Additional information from scheduling and Phase 2 Generation viewpoints
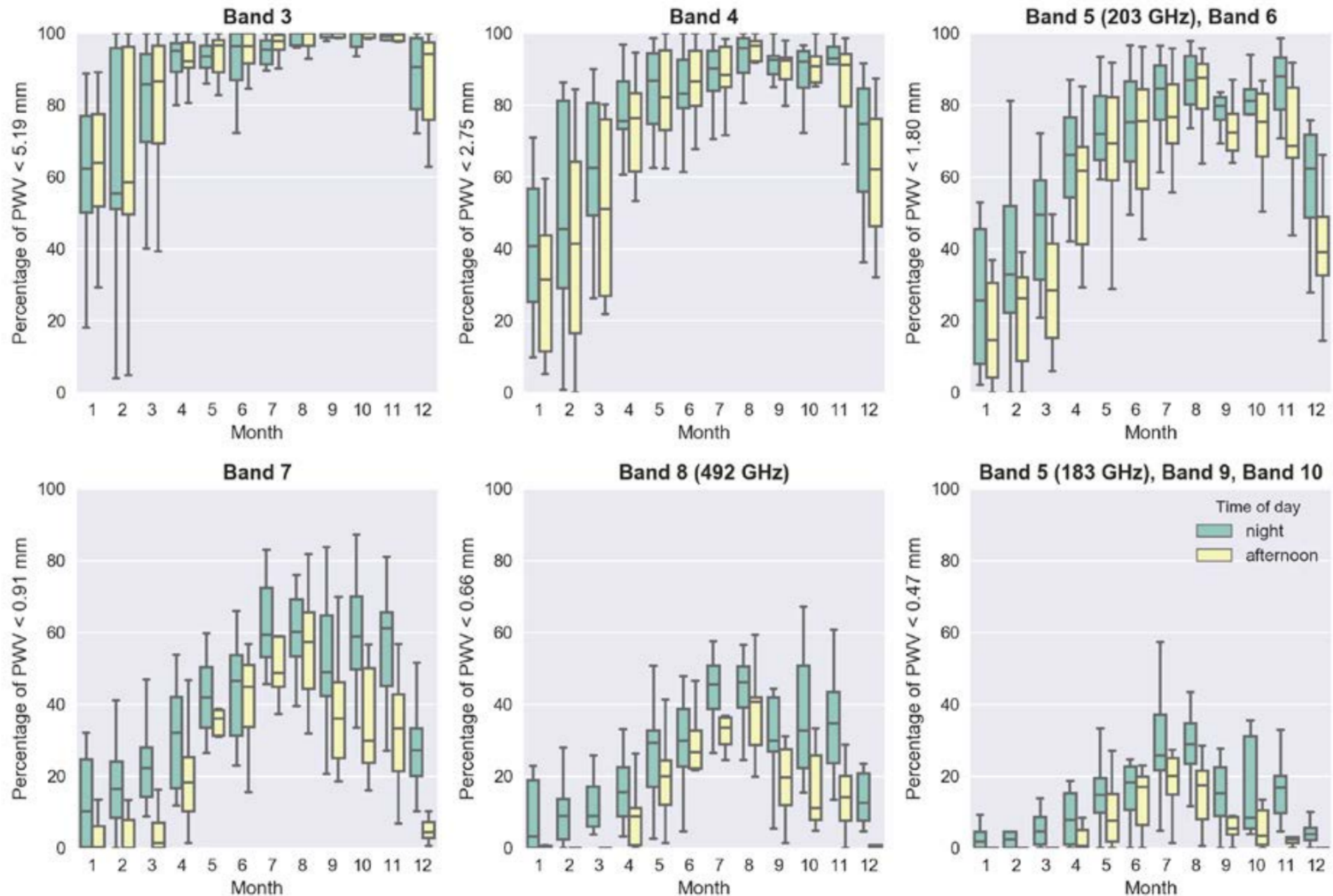
Daniel Espada

East Asian ALMA Regional Center
Specially Appointed Associate Professor

Summary

- 1) Weather pattern, configuration plan, observing time available, and observing pressure

- 2) Duplications and Resubmission

- 3) Double check observing parameters before deadline

- 4) Minor/Major changes

- 5) Other considerations

1) Weather pattern

Configuration plan

Bands 7, 8, 9, and 10 and 5 near 183 GHz are not recommended around the Altiplanic winter at any LST
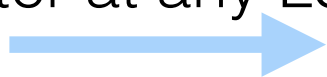
B9, and B10 will only be scheduled in these time ranges, and the rest will also be limited for B7 and B8 observations

