How to get your ALMA Proposal accepted

[or at least write a good one]

Toby Brown
McMaster University

Atacama Large Millimeter/submillimeter Array
Karl G. Jansky Very Large Array
Very Long Baseline Array

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NSF

Associated Universities, Inc.

Proposal Checklist

- ✔ Create ALMA account via the Science Portal
- ✔ Read the relevant documentation
- ✔ Prepare your Science Case
- ✔ Download the Observing Tool
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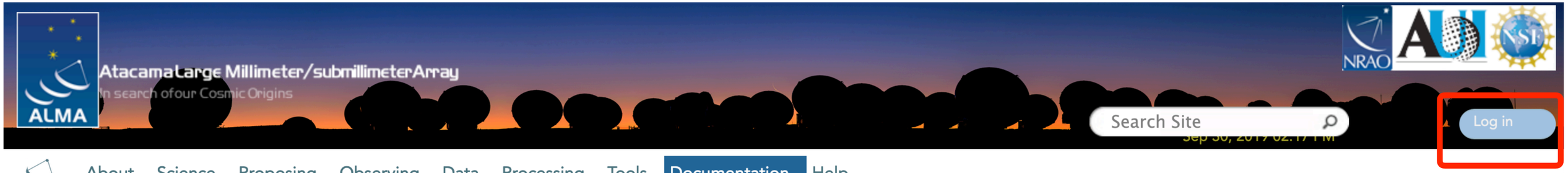
- ✔ Make use of the Helpdesk & Knowledgebase

The ALMA Science Portal



[http://almascience.nrao.edu]

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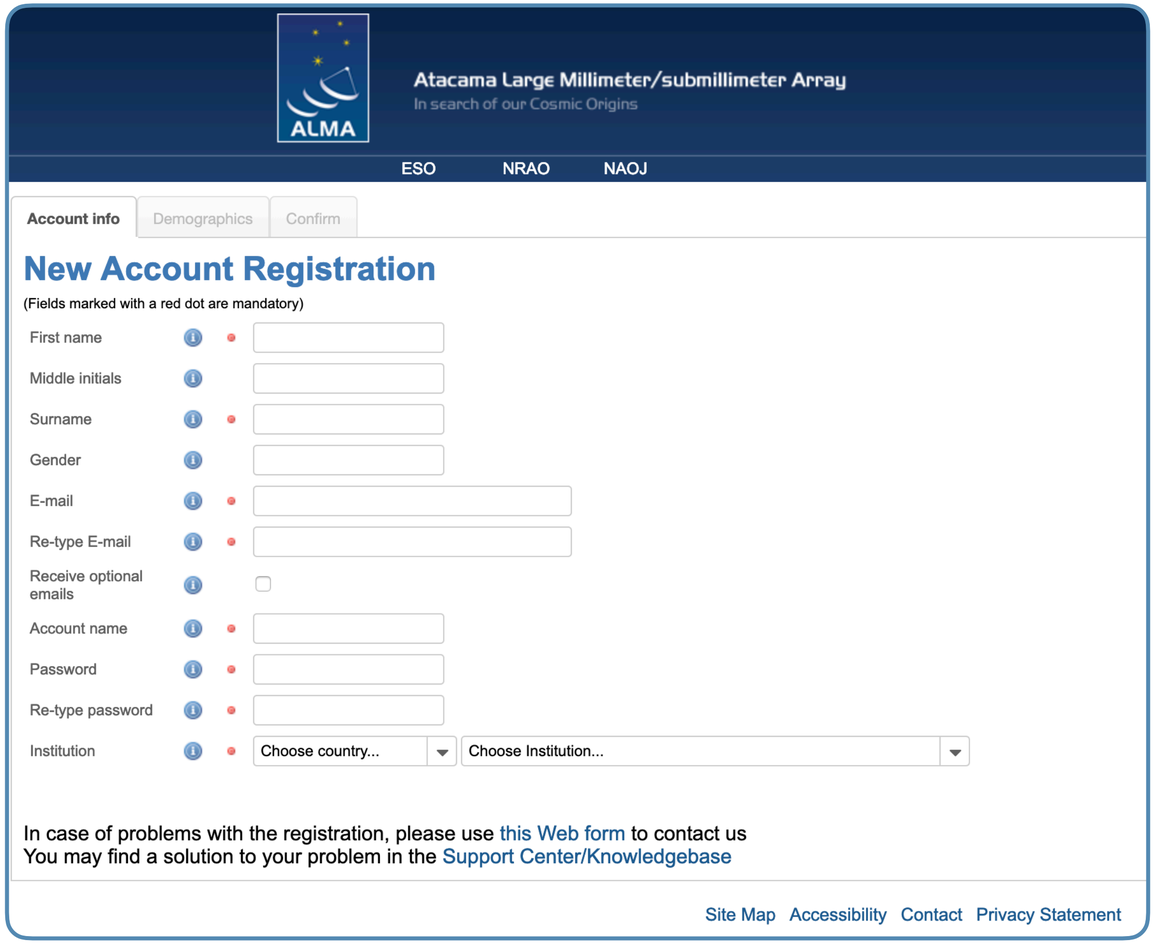
The ALMA Science Portal

