



NRAO Archive Access Tool (AAT)

Anna D. Kapinska (NRAO)



Archive Access Tool (AAT)

The “new” NRAO science data archive (2022–)

Post observations: obtaining your data

- (1) automatic email that observation was triggered
- (2) few days later: email about pipeline calibrated data (VLA),
can be accessed from /lustre (14 days), OR
- (3) raw (VLA, VLBA) and pipeline calibrated data (VLA)
available from the NRAO archive

Web address: <https://data.nrao.edu/>

Current version: AAT 4.2.1 (Mar 2023)

Archive Access Tool (AAT)

Array Operator logs

Post observations: obtaining your data

- (1) **automatic email** that observation was triggered
 - in the email information on weather, time lost and reason, any problems with baselines, RFI etc
 - "Operator Log"**

- (2) Operator logs also available online:
 - currently: <http://www.vla.nrao.edu/cgi-bin/oplogs.cgi>
 - future: from within the AAT

Archive Access Tool (AAT)

Array Operator logs

Post observations: obtaining your data

(2) Operator logs also available online:

- currently: <http://www.vla.nrao.edu/cgi-bin/oplogs.cgi>
- future: from within the AAT

The array operator logs are being merged with the new e2e archive system, this lookup tool has been provided as a stopgap measure to tide us over until the work is done. The logs here are from October 2003 onwards, older logs can be found using the previous tool, [here](#).

To use this tool, select the range of dates you wish to see logs for and hit the 'Show Logs' button. By default it will display logs for the last week.

Start Year 2022 Month Oct Day 03

Stop Year 2022 Month Oct Day 10

Show Logs

Home | Careers | Directories | Site Map | Help | Policies | Diversity | Search

| Date | Time | Code | File |
|------------|-------|----------|---------------------|
| 2022-10-10 | 23:37 | STARTUP | pdf |
| 2022-10-10 | 17:12 | SOFTWARE | pdf |
| 2022-10-10 | 16:36 | TCAL0003 | pdf |
| 2022-10-10 | 14:26 | 22B-034 | pdf |
| 2022-10-10 | 13:46 | TPOL0003 | pdf |
| 2022-10-10 | 13:23 | THIG0007 | pdf |
| 2022-10-10 | 11:08 | 22B-272 | pdf |
| 2022-10-10 | 08:02 | 22B-157 | pdf |
| 2022-10-10 | 03:25 | 20A-346 | pdf |
| 2022-10-09 | 22:41 | 22B-046 | pdf |

Archive Access Tool (AAT)

Array Operator log - example

VLA OBSERVING LOG

2022-10-10_1426_22B-034

Observing Date: 10-Oct-2022
 Configuration: C
 Decommissioned: 20

| | | | | | |
|-------------------------|------------------------|----------------------|-----------|--------------------------|---------|
| Project: | 22B-034 | # Subarrays: | 1 | Observation Type: | Science |
| Observer(PI): | Dr Marco Berton | Band(s) Used: | X Ka K Ku | | |
| SBID(s): | 42820540 | | | | |
| EBID(s): | 42897307 | | | | |
| Source File(s): | 22B-034_sb42820540_1_1 | | | | |
| Observer E-mail: | marco.berton@eso.org | | | | |
| Operator(s): | Hannah Brower | | | | |

| Time (UTC) | Dew Point (C) | Temp. (C) | Wind Speed & Direction (avg) | Bar. Pressure (mbars) | API RMS Phase (degs) | Remarks |
|----------------|---------------|-----------|------------------------------|-----------------------|----------------------|-----------------------------------|
| 10Oct 14:34:16 | 4.4 | 4.0 | NE at 1.0 m/s | 792.5 | 8.0 | Sky cover 70%. Mixed clouds. Fog. |
| 10Oct 15:01:54 | 5.2 | 5.1 | S at 0.5 m/s | 792.7 | 2.1 | Sky cover 70%. Mixed clouds. |
| 10Oct 16:02:40 | 7.2 | 9.0 | SE at 0.5 m/s | 793.0 | 3.4 | Sky cover 80%. Cumuliform clouds. |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Number of antennas used: 27