Start date	Configuration	Longest baseline	LST for best observing conditions
2018 October 1	C43-6	2.5 km	~ 22h – 10h
2018 October 15	C43-5	1.4 km	~ 0h – 12h
2018 November 25	C43-4	0.78 km	~ 2h – 14h
2018 December 15	C43-3	0.50 km	~ 4h – 15h
2019 January 5	C43-2	0.31 km	~ 5h – 16h
2019 January 20	C43-1	0.16 km	~ 6h – 17h
2019 February 1-28	No observations due to February shutdown		
2019 March 1	C43-1	0.16 km	~ 8h – 21h
2019 March 15	C43-2	0.31 km	~ 8h – 22h
2019 April 1	C43-3	0.50 km	~ 9h – 23h
2019 April 15	C43-4	0.78 km	~ 10h – 0h
2019 May 1	No observations due to major antenna relocation		
2019 June 1	C43-10	16.2 km	~ 13h – 3h
2019 June 20	C43-9	13.9 km	~ 14h – 5h
2019 July 10	C43-8	8.5 km	~ 16h – 6h
2019 August 1	C43-7	3.6 km	~ 18h – 8h
2019 September 5	C43-6	2.5 km	~ 20h – 9h

Configurations

- Angular resolution: Single value / Range / Any / Standalone ACA
- LAS, sensitivity

Effective Cycle 6 observing time
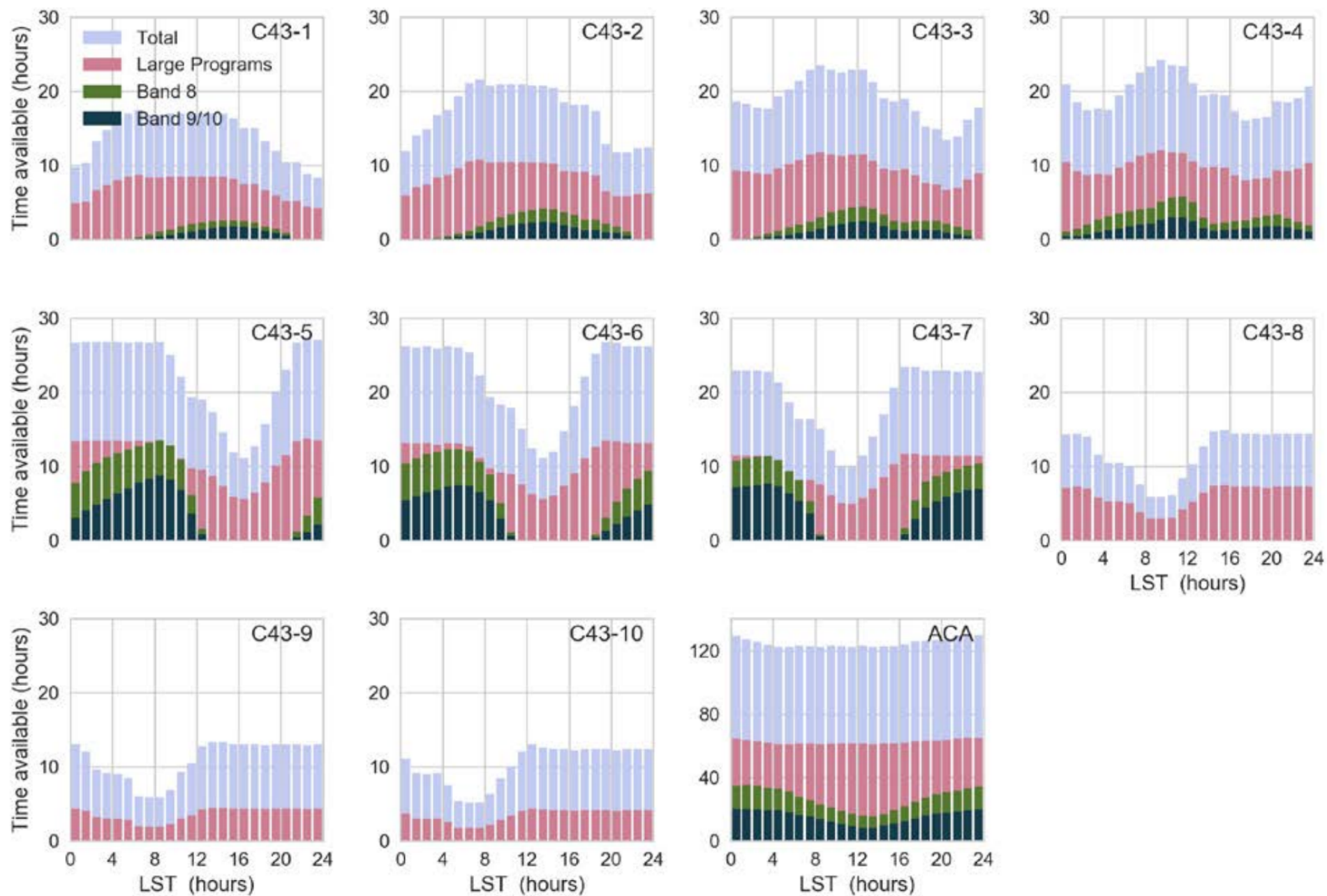
Observing Pressure

