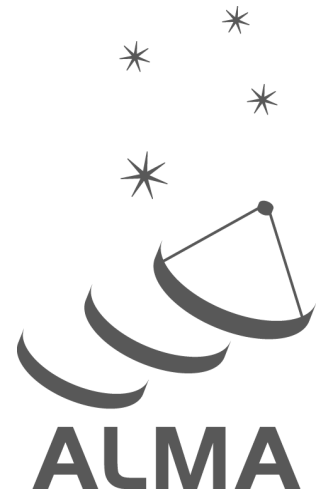


ALMA Snooping Project Interface (SnooPI) User Manual

Anna Miotello



www.almascience.org

User Support:

For further information or to comment on this document, please contact your regional Helpdesk through the ALMA User Portal at www.almascience.org. Helpdesk tickets will be directed to the appropriate ALMA Regional Centre at ESO, NAOJ or NRAO.

Revision History:

Version	Date	Editors
1.0	March 2016	Evanthia Hatziminaoglou
1.1	June 2016	Evanthia Hatziminaoglou
1.2	February 2017	Evanthia Hatziminaoglou
2.0	May 2017	Evanthia Hatziminaoglou
3.0	March 2018	Evanthia Hatziminaoglou
3.1	March 2019	Evanthia Hatziminaoglou
4.0	March 2020	Anna Miotello
4.1	March 2021	Anna Miotello
1.0	March 2022	Anna Miotello
1.0	March 2023	Katharina Immer
1.0	March 2024	Katharina Immer
1.0	March 2025	Katharina Immer
1.0	March 2026	Anna Miotello
2.0	July 2026	Anna Miotello

In publications, please refer to this document as:

A. Miotello 2026, ALMA SnooPI User Manual, ALMA Doc. 13s.11 v2.0

TABLE OF CONTENTS

1. THE ALMA SNOOPING PROJECT INTERFACE (SNOOPI)	2
2. THE INTERFACE	2
3. “MY PROJECTS” VIEW	3
4. “MY SBS” VIEW	4
5. THE PROJECT TREE VIEW	5
5.1. The Scheduling Blocks detailed view	6
5.2. The Execution Blocks detailed view	8
5.3. The Phase 2 information	8
The Field Setup	9
The Spectral Setup	11
6. STATUS SYMBOL DESCRIPTIONS	12

1. The ALMA Snooping Project Interface (SnooPI)

The ALMA Snooping Project Interface (SnooPI) is a read-only web application that runs on Mozilla Firefox, Google Chrome, and Safari.

SnooPI allows Principal Investigators (PIs), Co-Is and Delegees to follow their ALMA projects from the moment of proposal submission all the way to data delivery. SnooPI also allows Contact Scientists to track all the ALMA projects supported by their node, by accessing exactly the same information that is made available to the PIs.

2. The interface

SnooPI can be accessed via the ALMA Science Portal by selecting the tool from the drop-down menu under the 'Observing' tab. The landing page of the application is a Dashboard-like page (Fig. 1) with direct access to the user's projects and Scheduling Blocks (SBs) as PI (including Co-PI),