| Start Time | End Time | Comments/Outages | Form # | #Ants | Down Time (in minutes) |
|----------------|----------|--|--------|-------|------------------------|
| 10Oct 14:26:48 | | Starting project 22B-034. | | | |
| 10Oct 14:26:48 | | The band(s) used is(are): X Ka K Ku. | | | |
| 10Oct 14:34:04 | | On source J1007-0207 with all available antennas. | | | |
| 10Oct 14:26:48 | | Antenna(s):1,2,3,4,7,8,12,13,14,15,18,19,21,24,26 | | | |
| | | have recently updated baseline parameters to correct for errors resulting from their recent relocation. Please check for any significant errors and submit them to the NRAO Helpdesk (https://science.nrao.edu/observing/helpdesk) under the VLA Observing department. | | | |
| 10Oct 14:26:48 | | To access your data from the NRAO archive visit: | | | |

Archive Access Tool (AAT)

Array Operator log - example

VLA OBSERVING LOG

2022-10-10_1426_22B-034

| | | | | | | | |
|-----------------|-------------|------------------|------------------------|---------------|-----------|-------------------|---------|
| Observing Date: | 10-Oct-2022 | Project: | 22B-034 | # Subarrays: | 1 | Observation Type: | Science |
| Configuration: | C | Observer(PI): | Dr Marco Berton | Band(s) Used: | X Ka K Ku | | |
| Decommissioned: | 20 | SBID(s): | 42820540 | | | | |
| | | EBID(s): | 42897307 | | | | |
| | | Source File(s): | 22B-034_sb42820540_1_1 | | | | |
| | | Observer E-mail: | marco.berton@eso.org | | | | |
| | | Operator(s): | Hannah Brower | | | | |

Data loss and reason

Page 2

| Time (UTC) | Dew Point (C) | Temp. (C) | Wind Speed & Direction (avg) | Bar. Pressure (mbars) | API RMS Phase (degs) | Remarks |
|----------------|---------------|-----------|------------------------------|-----------------------|----------------------|-----------------------------------|
| 10Oct 14:34:16 | 4.4 | 4.0 | NE at 1.0 m/s | 792.5 | 8.0 | Sky cover 70%. Mixed clouds. Fog. |
| 10Oct 15:01:54 | 5.2 | 5.1 | S at 0.5 m/s | 792.7 | 2.1 | Sky cover 70%. Mixed clouds. |
| 10Oct 16:02:40 | 7.2 | 9.0 | SE at 0.5 m/s | 793.0 | 3.4 | Sky cover 80%. Cumuliform clouds. |

Number of antennas used: 27

| Start Time | End Time | Comments |
|----------------|----------|---|
| 10Oct 14:26:48 | | Starting project 22B-034. |
| 10Oct 14:26:48 | | The band(s) used is(are): X Ka K Ku. |
| 10Oct 14:34:04 | | On source J1007-0207 with all available antennas. |
| 10Oct 14:26:48 | | Antenna(s): 1, 2, 3, 4, 7, 8, 12, 13, 14, 15, 18, 19. Antennas 1, 2, 3, 4, 7, 8, 12, 13, 14, 15, 18, 19 have recently updated baseline parameters to complete their recent relocation. Please check for them to the NRAO Helpdesk (https://science.nrao.edu/observing) under the VLA Observing department. |
| 10Oct 14:26:48 | | To access your data from the NRAO archive. |