- The probability that an observation be scheduled depends on the over-subscription for a given LST and configuration besides the required weather conditions.

- In particular in Cycle 5, projects requesting:

  - Configurations C43-8, 9, or 10 had a higher success rate than those requesting other configurations

  - stand-alone ACA observations have a high probability of being scheduled, especially at LST between 20 h and 14 h.

(Cycle 5) Observing Pressure

C43-2

Requested time
Accepted
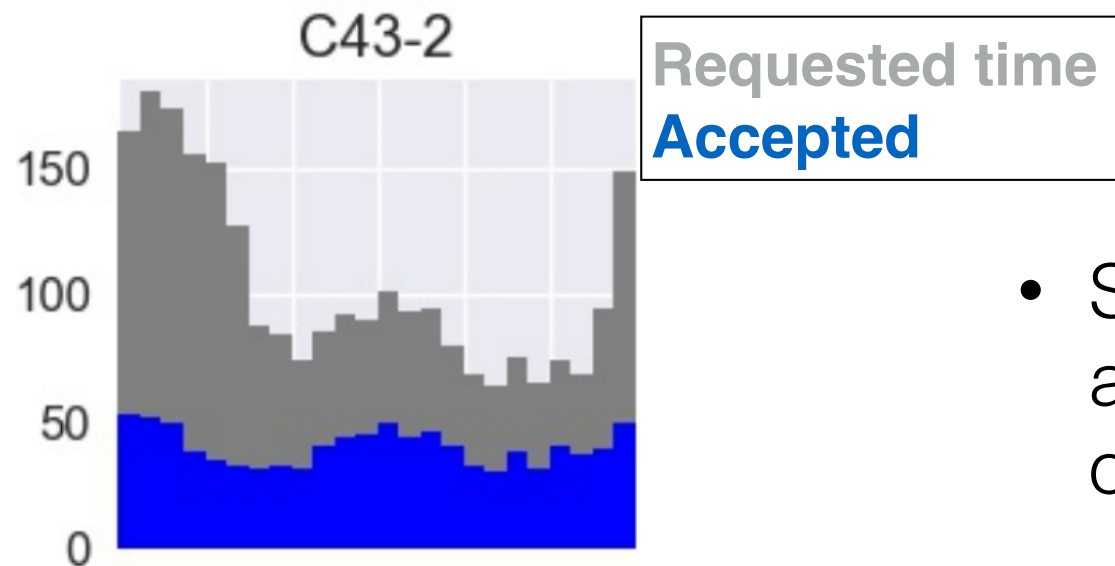
- Some LST ranges such as 0-6 h or 13-19 h show over-subscription

- In general, proposals in less subscribed LST ranges will have a higher probability of execution

7-m Array

LST (hours)
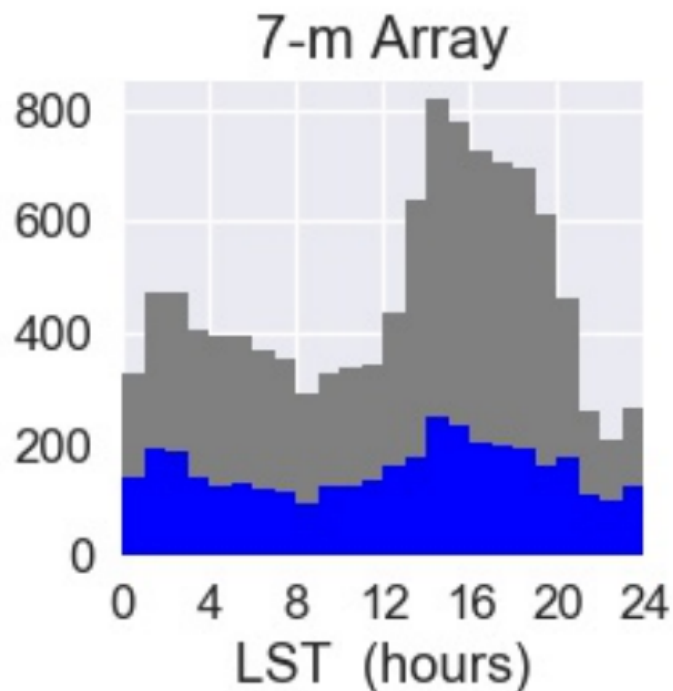
2) Duplications

Check proposed observations against both the ALMA archive and a list of projects in the queue (grade A projects not started as of 2018 March 17).

https://almascience.nao.ac.jp/proposing/duplications

2) Duplications

Check proposed observations against both the ALMA archive and lists of projects in the queue (grade A proj...

https://almascience.nao.ac...