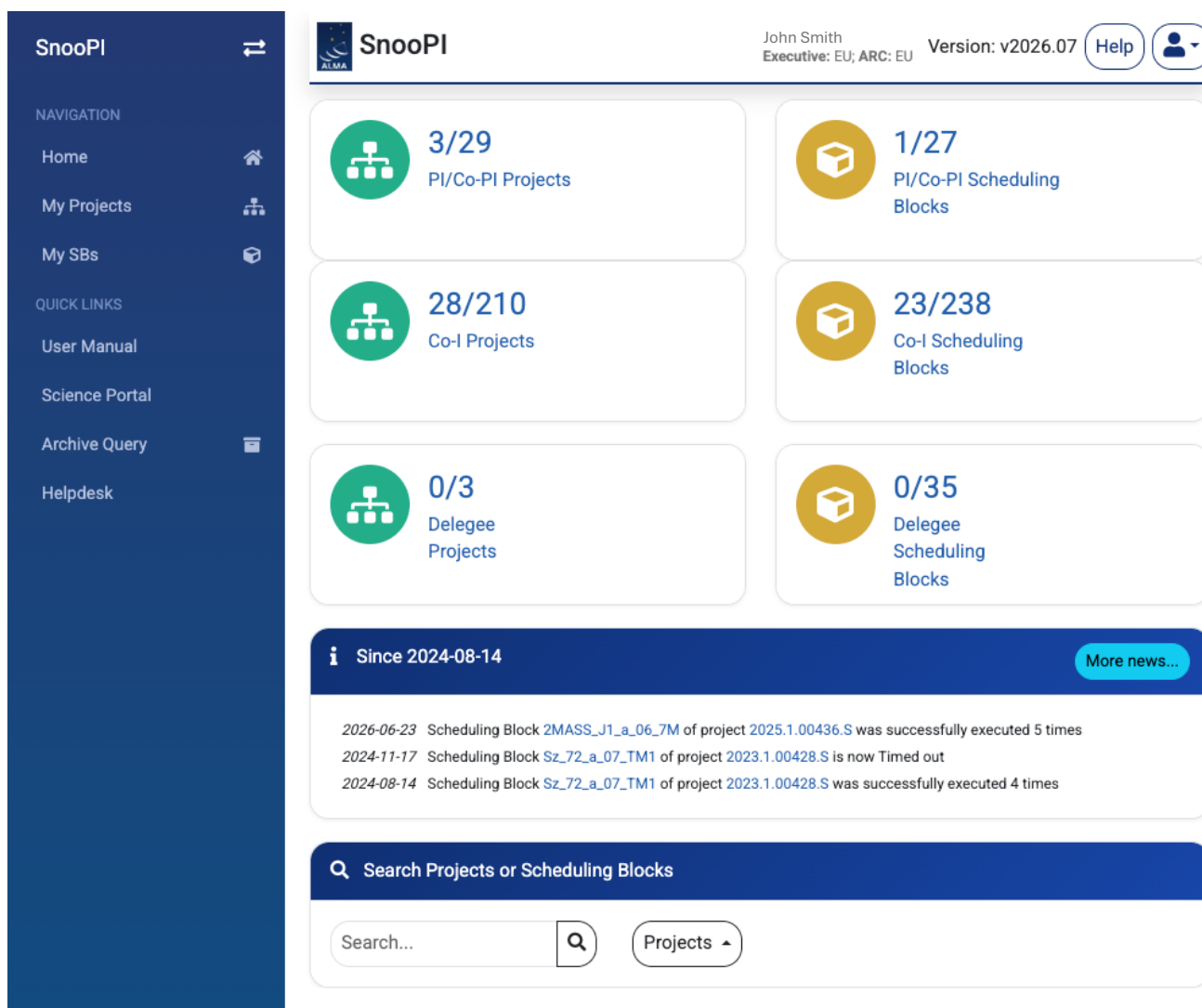


Fig. 1: SnooPI's home page, showing the dashboard of projects and scheduling blocks as well as the news feed and the search feature.

Co-I and Delegee if applicable. The details of the various views and functionalities will be described in the following sections.

The ‘Help’ button in the top right corner provides a list of all the symbols used to describe the states of Projects, SBs, Member Observing Unit Sets (MOUSs) and Execution Blocks (EBs). Clicking on the avatar icon next to the ‘Help’ button, the user can either access their User Profile in the Science Portal, where the data, Phase 2 submission and Target of Opportunity delegations can be handled, or has the option to log out of SnooPI.

The dashboard on the home page displays the number of currently active as well as the total number of projects, subdivided into the PI, Co-I and Delegee (if applicable) categories. The total number of projects also includes rejected proposals.

An expandable newsfeed below the dashboard informs the user about the latest news for their projects. At the bottom of the page, a Search feature permits to look for a specific project or SB, which can be selected from the pull-down menu.

The left-hand side menu is retractable and provides direct links to the *Home* page (dashboard view), *Projects* and *SBs*, the *User Manual*, the *Science Portal*, the *Archive Query* Interface and the *Helpdesk*. In the bottom left corner, the user can find direct links to the pages of the three ALMA Executives (ESO, NRAO and NAOJ).

3. “My Projects” view

The Projects view displays by default a table of the active projects (Fig. 2), listing the project code, title of the project, project status and priority grade. The table is sortable by any of these columns by clicking the arrow next to the column name. Different tabs on the top subdivide the projects into the PI (including Co-PI), Co-I, and Delegee (if applicable) categories.

 SnooPI

John Smith
Executive: EU; ARC: EU

Version: v2026.07

Help



PI/Co-PI

Co-I

Delegee

 Projects

☐ All projects

☐ Accepted projects

Search...



Project code ^	Project Title ^	Status ^	Grade ^
2026.1.12345.S	Having so much fun with ALMA		
2025.1.12345.S	Having fun with ALMA		B
2024.1.12345.S	 An amazing observing program 2MASS_J1_a_06_7M		C

Fig 2. “My Projects” list with the SB list of the last project deployed, after clicking on the cube next to the project code.

Active projects are all approved projects of the current cycle with a priority grade A, B (i.e. high priority projects) or C (i.e. filler projects), A-ranked carry-over projects from the previous cycle, as

well as projects from the previous cycle that have not yet been fully delivered. Before the result of the proposal review is made public¹, projects submitted to the next cycle are also listed by default among the active projects.

By selecting “All projects”, inactive projects (e.g. fully or partially completed projects from previous cycles, rejected projects etc) are also included in the table, in reverse Project Code order. Rejected projects are removed from the displayed list by selecting “Accepted projects”.

The status of each project is indicated by an icon. The meaning of the icon is explained in a text box that appears when hovering over the icon. The intent of each icon is listed in SnooPI when clicking the “Help” button in the upper right corner as well as in Section 6 of this document.

A cube to the left of the project name indicates that SBs have been generated for this project. Clicking on the cube will open a list of the available SBs and their statuses. The status icons for the SBs are the same as for the projects and are explained by hovering over the symbol or by clicking the “Help” button.

The Search function at the top of the list allows the user to look for specific projects by project code or SBs by SB name.

Clicking on a project code, project title or SB name opens the project tree view which is described in more detail in Section 5.

