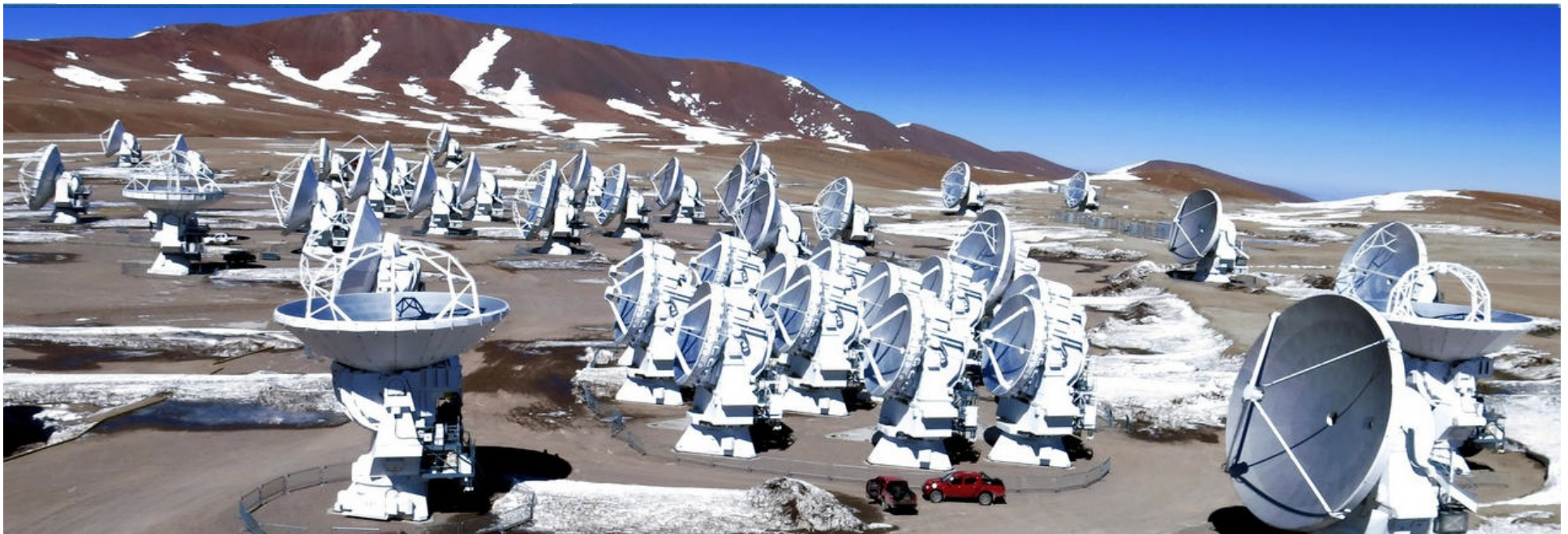


The ALMA Proposal Submission Process

How to get started (<ftp://ftp.cv.nrao.edu/NRAO-staff/hliszt/CDE-STSci>)



Harvey Liszt, Alison Peck & Drew Brisbin



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





This talk is for you if...

- You have even the slightest interest in ALMA ...
- You are new to ALMA
- You have not downloaded the ALMA Observing Tool (OT) or even know where to get it
- You have a fabulous science case that will be essential to follow-up with ALMA facilities
- You would like examples of science use cases for ALMA
- You were familiar with Cycle 2 and wonder about Cycle 3
- If ALMA is not your final destination please deplane now and talk to an agent at the gate

This talk will be available online for reference after this workshop.

