

ALMA Data Products: *What to Expect when Observations are Complete*



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



Data Delivery Summary

When: after observations pass Quality Assurance (QA)

Where: data delivery email, ALMA archive, SnooPI

What: preliminary images, calibration tables, aux info

Why: see Technical Handbook §11, 12, 14 & Appendix C

Quality Assurance

QA0: *during* observations → monitoring of on-the-fly variables [PWV, wind, temp.]

QA1: *between* observations → monitoring of array and calibrator performance

QA2: *after* observations → calibrated products checked [rms, calibration, res.]

QA3: *after* delivery → triggered by PI reporting issues [data, calibration, obs.]

does NOT include incorrect coordinates, insufficient sensitivity, inadequate frequency or spatial resolution, etc.



SnooPI: Monitoring Project Status

[<https://almascience.eso.org/observing/snoopi>]

SnooPI | Megan Ansdell
Executive: NA; ARC: NA

Help | [User Icon]

NAVIGATION

- Home
- My Projects
- My SBs

QUICK LINKS

- User Manual
- Science Portal
- Archive Query
- Helpdesk

PI | Co-I | Delegee

Projects All projects

Project code ^	Project Title	Status	Grade
2018.1.01355.S	Planet Formation in Binary Systems	●	C
2018.1.00519.S	Visualizing protoplanetary disk evolution	✗	U
2018.1.00209.S	Seeing clearer in the millimeter: unbiasing scattered light observations of debris disks	✗	U
2017.1.00466.S	ALMA survey of lambda Orionis disks: understanding the influence of OB stars on planet formation	☑	A
2017.1.00299.S	Legacy disk surveys with ALMA: leveling the playing field in sigma Orionis	✗	C
2016.1.00338.S	Disk Demographics in Taurus	✗	U
2016.1.00336.S	"Dipping" into Terrestrial Planet Formation	☑	B
2015.1.00431.S	Catching disk dispersal in the act	✗	U

sign in!

check this box!

monitor status

SnooPI: Monitoring Project Status

- 👍 Project has been submitted (Phase 1)
 - ✗ Rejected at proposal review stage
 - ✳ Approved but SBs not yet prepared
 - 👍 SBs prepared but are not yet in the observing queue
 - SBs are in the observing queue but not yet taken
 - ▲ Some data has been taken
 - ✅ All the data has been taken
 - ✅ Completed and delivered
 - ✅ Partially completed and all data taken has been delivered
 - ⊖ Project is timed out
 - ✗ Project cancelled and not observed
 - 🔄 Project that are not to be observed
 - ❓ Unknown status
- **you want to see these**

SnooPI: Single Project Status

SnooPI

Megan Ansdell
Executive: NA; ARC: NA

Project Code: 2017.1.00466.S ARC node: Canadian. Contact scientist: Brenda Matthews.

Download Proposal [pdf] Project report

2017.1.00466.S

ALMA survey of lambda Orionis disks: understanding the influence of OB stars on planet formation

ObsUnitSet

SG OUS (Disk Demographics in l...)

Group OUS

Member OUS (HD_245185)

HD_24518_a_06_TM1

Scheduling Block Name: HD_24518_a_06_TM1 ✓ History

Scientific Goal Name: SG OUS (Disk Demographics in lambda Orionis)

Member ObsUnitSet: uid://A001/X1296/Xb40 History Archive query

Array: 12m

RA, Dec: 5^h 35^m 9.6^s, 10° 1' 51.5"

Pointing information: Multiple sources

Band: 6

Representative Frequency, GHz: 245.48

Nominal configuration: C43-3,C43-4,C43-5

Min/Max Angular Resolution [arcsec]: 0.240 / 1.000

Successful Executions: 13 / 12

QA2: ✓ Report

End time	Duration [min]	Execution Block UID	QA0
2018-09-09 13:39:36	68.67	uid://A002/Xd1c06f/X7064	✓ Report
2018-09-09 10:58:12	68.65	uid://A002/Xd1c06f/X5eb4	✓ Report
2018-09-08 13:09:24	68.07	uid://A002/Xd1b712/X3540	✓ Report
2018-09-01 12:28:28	68.59	uid://A002/Xd16a1e/X46ec	✓ Report
2018-08-30 12:15:34	56.28	uid://A002/Xd15514/X5277	✓ Report
2018-01-24 04:01:52	69.37	uid://A002/Xc9831a/Xa4de	✓ Report
2018-01-24 02:48:40	0.37	uid://A002/Xc9831a/Xa49c	● Report
2018-01-23 03:33:37	69.11	uid://A002/Xc9831a/X1933	✓ Report
2018-01-22 04:09:53	69.06	uid://A002/Xc96f17/Xa74d	✓ Report
2018-01-22 03:00:38	68.91	uid://A002/Xc96f17/X9fc7	✓ Report
2018-01-21 04:12:04	68.69	uid://A002/Xc96f17/X1f52	✓ Report
2018-01-21 03:03:10	68.86	uid://A002/Xc96f17/X17b6	✓ Report
2018-01-19 03:44:18	68.99	uid://A002/Xc94c38/Xb0c4	✓ Report
2018-01-18 03:59:12	69.30	uid://A002/Xc94c38/X181e	✓ Report

useful docs

observing status

individual QA0 reports

QA0 passed
 QA0 failed

Data being processed
 Data has been delivered
 QA3 is in progress



Data Delivery Email [QA2]

When: after observation set passes QA2

What: instructions for downloading and delegating access, weblog (calibration + imaging report) and other metadata

Why: triggers start of one-year proprietary period

Where: ALMA archive links (all ALMA users)
temporary link to fully calibrated dataset (only North America)

don't forget to download within 30 days!