4. “My SBs” view

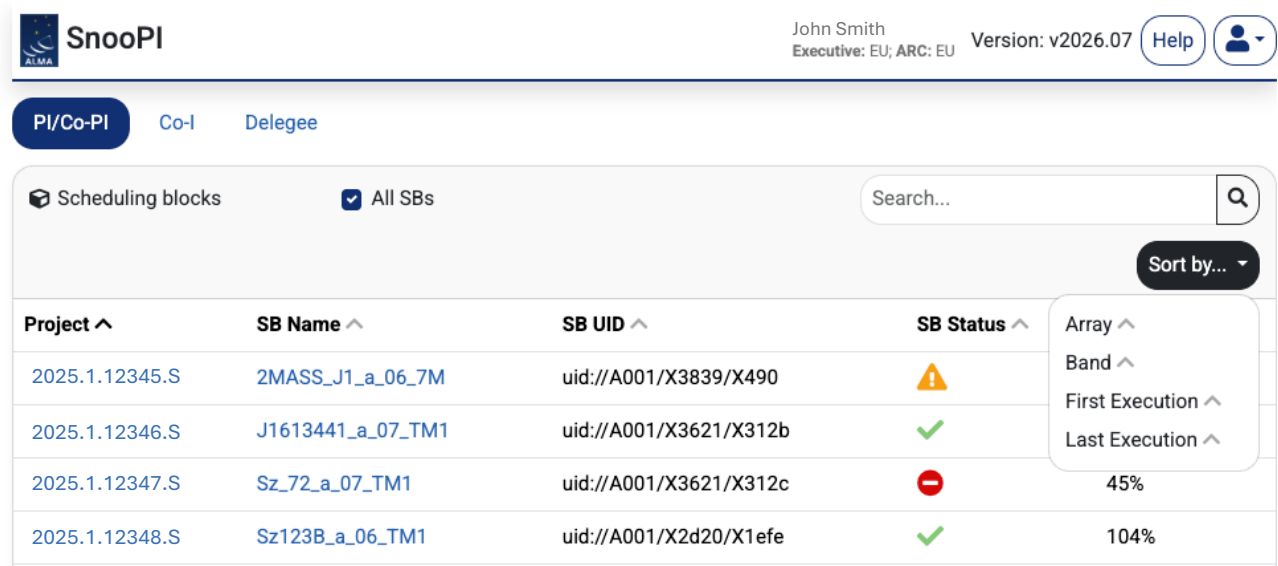


Fig. 3a. My SB view with the Sort by... drop-down menu deployed.

The Scheduling Block or SB view lists in a table the project code, the SB name, the SB unique identifier (UID), the status of the SB and the progress of the observations (Fig. 3). The SB table can

¹The proposal review is either concluded as a consensus report of the ALMA Proposal Review Committee (APRC), or as the reviewers feedback, if the proposal was evaluated through a Distributed Peer Review (DPR) process.

be sorted by any of these columns via the arrow next to the column title as well as by band, array, first execution and last execution by clicking on the “Sort by...” button.

By selecting “All SBs”, SBs from non-active projects will also be listed, when available. The status of the SB is indicated by one of the icons also used to show the status of the project (see Sec. 6). Additionally,

- a dark blue clock icon indicates that an action or an information is expected from the PI, including the triggering of the SB.

The progress column displays the execution percentage (EP, i.e. the execution count divided by the expected number of executions, expressed in %). The EP can exceed 100% and one SB can be considered completed if the EP is larger than 90%: the calculation of the EP is not exclusively based on the observing time, but also on the atmospheric conditions and the number of usable antennas, taking into account phase rms and shadowing.

5. The project tree view

Clicking on a project code in the “My Projects” view will open its project tree whose structure mirrors the project tree of the ALMA Observing Tool (AOT). The Execution Percentage (EP, i.e., the execution count divided by the expected number of executions, expressed in %) is shown next to each SB under the Progress column. The EP can exceed 100% and one SB can be considered completed if the EP is larger than 90%.

 **SnooPI**

John Smith
Executive: EU; ARC: EU

Version: v2026.06

Help



Project Code: 2023.1.11123.S Contact scientist: Maria Jones

Download Proposal [pdf] Project report

Highlight by OUS or SB name or SB status...

2023.1.11123.S

 An amazing observing program

 ObsUnitSet

 SG OUS (13CO (3-2) detections)

 Group OUS

 Member OUS (J16134410-3736462)

 J1613441_a_07_TM1

95%

 J15450634-3417378

 Field Setup

 Spectral Setup

 J16085324-3914401

 Field Setup

 Spectral Setup

 Sz_131

 Field Setup

Fig 3b. The project tree view.

Once the SB is successfully completed and the SB moves to the processing stage, the status is no longer shown next to the SB but next to the corresponding MOUS, with one of the following symbols:

-  Three gears indicate that the MOUS is being processed;
-  A truck marks a delivered MOUS;
-  An ambulance marks an MOUS for which QA3 is in progress.

Starting from Cycle 13, for each approved program the Phase 2 information will be shown under each SB in the “Field Setup” and in the “Spectral Setup” for any science target included in that SB (See Fig 3, and Sec. 5.3 for more details).

The Search function at the top of the project tree allows the user to look for specific SBs by typing the SB’s name or status (one string can be typed at any given time). All SBs matching the string are highlighted with bold fonts in the project tree while the parent Science Goals (SGs) and Observing Unit Sets (OUSs) are highlighted in shaded yellow. At the top of the project panel, there are links to the web page of the corresponding ARC node, the project report and the pdf file of the proposal. The name of the Contact Scientist is also shown, when available.

Clicking on any linked object in the project tree opens a window on the right-hand side with detailed information. Clicking on the project title reveals the list of Co-PIs/Co-Is/Delegees if applicable, the proposal priority grade, the abstract of the proposal and the APRC consensus report, or the reviewer feedback if the proposal was evaluated through a DPR process. Each SB links to its individual detailed view panel, described in Section 5.1.