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Check proposed observations against both the ALMA archive and list of projects in the queue (grade A pro...

https://almascience.nao.a...

🔒 Secure | https://almascience.nrao.edu/proposing/duplications

⚏ Apps 📁 Astrophysics 📁 Japan 📁 ALMA

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

About   Science   **Proposing**   Observing   Data   Processing   Tools   Documentation   H...   Sea...

Duplicate Observations

In order to ensure the most efficient use of ALMA, duplicate observations of the same location on the sky with similar ol... (frequency, angular resolution, coverage, and sensitivity) are not permitted unless scien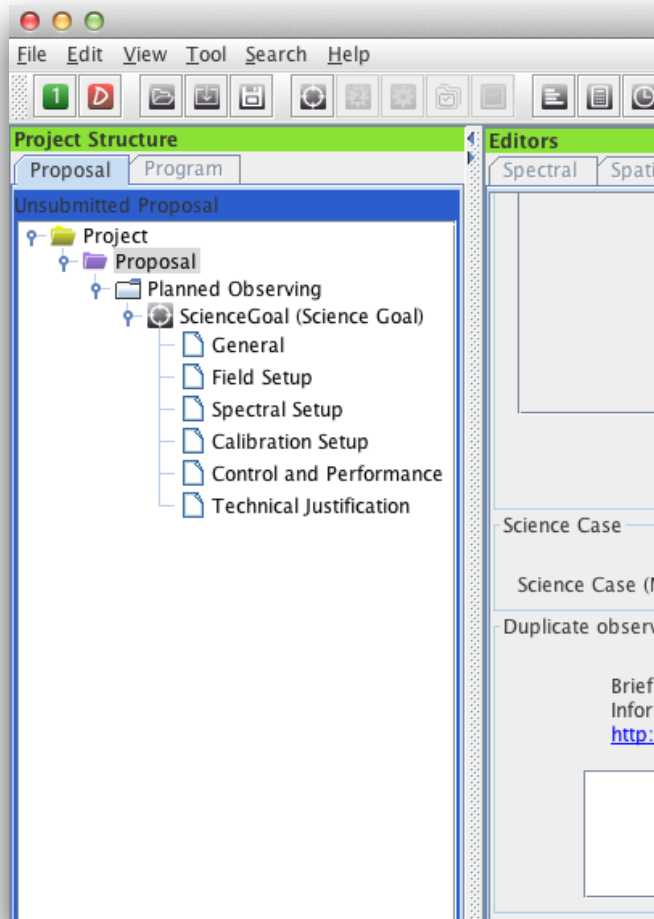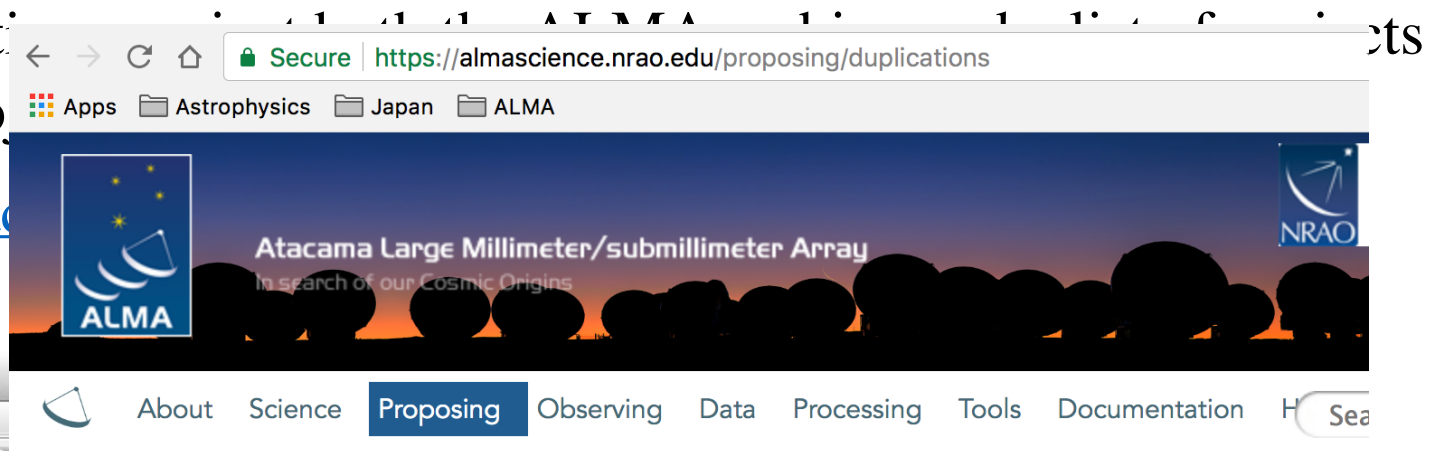tifically justified. Details on the d... provided in Section 4.4 of the Cycle 6 Proposer's Guide and Section 5.2 of the Users' Policies. It is the responsibility of t... (PI) to check their proposed observations against *both* the ALMA Archive and the spreadsheet provided below to avoid...