| Start Time | End Time | Comments | Antenna(s) | Band | Down Time % of Total Time | Total Down Time (minutes) | |
|-------------------------|----------------|---|--|----------|----------------------------------|---------------------------|--------|
| 10Oct 14:26:48 | 10Oct 16:36:39 | Antenna(s) 10 (Data: Lost): | Antenna T303 and P302-1 low voltage, antenna parked as precaution. | LO-IF | WO-15183 | 1.00 | 129.85 |
| 10Oct 14:26:48 | 10Oct 16:36:39 | Antenna(s) 23 (Data: Lost): | FRONT END | WO-15113 | 0.14 | 18.05 | |
| 10Oct 14:26:48 | 10Oct 16:36:39 | X-band dead. Water Feed. | | | | | |
| 10Oct 14:26:48 | 10Oct 16:36:39 | Antenna(s) 7 (Data: Lost): | FOCUS/ROTATION | WO-15190 | 1.00 | 129.85 | |
| 10Oct 14:26:48 | 10Oct 16:36:39 | Both focus and rotation problems that will not clear. Antenna parked. | | | | | |
| 10Oct 14:26:48 | 10Oct 16:36:39 | Antenna(s) 08 (Data: Lost): | Bandswitch issue for Ku and K bands | LO-IF | WO-14927 | 0.25 | 32.46 |
| Project End Time | | End of project 22B-034 | Total Project Time (minutes x 27 ants.) | | Down Time % of Total Time | Total Down Time | |
| 10Oct 16:36:39 | | End of project 22B-034 | 3506.0 | | 8.8% | 310.2 | |

Page 1

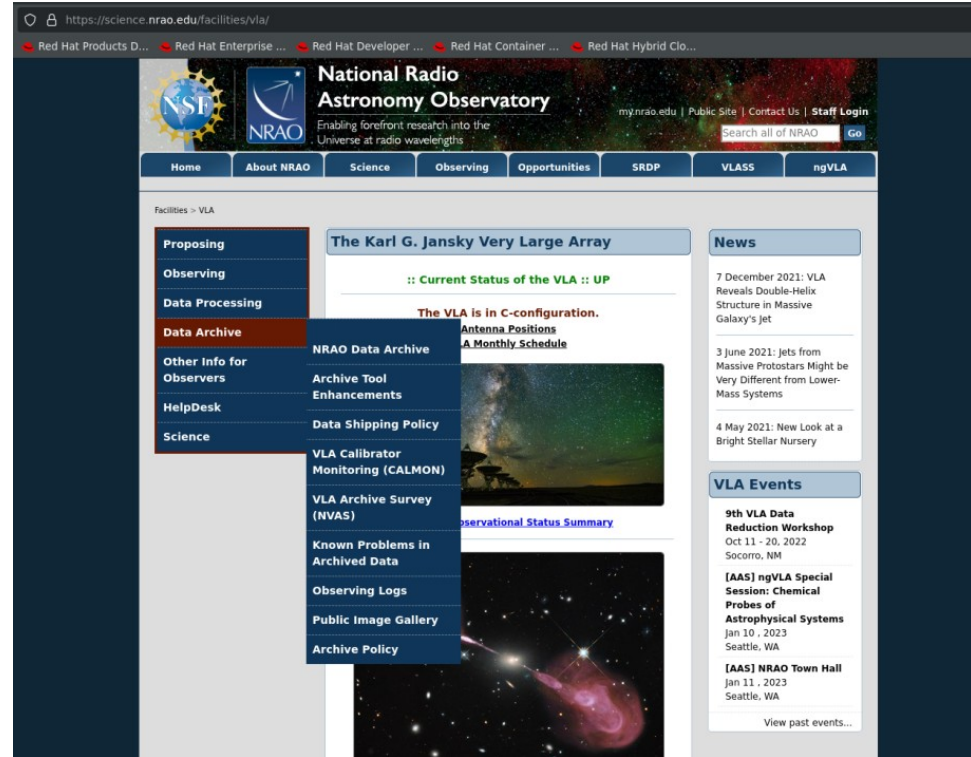
Archive Access Tool (AAT)

Obtaining data from the NRAO archive

<https://data.nrao.edu/portal/>

Archive Access Tool (AAT)

Information pages



VLBA related information:

<https://science.nrao.edu/facilities/vlba/facilities/vlba/data-archive/index>

VLA related information:

<https://science.nrao.edu/facilities/vla/archive/index>

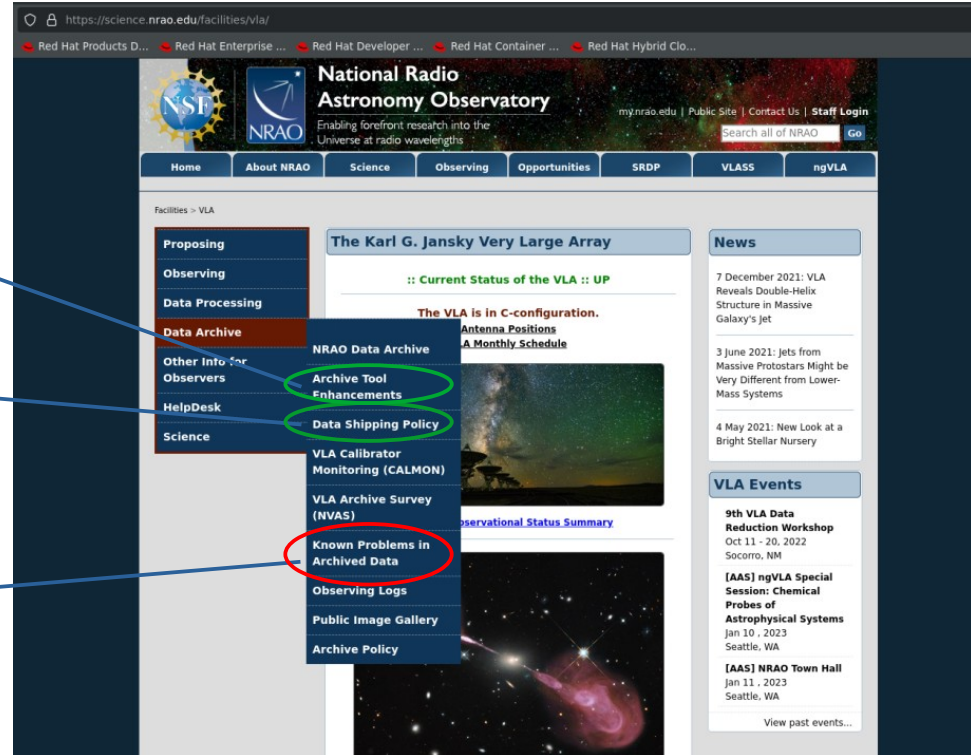
Archive Access Tool (AAT)

Information pages

Archive tool planned enhancements

Data can be shipped on hard disk (information)

Known data issues



VLBA related information:

<https://science.nrao.edu/facilities/vlba/facilities/vlba/data-archive/index>

VLA related information:

<https://science.nrao.edu/facilities/vla/archive/index>

Archive Access Tool (AAT)

Interface: Landing page

<https://data.nrao.edu/portal/>

version: 4.2.0

National Radio Astronomy Observatory
Enabling forefront research into the Universe at radio wavelengths

Archive Access Tool Back Log In About

Search

Show Search Inputs

View Projects View Observations View Images

Page 1 of 25788 Projects

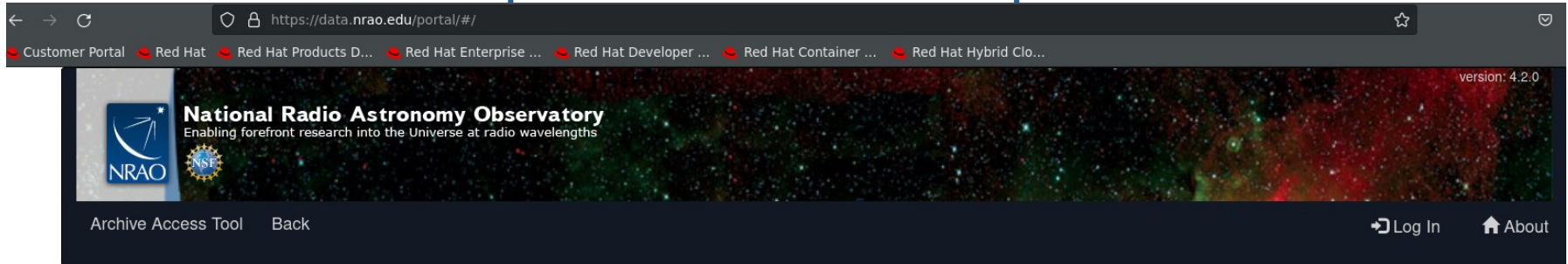
| Project | Instrument | Title | First Obs | Last Obs | Execution Blocks | Lock |
|------------|------------|---|------------------|------------------|------------------------|------|
| 21B-286 | EVLA | The North American Nanohertz Observatory for Gravitational Waves | 2021-09-27 19:51 | 2022-10-11 01:34 | 95 execution blocks | 🔒 |
| Operations | EVLA | No title found | 2009-10-14 21:18 | 2022-10-10 23:42 | 57157 execution blocks | |
| 22B-174 | EVLA | VLA as a High-Speed Camera to Probe Semi-Relativistic Electrons in Solar Flares | 2022-10-03 18:09 | 2022-10-10 22:42 | 19 execution blocks | 🔒 |
| 158_2 | EVLA | No title found | 2016-09-13 21:51 | 2022-10-10 20:57 | 653 execution blocks | |
| TRSR0001 | EVLA | No title found | 2010-05-22 03:57 | 2022-10-10 20:15 | 1467 execution blocks | |
| TPUL0001 | EVLA | No title found | 2011-11-29 19:14 | 2022-10-10 19:05 | 913 execution blocks | |
| TSUB0001 | EVLA | No title found | 2011-04-30 07:38 | 2022-10-10 17:12 | 848 execution blocks | |
| TCAL0003 | EVLA | No title found | 2010-10-22 03:08 | 2022-10-10 17:02 | 1396 execution blocks | |
| 22B-034 | EVLA | A blind survey of narrow-line Seyfert 1 galaxies - The quest for invisible jets | 2022-10-10 14:26 | 2022-10-10 16:36 | 1 execution blocks | 🔒 |