5.1. The Scheduling Blocks detailed view

Clicking on an SB name will open a new panel with the project tree on the left-hand side and the details of the SB on the right-hand side (see Fig. 4), namely:

- the name of the SB, its status and a status history button (“History”);
- the name of the original Science Goal;
- the uid of the MOUS, a status history button and the possibility to launch an ALMA archive query (“Archive query” button) for this uid as soon as there is a QA0 Pass execution block (see Fig. 4 for an example). The results of the query will be displayed in a new tab. A button “Weblog” can be clicked by PIs/Co-PIs or Co-Is to download the Weblog of the delivered MOUSs;
- the coordinates of the target and pointing information (i.e. single or multiple sources, custom mosaic or rectangular field). In case of mosaics, the coordinates are the ones that the PI had entered in the Field setup in the AOT. The coordinates of Ephemeris objects are also shown;
- the Array (12-m, 7-m or total power (TP)), band, representative frequency in GHz, the bandwidth used for sensitivity in MHz, the desired sensitivity per pointing in Jy, the nominal array configuration with a link to the configuration schedule, the minimum/maximum angular resolution and the largest angular scale in arcsec requested by the PI
- The calibration setup requested by the PI (System-defined or User-defined)

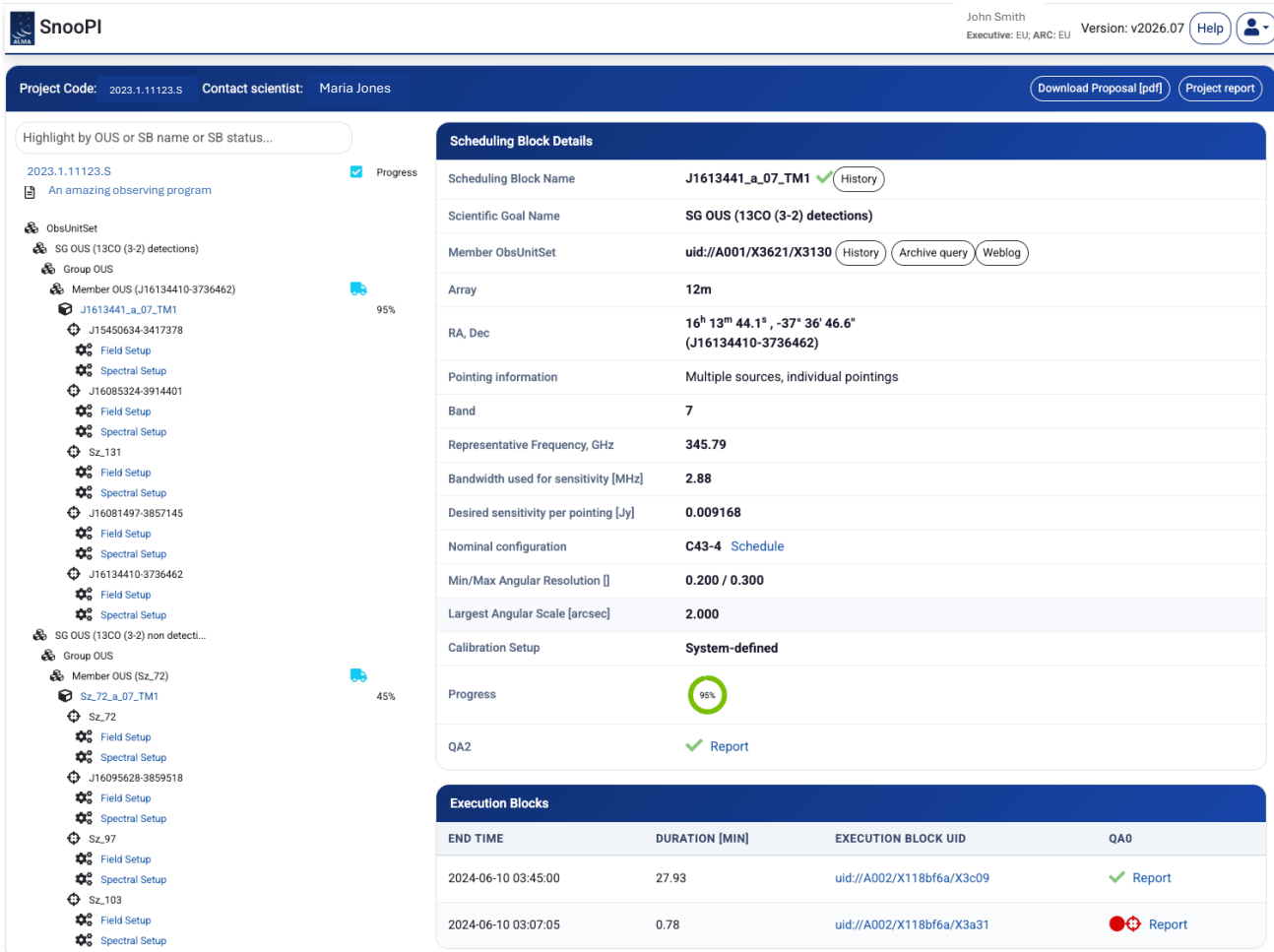


Fig. 4. Detailed SB view next to the project tree view.

- progress circle which displays the execution percentage (EP);
- the time constraints and visit constraints for time-critical projects; hovering over the underlined text, the list of requested time-slots appears, and/or links to other SBs that need to be executed in sequence, when applicable;
- the QA2 status (if set in the database) and a link to the QA2 report for QA2 Pass or QA2 Semi-pass statuses;
- a list of all the corresponding Execution Block (EB) IDs, with their execution end times, execution duration, QA0 status and links to the corresponding QA0 reports. The QA0 and QA2 status is indicated by:
 - a green check-mark to signify Pass;
 - a green check-mark with an adjacent danger symbol to signify Semi-pass;
 - a red circle to signify Fail.
 - a red target to signify QA0 Semi-pass specifically because the science target was not observed.

QA0 and QA2 reports are not generated by SnooPI. The application simply displays them, when available. QA0+ results, that can be used to access the data quality and shall not be used for scientific use, are also included in the QA0 report.