Reasons to register an ALMA account:

- *You need an account to submit a proposal [all co-I's need an account; make sure they do early!]*
- *You need an account to submit a Helpdesk Ticket [you should be using this amazing resource]*

Please fill out [optional] demographic info!

[helps tracks career stage + gender in proposal outcomes]



[https://asa.alma.cl/UserRegistration/newAccount.jsp]

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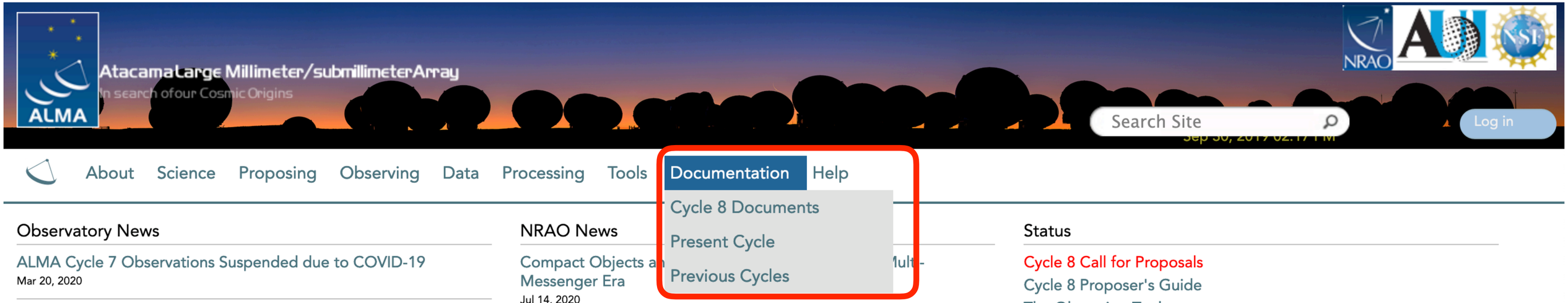
ALMA Cycle 8 Documentation



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(COVID-19) ALMA Cycle 8 Timeline

Date	Milestone
17 March 2020 (15:00 UT)	Release of Cycle 8 Call for Proposals, Observing Tool, and supporting documents and opening of the Archive for proposal submission
~~15 April 2020 (15:00 UT)~~	Proposal submission deadline for Cycle 8 proposals
End of July 2020	Announcement of the outcome of the proposal review process process
9 September 2020	Deadline for submission of Phase 2 material for Cycle 8 accepted proposals
October 2020	Start of ALMA Cycle 8 science observations
September 2021	End of ALMA Cycle 8

NO EARLIER than 15:00 UT 19 May 2020.

Likely to be affected…

https://science.nrao.edu/

ALMA Cycle 8 Documentation

About Science Proposing Observing Data Processing Tools **Documentation** Help

Cycle 8 Documents

Call for Proposals

Documentation supporting the current ALMA Call for Proposals – **Cycle 8**. Documents from previous Cycles are provided here.