ALMA



First find a portal (www.almascience.org)

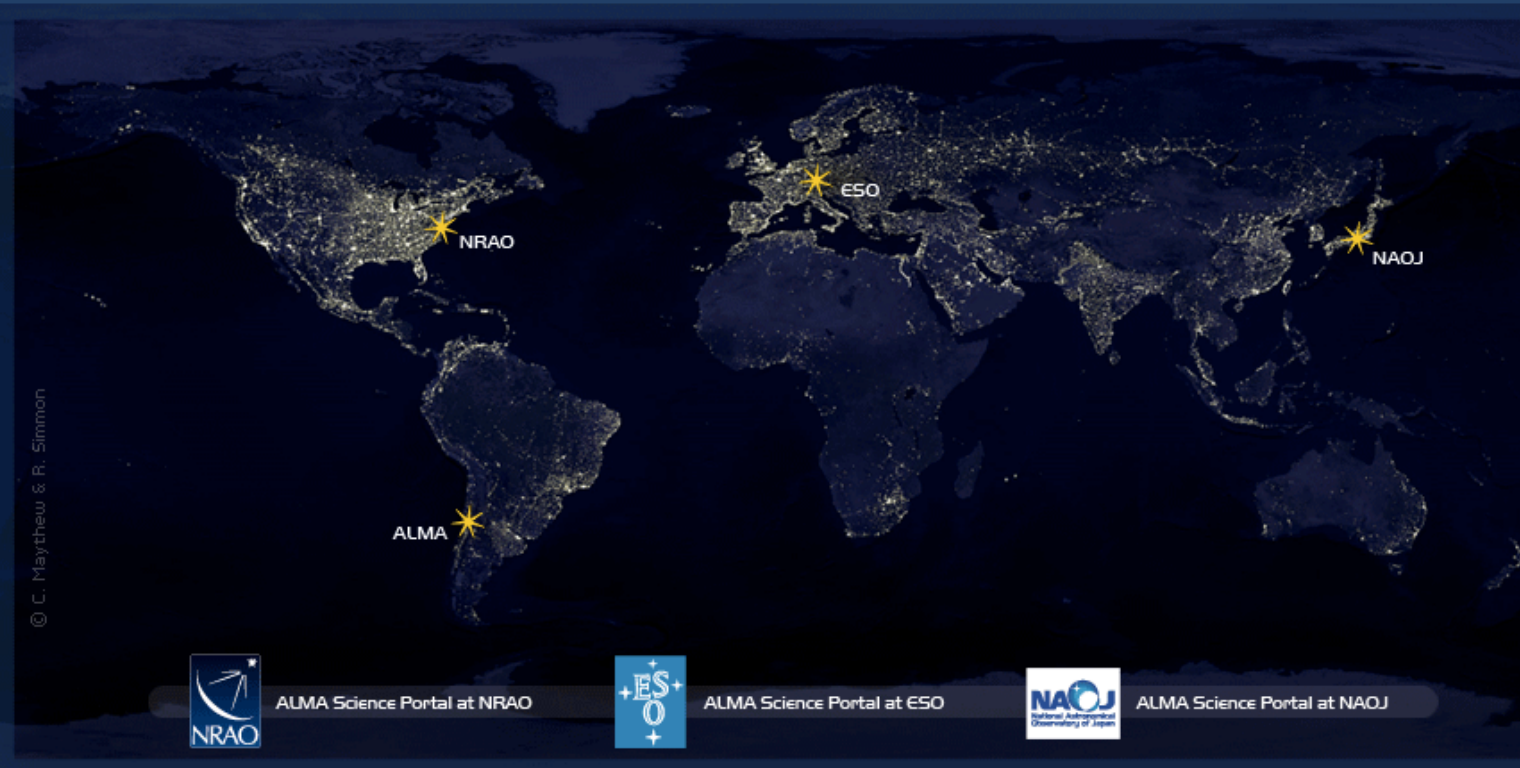


Atacama Large Millimeter/submillimeter Array

In search of our Cosmic Origins



Please select your preferred ALMA Regional Centre (ARC). Alternatively you will be redirected in 5 seconds to the closest ARC which in your case is at .