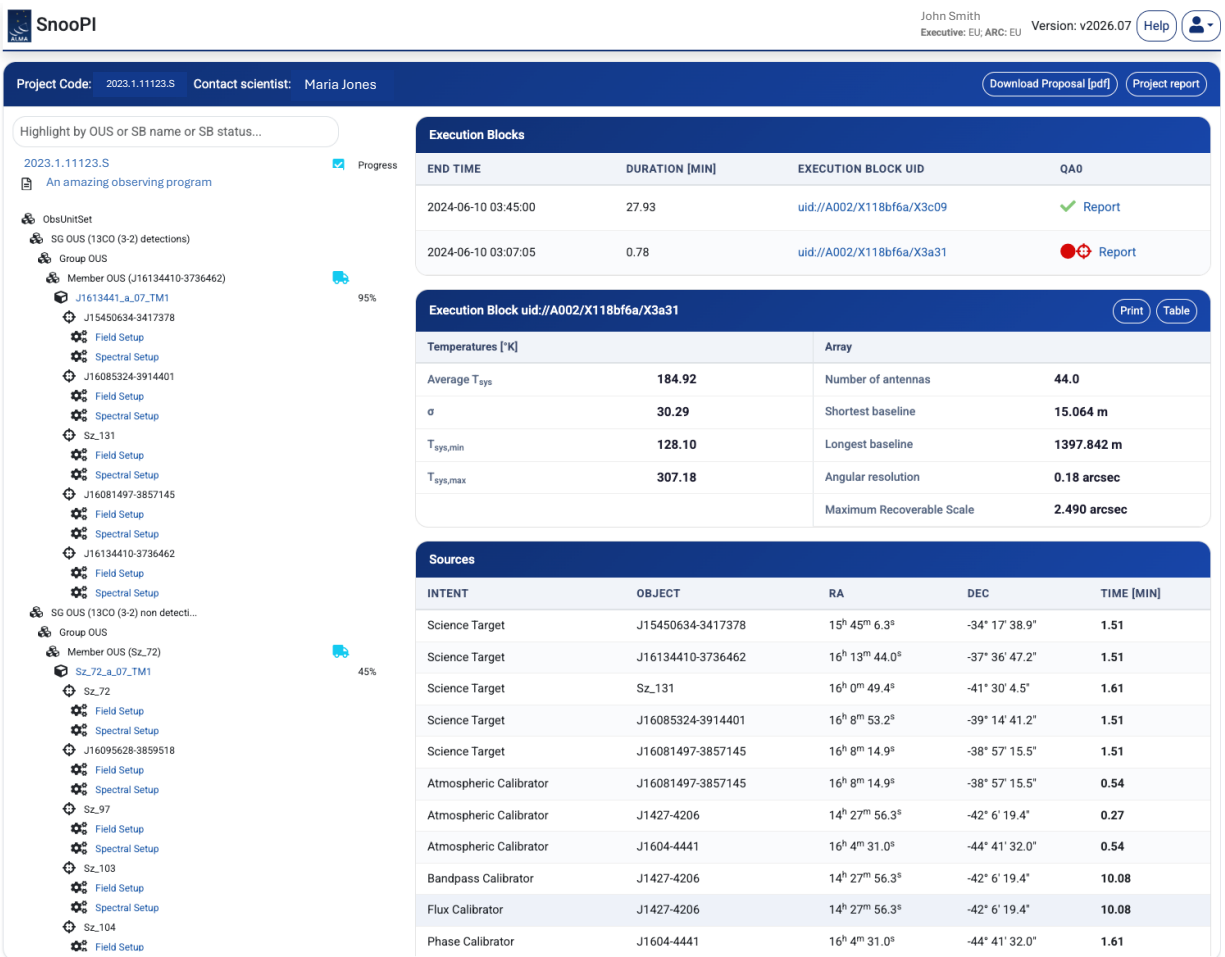


Fig. 5. Detailed EB view next to the project tree view.

5.2. The Execution Blocks detailed view

Clicking on an EB will expand the bottom of the SB panel to list EB details on:

- the system temperature (average T_{sys} , sigma, minimum and maximum T_{sys});
- the array (number of antennas, shortest and longest baselines, angular resolution and maximum recoverable scale);
- the observed sources divided into science target(s) and calibrators with their respective names, coordinates and on-source observing times (see Fig. 4).

The EB detailed view can be viewed as a printable version by clicking on the “Print” button, or exported in machine readable format by clicking on the “Table” button.

5.3. The Phase 2 information

Starting from Cycle 13, for each approved program the Phase 2 information will be shown under each SB in the “Field Setup” and in the “Spectral Setup” for any science target included in that SB.

Clicking on the “Field Setup” and “Spectral Setup” in the project tree on the left hand side of the page, the PI can navigate to these two setups.

The Field Setup

The Field Setup aims to mimic the structure and information found in the ALMA OT under “Field Setup” and it is reported for any Science Target included in any SB. It is divided in three main sections:

- **Spatial Visualiser:** it is a graphical window that displays the browser version of the Aladin interactive Sky Atlas (Aladin lite; see <https://aladin.cds.unistra.fr/>) centred on the Science Target. The spatial visualiser in SnooPI is essentially the same graphical interface included in the ALMA OT (see more detail in the [OT User Manual](#), Sec. 5.4.). The only main difference is that in SnooPI the PIs is not allowed to set coordinates by clicking on a position in the visualiser, and add new pointings. It is essentially a visualisation tool for the information reported in the field setup (see Figure. 6).