The ALMA Archive

[<http://almascience.eso.org//aq/>]

The screenshot shows the ALMA Science Archive query interface. At the top, there are tabs for 'Query Form' and 'Results Table', and a 'Query Help' link. Below these are 'Search' and 'Reset' buttons. The main area is divided into several panels: 'Position', 'Energy', 'Time', 'Polarisation', 'Observation', 'Project', 'Publication', and 'Options'. The 'Position' panel has a text input field containing '15 46 44.72 -34 30 35.67 0.003'. The 'Options' panel has radio buttons for 'observation', 'project', and 'publication', and checked checkboxes for 'public data only' and 'science observations only'. A tooltip is visible over the 'Water vapour' field in the 'Observation' panel, showing its description, unit (mm), and example values. Red annotations with arrows point to the search button, the coordinate input field, the 'public data only' checkbox, and the 'Water vapour' tooltip.

perform search!

coordinate search within given radius

specify public science data only

click to enter value and see details



The ALMA Archive

[<http://almascience.eso.org//aq/>]

download!

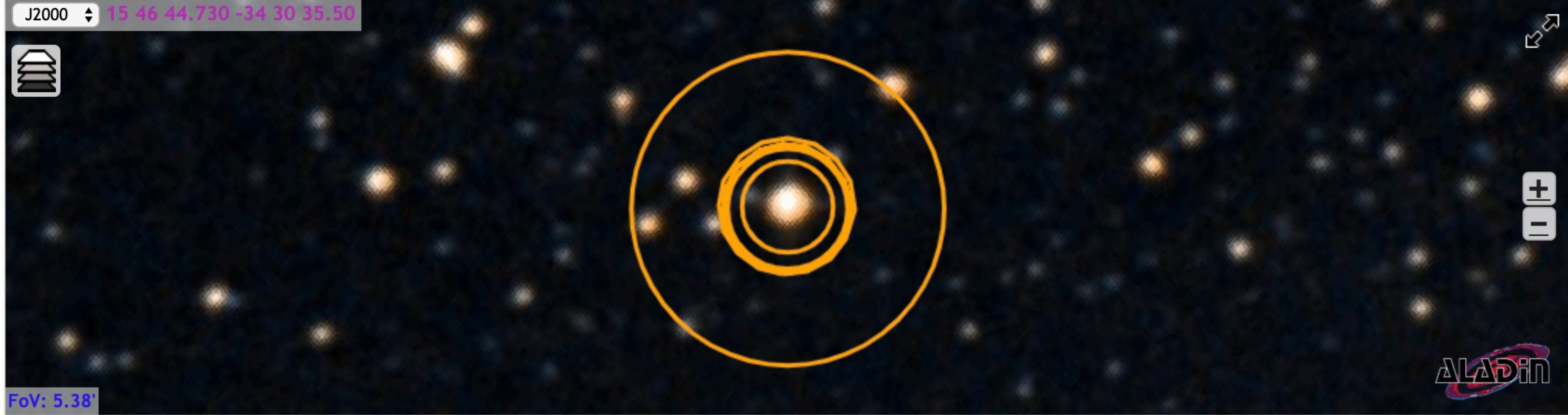
more details

Query Form Results Table ALMA Science Archive

Close Viewer Results Bookmark Export Table Results Help

Submit download request

J2000 15 46 44.730 -34 30 35.50



FoV: 5.38'

More columns Showing 6 of 6 rows.

<input type="checkbox"/>	Project code	Source name	RA	Dec	Band	Integration	Release date	Angular resolution	Array	Frequency resolution	PI name
Filter:	<input type="text"/>	<input type="text"/>	<input type="text"/> H:M:S	<input type="text"/> D:M:S	<input type="text"/>	<input type="text"/> seconds	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> kHz	<input type="text"/>
<input type="checkbox"/>	2013.1.00220.S	LupusIII_1001	15:46:44.73	-34:30:35.5	7	133.056	2016-09-04	0.35	12m	244.1421409055011	Williams, Jonathan
<input type="checkbox"/>	2016.1.00571.S	Sz_71	15:46:44.73	-34:30:35.9	3	120.960	2017-11-21	0.43	12m	1953.2299329780933	Tazzari, Marco
<input checked="" type="checkbox"/>	2015.1.00222.S	LupusIII_1001	15:46:44.73	-34:30:35.5	6	90.720	2017-12-18	0.20	12m	244.15529412973663	Williams, Jonathan
<input type="checkbox"/>	2016.1.00484.L	GW_Lup	15:46:44.73	-34:30:35.9	6	755.993	2018-06-08	0.30	12m	488.26312555471685	Andrews, Sean
<input type="checkbox"/>	2016.1.00484.L	GW_Lupi	15:46:44.73	-34:30:35.9	6	4136.301	2018-11-29	0.03	12m	488.28653260947544	Andrews, Sean
<input type="checkbox"/>	2016.1.00459.S	sz71	15:46:44.73	-34:30:35.9	6	393.120	2018-12-31	0.22	12m	244.1522868318708	Miotello, Anna