Document	Description
ALMA Proposer's Guide	Contains all pertinent information regarding the ALMA Call for Proposals
ALMA Technical Handbook	A comprehensive description of the ALMA observatory and its components
ALMA Users' Policies	The long-term core policies for use of the ALMA and ALMA data by the science community
Observing With ALMA - A Primer	Introduction to interferometry and how to use ALMA
ALMA Proposal Template	LaTeX format. Recommended but not mandatory
ALMA Proposal Review Process	The latest version of the ALMA Principles of the ALMA Proposal Review Process

all proposers

new proposers

[https://almascience.nrao.edu/documents-and-tools/cycle-8-documents]

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ALMA Cycle 8 Documentation

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use ctrl+F

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Proposal Science Case

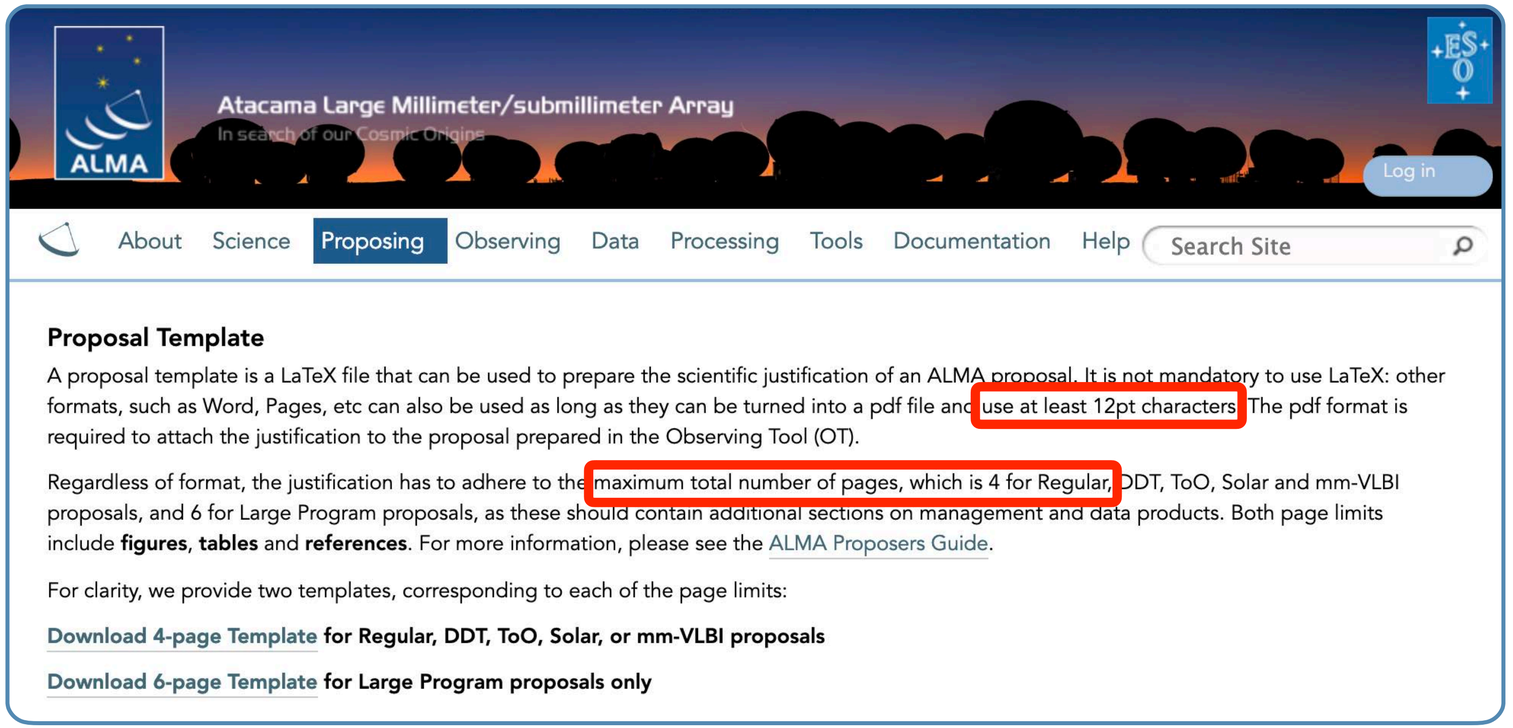
You MUST include:

- *Astronomical importance*
- *Estimate of intensity of targets*
- *Justification of requested SNR*
- *Size of target sample*

You may include:

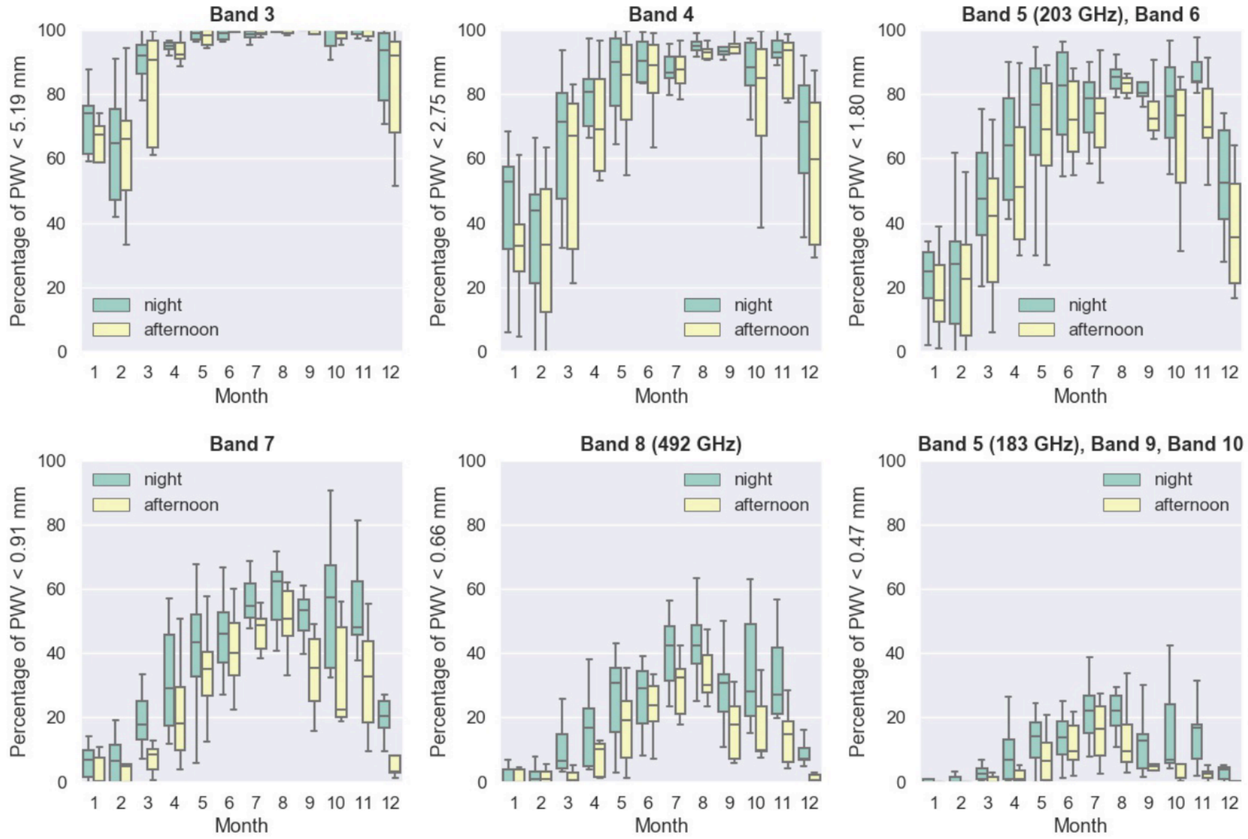
- *Figures & tables*
- *References (must be self-contained)*
- *Simulations (see afternoon tutorial)*