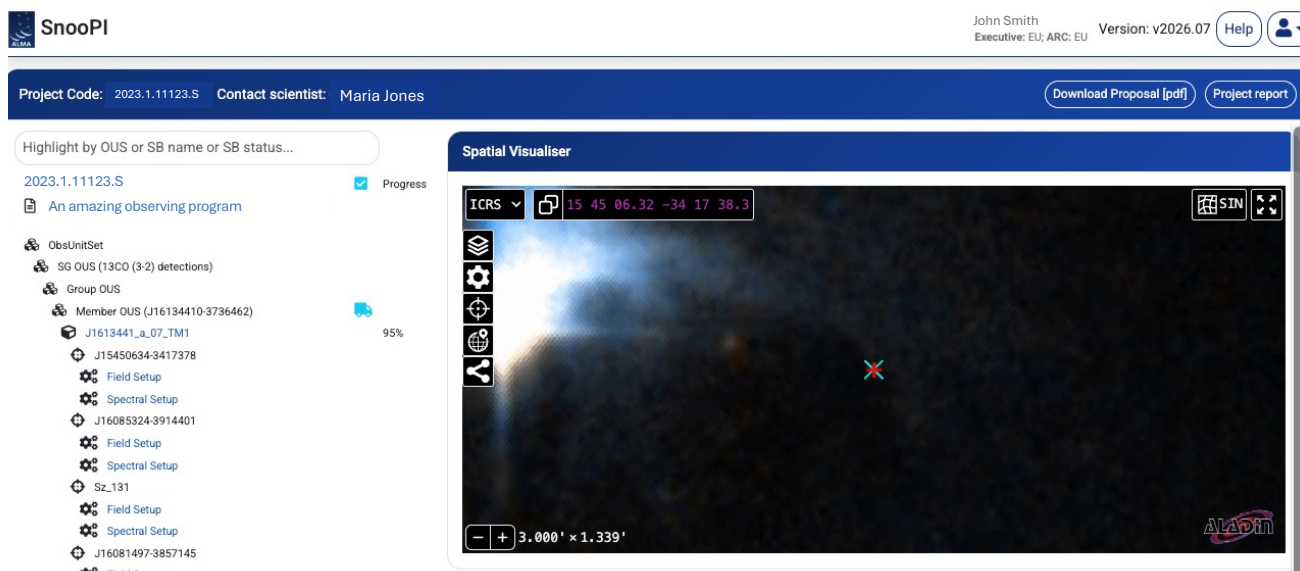


Fig 6. Spatial Visualiser reported in the Field Setup

- **FOV Parameters:** the Field of View information is reported, i.e., the Representative Sky Frequency in GHz, the Array Type (12-m, 7-m or total power (TP)), and the FoV size (antenna primary beam size) in arcsecond. A check box allows the PIs to show the antenna beam size, and 1/3 of the the beam size, as circles on the spatial visualiser (see Fig. 7)
- **Source Information:** a summary of the source information provided by the PI at proposal submission. This includes the source name, its coordinates (RA and Dec), its parallax in mas, the proper motion in the RA and Dec in mas/yr, the source radial velocity in km/s, the redshift, the peak continuum flux density per synthesised beam in Jy, the continuum linear and circular polarisation level in %, the peak line flux density per synthesised beam in Jy, the line width in km/s, the line linear and circular polarisation level in % (see Figure. 7).

- **Field Centre Coordinates:** this panel summarises the pointing information. This includes the coordinate type (relative or absolute), the array Type (12-m, 7-m or total power (TP)), the offset unit (usually arcsec), the number of defined pointings, and the position (RA and Dec) of each pointing (see Figure. 7).


SnootPI

John Smith
Executive: EU, ARC: EU
Version: v2026.07
Help


Project Code: 2023.1.11123.S Contact scientist: Maria Jones
Download Proposal [pdf] Project report

Highlight by OUS or SB name or SB status...

2023.1.11123.S Progress

An amazing observing program

ObsUnitSet

SG OUS (13CO (3-2) detections)

Group OUS

Member OUS (J16134410-3736462) 95%

J1613441_a_07_TM1

J15450634-3417378

Field Setup

Spectral Setup

J16085324-3914401

Field Setup

Spectral Setup

Sz_131

Field Setup

Spectral Setup

J16081497-3857145

Field Setup

Spectral Setup

J16134410-3736462

Field Setup

Spectral Setup

SG OUS (13CO (3-2) non detecti...

Group OUS

Member OUS (Sz_72) 45%

Sz_72_a_07_TM1

Sz_72

Field Setup

Spectral Setup

J16095628-3859518

Field Setup

Spectral Setup

Sz_97

Field Setup

Spectral Setup

Sz_103

Field Setup

Spectral Setup

Sz_104

Field Setup

Spectral Setup

Sz_106

Field Setup

Spectral Setup

FOV Parameters

Representative Freq. (Sky) (GHz) 345.794

Array Type 12m

Antenna Beamsize (HPBW) (arcsec) 16.839

Show antenna beam size ☐

Source

Source name J15450634-3417378

RA, Dec 15h 45m 6.3s, -34d 17m 38.3s

Parallax (mas) 6.2344

PM RA (mas/yr) -9.279

PM Dec (mas/yr) -25.434

Source radial velocity (km/s, hel) 1.6

z (Doppler type, RELATIVISTIC) 0.000005

Peak Continuum Flux Density per Synthesized Beam (Jy) 0.015

Continuum Linear Polarization (%) 0

Continuum Circular Polarization (%) 0

Peak Line Flux Density per Synthesized Beam (Jy) 0.35

Line Width (km/s) 10

Line Linear Polarization (%) 0

Line Circular Polarization (%) 0

Field Centre Coordinates

Coordinate type RELATIVE

Array Type 12m

Offset Unit arcsec

Number of pointings 1

#	RA (arcsec)	Dec (arcsec)
1	0	0

Fig 7: Summary of Field Setup information.