Archived Data Products Package

Anonymous User: Request #2146911082957 ✓
Request Title: [Click to edit](#)

Download Selected

readme product auxiliary raw raw (semipass) external

Project / OUSet / Executionblock	File	Size	Accessible
Request 2146911082957			
Project 2016.1.00484.L			
Science Goal OUS uid://A001/X8c5/X80			
Group OUS uid://A001/X8c5/X81			
Member OUS uid://A001/X8c5/X82			
SB GW_Lupi_a_06_TM1			
<input checked="" type="checkbox"/> readme	member.uid_A001_X8c5_X82.README.txt	130B	✓
<input checked="" type="checkbox"/> product	2016.1.00484.L_uid_A001_X8c5_X82_001_of_001.tar	493.8MB	✓
<input checked="" type="checkbox"/> auxiliary	2016.1.00484.L_uid_A001_X8c5_X82_auxiliary.tar	461.4MB	✓
<input type="checkbox"/> calibration	member.uid_A001_X8c5_X82.hifa_calimage_aux_products.tgz	6.0KB	✓
<input type="checkbox"/> calibration	member.uid_A001_X8c5_X82.session_1.caltables.tgz	12.9MB	✓
<input type="checkbox"/> calibration	member.uid_A001_X8c5_X82.session_3.caltables.tgz	16.3MB	✓
<input type="checkbox"/> calibration	uid_A002_Xc4c2da_X57b8.ms.calapply.txt	8.0KB	✓
<input type="checkbox"/> calibration	uid_A002_Xc4c2da_X57b8.ms.flagversions.tgz	2.3MB	✓
<input type="checkbox"/> calibration	uid_A002_Xc66ce1_X3ea6.ms.calapply.txt	8.0KB	✓
<input type="checkbox"/> calibration	uid_A002_Xc66ce1_X3ea6.ms.flagversions.tgz	2.9MB	✓
<input type="checkbox"/> log	member.uid_A001_X8c5_X82.hifa_calimage.casa_commands.log	143.0KB	✓
<input type="checkbox"/> qa	member.uid_A001_X8c5_X82.hifa_calimage.weblog.tgz	425.5MB	✓
<input type="checkbox"/> script	member.uid_A001_X8c5_X82.calimage.pipeline_manifest.xml	9.0KB	✓
<input type="checkbox"/> script	member.uid_A001_X8c5_X82.calimage.product_rename.txt	16.0KB	✓
<input type="checkbox"/> script	member.uid_A001_X8c5_X82.hifa_calimage.casa_piperestorescript.py	3.0KB	✓
<input type="checkbox"/> script	member.uid_A001_X8c5_X82.hifa_calimage.casa_pipescript.py	5.0KB	✓
<input type="checkbox"/> script	member.uid_A001_X8c5_X82.hifa_calimage.pprequest.xml	14.0KB	✓
<input type="checkbox"/> script	member.uid_A001_X8c5_X82.manual_imaging.tgz	1.2MB	✓
<input type="checkbox"/> script	member.uid_A001_X8c5_X82.scriptForPI.py	20.0KB	✓
<input type="checkbox"/> raw	2016.1.00484.L_uid_A002_Xc4c2da_X57b8.asdm.sdm	87.0GB	✓
<input type="checkbox"/> raw (semipass)	2016.1.00484.L_uid_A002_Xc5fe11_X841a.asdm.sdm	99.8GB	✓
<input type="checkbox"/> raw	2016.1.00484.L_uid_A002_Xc66ce1_X3ea6.asdm.sdm	99.8GB	✓
		Total: 282.7GB	

download tarball

or individual files (for > Cycle 6)

beware!



Resources After Data Delivery

ALMA Help Desk

Questions answered within 48 hours
[<https://help.almascience.org/>]

Documentation

ALMA Primer, Proposer's Guide, Technical Handbook
[<https://almascience.nrao.edu/documents-and-tools>]

Face-to-Face Visits

Travel for teams to visit NAASC for data reduction/analysis support
[<https://science.nrao.edu/facilities/alma/visitors-shortterm>]

Student Support

\$35k to support (under)graduate student for successful ALMA proposals
[<https://science.nrao.edu/opportunities/student-programs/sos>]