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Or NRAO's (<https://almascience.nrao.edu/>)



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

ESO NRAO NAOJ

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Welcome to the Science Portal at NRAO



Cycle 3 Call for Proposals

The Cycle 3 Call for Proposals is now open for scientific observations that will be scheduled from October 2015 to September 2016. The proposal submission deadline is 15:00 UT on April 23, 2015.

This is the website for **The ALMA Science Portal**, served from one of the **ALMA Regional Centers (ARCs)** of the ALMA partner organizations: ESO, NRAO or NAOJ. You may switch between the different instances of the portal through the links to the appropriate ALMA partner at the top banner. Through this portal you can find details about the technical capabilities of ALMA, how to propose for observing time, and how to access ALMA data. It includes links to all official ALMA documents and tools, including those for preparing and submitting proposals and processing ALMA data. In order to access some of the tools, users must register with the project and login to the portal via the links at the top banner.

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General News

ALMA Cycle 3 Call for Proposals is now open
Mar 24, 2015

Resubmission of unfinished Cycle 1 and 2 proposals for the Cycle 3 proposal review
Mar 24, 2015

Release of Science Verification data from the ALMA Long Baseline Campaign
Feb 16, 2015

Announcement of intent to release a new installment of Science Verification data
Feb 02, 2015

ALMA Cycle 3 Pre-announcement
Dec 08, 2014

More...

NRAO Events

NRAO Community Day at the Space Telescope Science Institute
Apr 13 - 14, 2015



Proposal Checklist

- Read relevant documentation (CfP, Primer, etc...)
- Create an ALMA account by registering at the Science Portal (almascience.org)
- Download the Observing Tool (OT) & related guides
- Prepare the Science Case (PDF file)
- Prepare Science Goals (sources, frequency & correlator setup, integration times) within the OT
- Prepare the Technical Justification
 - New Technical Justification inside each SG
- Make use of the Helpdesk & the Knowledgebase

<https://almascience.nrao.edu/>



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



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- User Services at ARCs**
 - Helpdesk
 - ALMA Calendars
 - EU ARC
 - NA ARC
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- Release of Science Verification data from the ALMA Long Baseline Campaign
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Dec 08, 2014
- ALMA Status Report: November 2014
Nov 12, 2014
- Additional Scope for Long Baseline Science Verification Targets
Oct 30, 2014
- More...

NRAO Events

NRAO Community Day at

NRAO User Support

Docs & Tools for the call
Helpdesk + help FAQ & knowledgebase



Cycle 3 Documentation & Timeline

- Call for Proposals
- Capabilities
- ALMA Primer
- OT Manual + Quickstart
- ALMA Tech Handbook
- Timeline for Cycle 3
 - ✓ Mar 24 – Call for Proposals
 - Proposal Deadline:
15:00 UT on April 23, 2015
 - Oct 1 – Start of Cycle 3
 - Duration – 12 months



Observing with *ALMA*
A Primer for Early Science



[https://almascience.nrao.edu/
documents-and-tools/cycle3/alma-early-
science-primer](https://almascience.nrao.edu/documents-and-tools/cycle3/alma-early-science-primer)

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[Oct 30, 2014](#)
- [More...](#)

NRAO Events

[NRAO Community Day at](#)

Login/register



To be PI /Co-I, submit, ask for help, access data etc, YOU MUST BE REGISTERED

Proposal Checklist

- Read relevant documentation (CfP Guide, Primer, etc...)
- Create an ALMA account by registering at the Science Portal (almascience.org)
- **Download the Observing Tool (OT) & related guides**
- Prepare the Science Case (PDF file) [or maybe not]
- Prepare Science Goals (sources, frequency & correlator setup, integration times) within the OT
 - **New Technical Justification inside each SG**
- Make use of the Helpdesk & the Knowledgebase

Downloading the ALMA OT



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Observing Tool

The ALMA Observing Tool (OT) is a Java application used for the preparation and submission of ALMA Phase I (observing proposal) and Phase II (telescope runfiles for accepted proposals) materials. It is also used for preparing and submitting Director's Discretionary Time (DDT) proposals. The current *Cycle 1* release of the OT is configured for the Early Science Capabilities of ALMA as described in the [Cycle 1 Call For Proposals](#). Note that in order to submit proposals you will have to register with the ALMA Science Portal beforehand.