The Spectral Setup

The Spectral Setup aims to mimic the structure and information provided by the PIs in the ALMA OT under “Spectral Setup” and it is reported for any Science Target included in any SB. The spectral information are shown in the following sections:

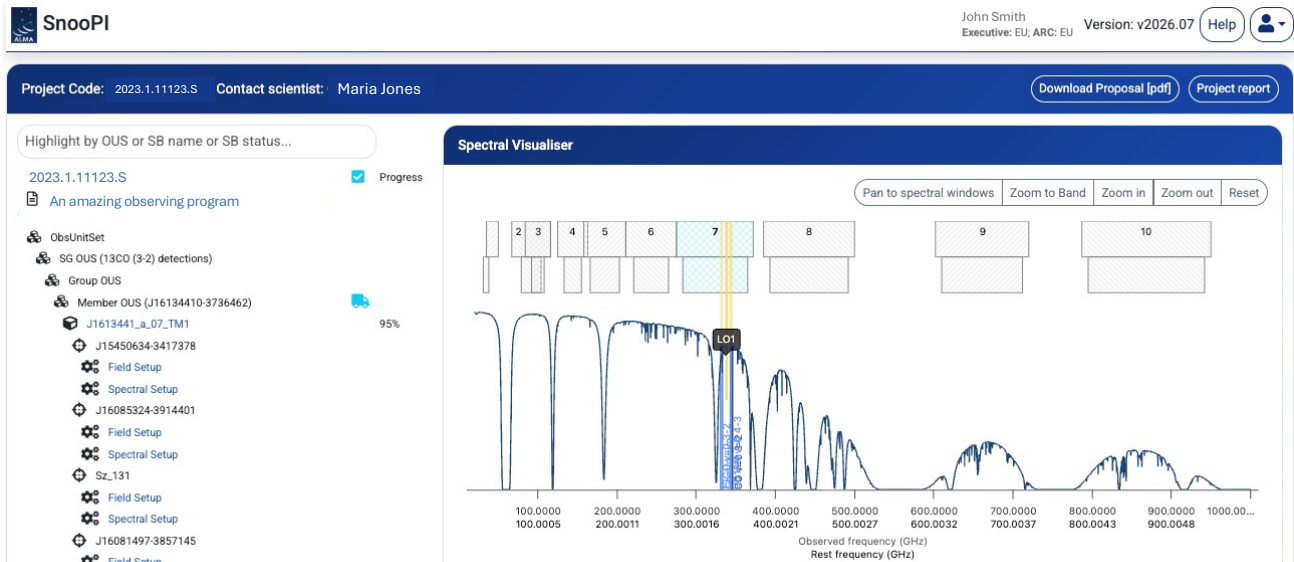


Fig. 8: Spectral visualiser reported in the spectral setup.

- **Spectral visualiser:** it allows the spectral windows that are defined by the PI to be viewed in a graphical environment that contains a number of aids to their placement, particularly the atmospheric transmission and the receiver/correlator configuration (receiver bands, sidebands, etc., see Fig. 8). The spectral visualiser in SnooPI is essentially the same as in the ALMA OT (see more detail in the [OT User Manual](#), Sec. 5.5).
- **Spectral controls:** this panel contains buttons that allow the user to overlay or hide the receiver bands, the atmospheric transmission, the doppler side band (DSB) images, as well as the spectral lines to the spectral setup in the visualiser.
- **Spectral setup:** this section contain the relevant spectral information provided by the PI at proposal submission for the specific science target selected in the project tree (see Fig. 9). The source name is reported, followed by the selected spectral type (Spectral Line, Single Continuum or Spectral Scan), whether Image Sidebands are produced (possible only for Bands 9 and 10), and the desired Polarisation Product (Single (XX), Dual, Full). This is then followed by a table summarising the spectral windows (SPWs) information, specifically the SPW number, its fraction, its centre frequency (rest, and sky), the transition name as provided by the PI at submission, spectral bandwidth and resolution (smoothed), and spectral averaging. The representative SPW is flagged by a blue circle in the last column of the table.

Project Code: 2023.1.11123.S Contact scientist: Maria Jones

Download Proposal [pdf]

Project report

Highlight by OUS or SB name or SB status...

2023.1.11123.S

Progress

An amazing observing program

ObsUnitSet

SG OUS (13CO (3-2) detections)

Group OUS

Member OUS (J16134410-3736462)

J1613441_a_07_TM1

J15450634-3417378

Field Setup

Spectral Setup

J16085324-3914401

Field Setup

Spectral Setup

Sz_131

Field Setup

Spectral Setup

J16081497-3857145

Field Setup

Spectral Setup

J16134410-3736462

Field Setup

Spectral Setup

SG OUS (13CO (3-2) non detecti...