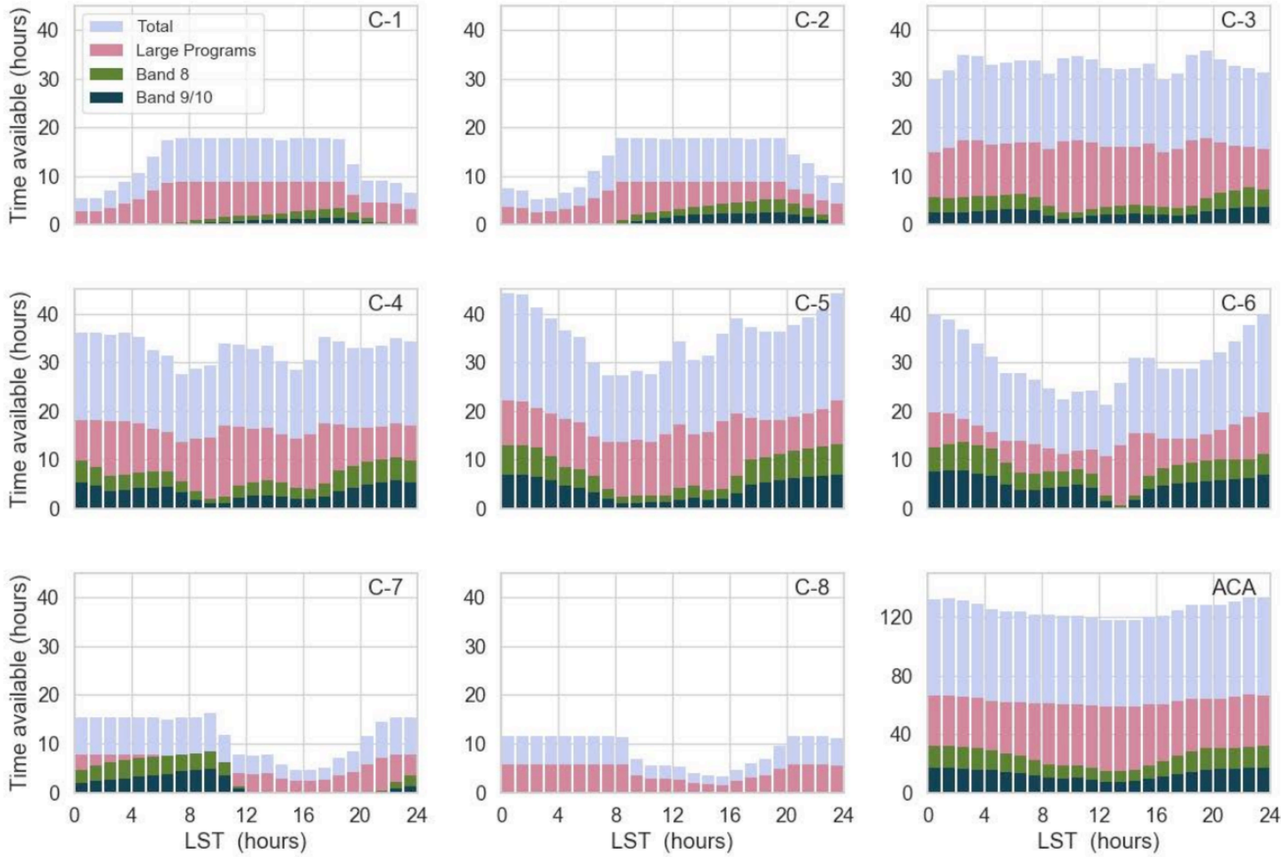
Using proposal template (as-is!) is strongly encouraged



[https://almascience.eso.org/documents-and-tools/proposing/proposal-template]

Observing strategies are important





Proposal Science Case

Success rate does NOT depend on time request (out to ~30 hours)