Download & Installation

The OT will run on most common operating systems, as long as you have Java 6 installed (see the [troubleshooting page](#) if you are experiencing Java problems). The ALMA OT is available in two flavours: Web Start and tarball.

The **Web Start** application is the recommended way of using the OT. It has the advantage that the OT is automatically downloaded and installed on your computer and it will also automatically detect and install updates. There are some issues with Web Start, particularly that it does not work with the Open JDK versions of Java such as the "Iced Tea" flavour common on many modern Linux installations. The Sun/Oracle variant of Java should therefore be installed instead. If this is not possible, then the tarball installation of the OT is available.

The **tarball** version must be installed manually and will not automatically update itself, however there should be no installation issues. For Linux users, we also provide a download complete with a recommended version of the Java run time environment. Please use this if you have any problems running the OT tarball install with your default Java.

WebStart

Tarball

Documentation

Extensive documentation is available to help you work with the OT and optimally prepare your proposal:

- If you are a novice OT user you should start with the [OT Quickstart Guide](#), which takes you through the basic steps of ALMA proposal preparation.
- Audio-visual illustrations of different aspects of the OT can be found in the [OT video tutorials](#). These are recommended for novices and advanced users alike.
- More in-depth information on the OT can be found in the [User Manual](#), while concise explanations of all fields and menu items in the OT are given in the [Reference Manual](#). These two documents are also available within the OT under the Help menu.



Proposal Checklist

- Read relevant documentation (CfP Guide, Primer, etc...)
- Create an ALMA account by registering at the Science Portal (almascience.org)
- Download the Observing Tool (OT) & related guides
- **Prepare the Science Case (free-form PDF file, 4 pages)**
- Prepare Science Goals (sources, frequency & correlator setup, integration times) within the OT
 - **New Technical Justification inside each SG**
- Make use of the Helpdesk & the Knowledgebase

When preparing Science Case...

ALMA provides two tools for users to produce simulated images:

- **ALMA Observation Support Tool (OST)**: a simple web interface to help users generate ALMA simulations. Users submit jobs to the OST and are notified by email when the simulations are completed.
 - <http://almaost.jb.man.ac.uk>
- **CASA** tasks “**simobserve**” and “**simanalyze**”, generate simulated ALMA observations. See also “**simalma**” to simplify the process of combining data from multiple arrays
 - **CASA**: “Common Astronomy Software Applications”, which is the offline data reduction and analysis tool for ALMA data
 - <http://casaguides.nrao.edu>

Proposal Checklist

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Atacama Large Millimeter/submillimeter Array
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Oct 30, 2014

More...

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NRAO Community Day at



ALMA Science Portal at NRAO

I could use a hand ...

Have no fear, the ALMA Helpdesk is there...

ALMA



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Lost password

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 - Early Science - Cycle 1 (31)
 - Resources & Observer Support (12)
 - Project Planning (14)
 - ALMA Observing Tool (OT) (29)
 - Proposal Handling (5)
 - Archive & Data Retrieval (4)
 - Offline Data Reduction and/or CASA (14)
 - Development Program (1)

Knowledgebase

- General ALMA Queries (13)**
 - Can I submit a ticket in Japanese?
 - How close can ALMA observe to the Sun?
- Early Science - Cycle 1 (31)**
 - Can I use "breakpoints" in ALMA cycle 1?
 - The Cycle 1 Technical Handbook has some gaps in its discussion of ALMA receivers (SSB, 2SB, DSB). What else can you tell me about them?
- Resources & Observer Support (12)**
 - How do I arrange a visit to one of the ARCs?
 - Where can I find ALMA documentation and manuals?
- Project Planning (14)**
 - What should I include for the content of the Technical Justification and in what format should I submit it?
 - Where can I find the online ALMA observing simulator developed by the University of Manchester?
- ALMA Observing Tool (OT) (29)**
 - What do I do if I can't get the OT to work?
 - How do I deal with targets with unspecified coordinates in the OT?
- Proposal Handling (5)**
 - May I submit an identical proposal to more than one category, e.g. submitting a proposal on distant galaxies both to cosmology and to galaxy categories?
 - Which category should I submit a proposal on distant galaxies: "cosmology/high-z" or "Galaxies/Nudei"?