The ALMA Archive contains an up-to-date list of the PI science observations, including Cycle 5 programs that have been... spreadsheet "Projects in the Queue" supplements the ALMA archive in that it lists the metadata for Grade A projects th... completed as of 2018 March 17 and are still in the observing queue. The spreadsheet lists the sensitivity and angular re... to be achieved assuming the observations are completed in full. Observations from for Grade B and C projects that hav... March 17 will not be used in the duplication checks conducted by ALMA even if observations are obtained later in Cycl...

The ongoing list of observations is provided in both Excel Workbook (xlsx) and Comma Separated Variable (CSV) text fo... for each target, rectangular mosaic, or each pointing in custom mosaics. The spreadsheet content is described at the be... includes target names, coordinates, properties of each spectral window, along with the resolution and sensitivity reques...

A link is provided to a user-contributed python script, which contains functions to search, plot, and display source infor... of ongoing observations. Instructions on how to run the script are provided in the script header. The script is made avail... convenience and is not supported by the ALMA Regional Centers (ARCs).

ALMA Science Archive Query | Projects in the Queue (Excel spreadsheet) | Projects in the Queue (CSV text file) | Python Script

File   Edit   View   Tool   Search   Help

Project Structure   Editors
Proposal | Program   Spectral | Spati...

Unsubmitted Proposal
Project
  Proposal
    Planned Observing
      ScienceGoal (Science Goal)
        General
        Field Setup
        Spectral Setup
        Calibration Setup
        Control and Performance
        Technical Justification

Science Case
Science Case (N...
Duplicate observ...
Briefl...
Infor...
http:...

Resubmissions

- Proposal teams that submit a Cycle 6 proposal to observe some or all SGs of a currently active but unfinished project will have the relevant SGs identified as a "resubmission" by ALMA.

- A SG is deemed a "resubmission" if it constitutes a duplication of an active SG and the PI of the relevant Cycle 5 project is listed as a PI, co-PI or co-I of the corresponding Cycle 6 proposal or the Cycle 6 PI is listed as an investigator on the Cycle 5 proposal.

- For such resubmissions, the relevant portion of the Cycle 6 proposal will be cancelled if the observations are successfully completed in Cycle 5. Observations started in a previous cycle and accepted as a resubmission in Cycle 6 will continue to be observed with the setup of the previous cycle.

3) Check your observing setup

- Target properties (coordinates,velocity/redshift)

- Single pointing/Mosaic information

- Spectral setup

- Angular resolution/LAS and sensitivity. Time constraints?

- … and make sure sufficient justification in the Technical justification

4) Minor and Major changes

- Changes to a submitted proposal are not permitted prior to the completion of the review process

- Minor changes in the Science Goals can usually be made during the Phase 2 process by the PI

- PIs of proposals assigned a grade of A, B, or C may request changes to their projects subject to the ALMA Change Request policies described in the Users' Policies. These are decided by change request committee

5) Other considerations

- **Non standard observations:** Remember that only 20% of the time goes to non-standard modes, so select if really needed. Note that Band 8 observations is standard.

- **Aggregate bandwidth** (sum of bandwidths of all spectral windows): Try to maximize because it is used for calibration. If aggregate bandwidth less than ~1 GHz then it is non-standard

- **ToO:** Observations that can be anticipated, but for which source coordinates and timing are not known at proposal submission time (Examples: Supernovae, gamma ray bursts, transients) Just time critical is not ToO and should be submitted as a regular proposal

- **Spectral scan:**   If long on-source times and many frequency tunings then it is more efficient to setup such spectral scans using separate SGs for each frequency tuning.