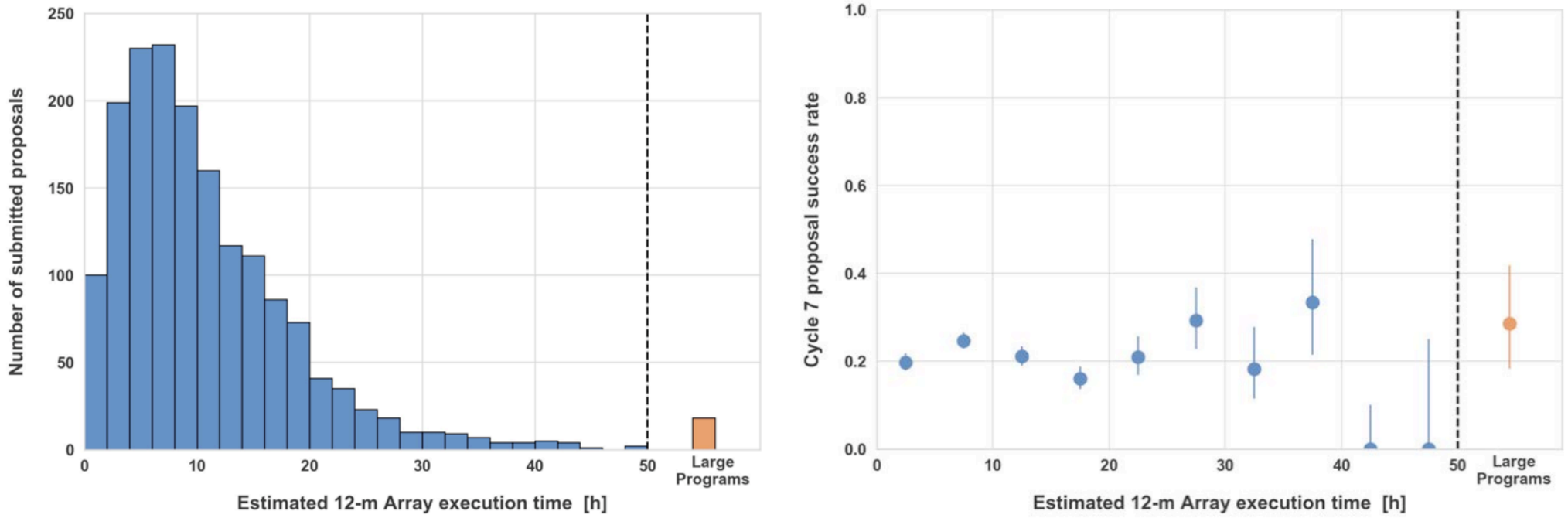


Figure 1: (Left) Number of proposals submitted as a function of the 12-m Array execution time in Cycle 7. (Right) The fraction of proposals (with 1σ confidence intervals) that are assigned priority Grade A or B as a function of the estimated 12-m Array time.