Live Chat Software by Kayako



help.almascience.org



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

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Please type your question here

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Help Desk Software by Kayako Resolve

ALMA Helpdesk at NRAO (logged in view)

I could use a hand...



- <https://almascience.nrao.edu/proposing/learn-more>

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Learn More

What is ALMA?

ALMA Science Capability

Developing a Research Program with ALMA

Estimating sensitivity and integration time

The [ALMA Sensitivity Calculator \(ASC\)](#) will help you with this step.

In radio astronomy, source fluxes are generally expressed in terms of flux density using Jansky (Jy) units, or brightness temperature, T_b , in Kelvin.

Line fluxes are generally expressed in terms of velocity-integrated flux, S , in units of Jy km/s, or in intensity, I , in units of K km/s

Learn more

Chapter 9 of the [ALMA Technical Handbook](#) explains the operation of the ASC.

You may need to decide whether to setup your experiment in terms of T_b or [flux density](#). See also the knowledgebase article [How do I convert flux measurements given in Jy km/s or K km/s into the peak flux density required by the OT?](#)

Formulae for deriving expected line fluxes can be found in Solomon & Vanden Bout, 2005, Annual Review of Astronomy and Astrophysics (ARAA), 43, 677, section 2.

Accessible spectral lines

Visualising your expected images

Configurations, resolution and Largest Angular Structure (LAS)

Do I need to use the Atacama Compact Array?

Actual moment of the proposal submission

Click here to make sure that your project can be validated by the OT. If it won't, you will not be able to submit it.

When you are satisfied that your proposal is complete, click here to submit your project to the ALMA Archive

Contextual Help

1. Please ensure you and your co-Is are registered with the [ALMA Science Portal](#)
2. Create a new proposal by either:
 - Selecting *File > New Proposal*
 - Clicking on the **1** icon in the toolbar
 - Or clicking on this [link](#)
3. Click on the [proposal](#) tree node and complete the relevant fields.

Phase I: Science Proposal

New Science Proposal → Create Science Goals → Validate Science Proposal → Submit Science Proposal

Click on the overview steps to view the contextual help

Importing And Exporting | Template Library | Need More Help? | View Phase 2 Steps

Then what happens?

- Note that you can resubmit as often as needed, but bear in mind that the server is quite busy right before the deadline
- Proposals will often validate before being absolutely finalized
- Standard and ToO proposals will be reviewed by the ALMA Proposal Review Committee (APRC) and the ALMA Review Panels (ARP).
- All proposals will be subject to Technical Assessment by a group of JAO and ARC (*ie* internal) expert users.
- Proposals will be assessed on the basis of the *overall scientific merit* of the proposed investigation and its potential contribution to the *advancement of scientific knowledge*.
- Following approval by the Directors' Council, the outcome of the Proposal Review Process will be communicated to the PIs of all valid submitted proposals, expected on or around July 29, 2015.

Then what happens?