Group OUS

Member OUS (Sz_72)

Sz_72_a_07_TM1

Sz_72

Field Setup

Spectral Setup

J16095628-3859518

Field Setup

Spectral Setup

Sz_97

Field Setup

Spectral Setup

Sz_103

Field Setup

Spectral Setup

Sz_104

Field Setup

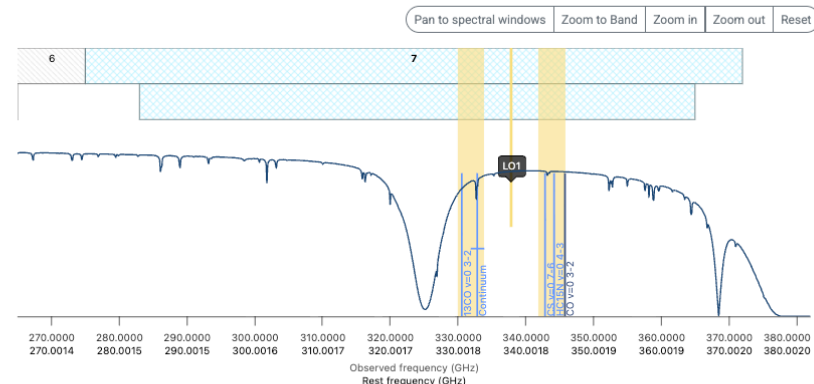
Spectral Setup

Sz_106

Field Setup

Spectral Setup

Spectral Visualiser



Spectral Controls

Overlays ☒ Receiver bands ☒ Transmission ☒ DSB imagesSpectral lines ☒ Display spectral lines

Spectral Setup

Source name J15450634-3417378

Spectral Type Spectral Line

Produce Image Sidebands (Bands 9 and 10 only) ☐

Polarization Products Desired Dual

#	Fraction	Center Freq (rest, hel) [GHz]	Center Freq (sky, hel) [GHz]	Transition Name	Bandwidth, Resolution (smoothed)	Spectral Averaging	Representational Window
1	HALF	344.20011	344.19827	HC15N v=0 4-3	58.594 MHz(51 km/s), 61.035 kHz(0.053 km/s) (2-bit)	1	☐
2	HALF	345.79599	345.79414	CO v=0 3-2	58.594 MHz(51 km/s), 61.035 kHz(0.053 km/s) (2-bit)	1	☒
3	HALF	342.88286	342.88103	CS v=0 7-6	117.188 MHz(102 km/s), 141.113 kHz(0.123 km/s) (2-bit)	2	☐
4	FULL	330.58797	330.58620	13CO v=0 3-2	58.594 MHz(53 km/s), 141.113 kHz(0.128 km/s) (2-bit)	2	☐

Fig. 9: Summary of the Spectral Setup information.

6. Status symbol descriptions

Project icons:



A white “thumbs up” marks a project that has been submitted (Phase 1);



A red cross marks a project which was rejected at the proposal review stage (after the results of the proposal review become public). Such projects only appear in the list if “All projects” is selected;



An asterisk marks an approved project (priority grades A, B or C) for which the Phase 2 material has not yet been submitted;



A light blue “thumbs up” indicates that Phase 2 material for the project has been submitted, but the SBs have not been generated yet;

-  A blue “thumbs up” indicates that the Phase 2 material has been submitted, the SBs have been generated, but the project is not yet set to “Ready”, in other words it has not yet been placed in the observing queue;
-  An orange circle indicates that the project has been set to “Ready” but no data have been taken yet;
-  An orange triangle with a white exclamation mark indicates that some data have been taken;
-  A green check-mark indicates that all the data have been taken;
-  A check-mark inside a square indicates that the project has been completed and all data have been delivered; such projects only appear in the list if “All projects” is selected;
-  A check-mark inside a blue square marks a project that has been partially completed and all data taken have been delivered;
-  A stop sign indicates that the project has timed out; this can happen for time-critical projects or projects that require configurations that are no longer coming back in the current cycle;
-  A blue cross marks a project that has been cancelled or not been observed;
-  An “undo” arrow marks a project that is not to be observed;
-  A question mark indicates an unknown project status, i.e. not properly set in the data base.

ObsUnitSet icons:

-  Three gears indicate that the MOUS is being processed;
-  A truck marks a delivered MOUS;
-  An ambulance marks an MOUS for which QA3 is in progress.

Scheduling Block (SB) icons:

-  A blue “thumbs up” indicates that the SBs have been generated but they have not been set to “Ready” yet;
-  An orange circle indicates that the SB has been set to “Ready” but no data have been taken yet;
-  An orange triangle with a white exclamation mark indicates that some data have been taken;
-  A green check-mark indicates that all the data have been taken and successfully passed a level 0 quality assurance (QA0) checked against the required number of executions;
-  A stop sign indicates that the SB has timed out;
-  A blue cross marks an SB that has been cancelled;
-  A dark blue clock indicates that the SB is waiting for input from the PI, including the triggering of the SB.

-  A bright blue clock indicates that the SB is waiting for input from the Phase 2 Group or for a calibrator search, without any required action from the PI.

Execution Block (EB) icons:

-  A green check-mark indicates that the execution block has passed quality insurance (Pass);
-  A green check-mark with an adjacent danger symbol indicates that the execution block has semi-passed quality insurance (Semi-pass);
-  A red target marks an execution block in which no science target was observed (QA0 Semi-pass);
-  A red circle marks a failed execution block (FAIL).



The Atacama Large Millimeter/submillimeter Array (ALMA), an international astronomy facility, is a partnership of the European Organisation for Astronomical Research in the Southern Hemisphere (ESO), the U.S. National Science Foundation (NSF) and the National Institutes of Natural Sciences (NINS) of Japan in cooperation with the Republic of Chile.

ALMA is funded by ESO on behalf of its Member States, by NSF in cooperation with the National Research Council of Canada (NRC) and the National Science and Technology Council (NSTC) in Taiwan and by NINS in cooperation with the Academia Sinica (AS) in Taiwan and the Korea Astronomy and Space Science Institute (KASI).

ALMA construction and operations are led by ESO on behalf of its Member States; by the National Radio Astronomy Observatory (NRAO), managed by Associated Universities, Inc. (AUI), on behalf of North America; and by the National Astronomical Observatory of Japan (NAOJ) on behalf of East Asia. The Joint ALMA Observatory (JAO) provides the unified leadership and management of the construction, commissioning and operation of ALMA.