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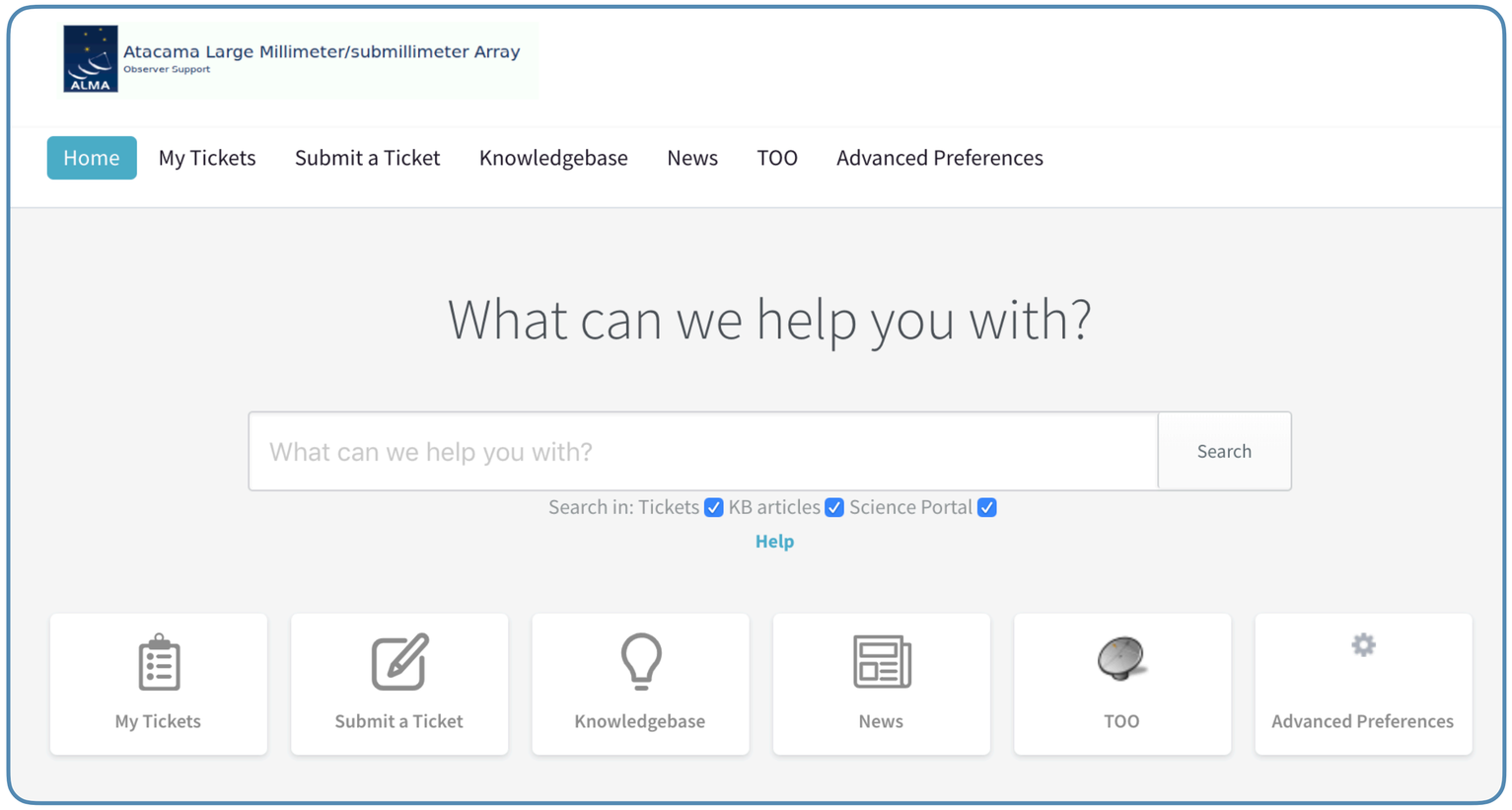
Helpdesk & Knowledgebase

Helpdesk

- *ALMA experts answer your questions*
- *Responses < 48 hr (usually faster)*
- *Staffed 24/7 near proposal deadline*
- *Used for Phase 2 & ToO triggers*

Knowledgebase

- *Bank of useful articles & how-tos*
- *Check first before contacted Helpdesk*



[https://help.almascience.org]

ALMA Review Process

- *Reviewers consist of scientists selected from the international astronomical community*
- *Reviewers are assigned to ALMA Review Panels in a specialized scientific category (e.g., Planet Formation)*

Dual anonymous review - identities concealed from the reviewers

- *Write in 3rd person, anonymise your science case!*
- *First year trying this; attempt to reduce bias affecting outcomes of proposal process*

Evaluated based on scientific merit

- *Possible to change technical aspects of proposal to enable execution (within reason)*
- *Major changes (e.g., additional bands) unlikely to be approved*
- *Large Programs subject to additional evaluation factors (scheduling, data products, management plan)*

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Coming later this afternoon!

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Resources

ALMA Help Desk
Questions and requests answered within 48 hours (faster on week of deadline) **[https://help.almascience.org/]**

Documentation
OT User Manual, OT Reference Manual, OT trouble-shooting page
[https://almascience.nrao.edu/documents-and-tools]

Video Tutorials
Visual demonstrations of OT usage (produced in Cycle 6)
[https://almascience.eso.org/proposing/observing-tool/video-tutorials]

Simulation Tutorials
Check that your observations are feasible in chosen configuration
[https://casaguides.nrao.edu/index.php/ALMAguides]

What the TAC are looking for?

Adam Leroy & Christine Wilson

What is the process for proposal writing?

How do I write an anonymous proposal?

Do the TAC judge the technical case and/or feasibility?

Do I need to explain the setup (band, resolution, snr etc.) from a scientific perspective?

Write reader friendly proposals. The TAC read 100s so make it easy to parse important information