- If successful, you will be contacted about Phase II Scheduling Blocks (SBs).
- Then wait – dynamic scheduling means your Contact Scientist doesn't know when your project will run beyond the general time periods when the appropriate configurations are in place . As the project progresses, updates are shown in the Project Tracker at:

<https://almascience.nrao.edu/observing/project-tracker>

A project tracker view

asa.alma.cl/protrack/ via calibrator database

ALMA Project Tracker 1 Projects found

Project Code	PI Userid	Executives	Project Name	Progress	State	Time Co	Grade	Rank	Version	Time of Creation	Timed Out	Project UID
2013.1.01194.S	gerin	EU	A CF+ survey of the diffuse medium in the inner ga	<div style="width: 84%;"></div> 84 %	InProgress		A	9	3.0	2013-12-05 13:26:16		uid://A001/X112/X207

2013.1.01194.S - A CF+ survey of the diffuse medium in the inner galaxy

Entity	Status	Project Details	Comments and Attachments
<ul style="list-style-type: none"> 2013.1.01194.S InProgress Proposal ObsUnitSet PartiallyObserved <ul style="list-style-type: none"> SG OUS (CF+ in the inner galaxy - Sgr s) FullyObserved <ul style="list-style-type: none"> Group OUS FullyObserved <ul style="list-style-type: none"> Member OUS (SgrB2_S) PipelineProcessing <ul style="list-style-type: none"> SgrB2_S_a_03_TE FullyObserved SG OUS (CF+ in the inner galaxy - W31) PartiallyObserved <ul style="list-style-type: none"> Group OUS PartiallyObserved <ul style="list-style-type: none"> Member OUS (G10.6-0.4) PartiallyObserved <ul style="list-style-type: none"> G10.6-0_a_03_TE WaitingForP2G SG OUS (CF+ in the inner galaxy - B173) Delivered <ul style="list-style-type: none"> Group OUS Delivered <ul style="list-style-type: none"> Member OUS (B1730-130) Delivered <ul style="list-style-type: none"> B1730-13_a_03_TE FullyObserved 		<p>Code 2013.1.01194.S Cycle 2013.1</p> <p>PI Maryvonne Gerin (gerin) maryvonne.gerin@ira.ens.fr</p> <p>Creation date 2013-12-05 13:26:16 Version 3.0</p> <p>Executives EU Project UID uid://A001/X112/X207</p> <p>Ph1m Priority Flag A Grade A</p> <p>Rank 9 Score 1.836</p> <p>Project completion <div style="width: 84.7%;"></div> 84.7% Project Report PDF HTML</p> <p>P2G Eelco van Kampen (eelco) evkampen@eso.org</p> <p>Contact Scientist Sergio Martin (smartin) smartin@iram.fr</p> <p>State InProgress </p> <p style="text-align: right;">Project Status UID uid://A001/X112/X207b</p>	

APRC Consensus report

Understanding the connection between the CO-dark gas and diffuse molecular gas is very important. The authors present a clever, novel method to probe diffuse molecular gas via CF+ observations. The proposal will employ ALMA's sensitivity to demonstrate the usefulness of CF+ as a new probe of the HI-to-H2 transition. By comparing CF+ spectra in the direction of compact HII regions with other tracers (e.g. HI and CII from Herschel) the authors will constrain the relative importance of neutral and ionized phases to the C+ budget. This is a strong and novel proposal, building on the successful observations of the diffuse ISM with Herschel and Planck.



For more info:

<https://almascience.nrao.edu/>

The Atacama Large Millimeter/submillimeter Array (ALMA), an international astronomy facility, is a partnership of Europe, North America and East Asia in cooperation with the Republic of Chile. ALMA is funded in Europe by the European Organization for Astronomical Research in the Southern Hemisphere (ESO), in North America by the U.S. National Science Foundation (NSF) in cooperation with the National Research Council of Canada (NRC) and the National Science Council of Taiwan (NSC), and in East Asia by the National Institutes of Natural Sciences (NINS) of Japan in cooperation with the Academia Sinica (AS) in Taiwan. ALMA construction and operations are led on behalf of Europe by ESO, on behalf of North America by the National Radio Astronomy Observatory (NRAO), which is managed by Associated Universities, Inc. (AUI), and on behalf of East Asia by the National Astronomical Observatory of Japan (NAOJ). The Joint ALMA Observatory (JAO) provides the unified leadership and management of the construction and operation of ALMA.