Data may be locked
(if within proprietary period)

Archive Access Tool (AAT)

Interface: Landing page

<https://data.nrao.edu/portal/>



The list of data sets can be presented in various ways

▼ Show Search Inputs ▼

View Projects View Observations View Images

« Page 1 »

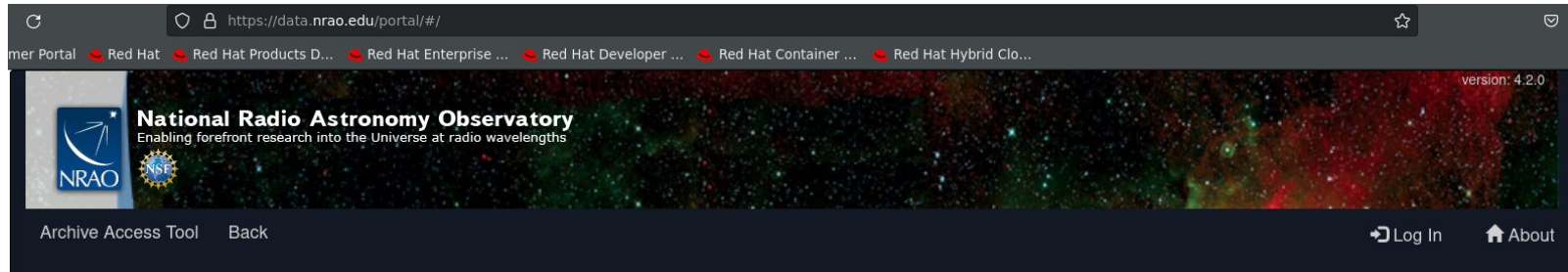
Show 25 of 25788 Projects

| Project | Instrument | Title | First Obs | Last Obs | Execution Blocks | Lock |
|--------------|------------|---|------------------|------------------|------------------------|------|
| + 21B-286 | EVLA | The North American Nanohertz Observatory for Gravitational Waves | 2021-09-27 19:51 | 2022-10-11 01:34 | 95 execution blocks | 🔒 |
| + Operations | EVLA | No title found | 2009-10-14 21:18 | 2022-10-10 23:42 | 57157 execution blocks | |
| + 22B-174 | EVLA | VLA as a High-Speed Camera to Probe Semi-Relativistic Electrons in Solar Flares | 2022-10-03 18:09 | 2022-10-10 22:42 | 19 execution blocks | 🔒 |
| + 158_2 | EVLA | No title found | 2016-09-13 21:51 | 2022-10-10 20:57 | 653 execution blocks | |
| + TRSR0001 | EVLA | No title found | 2010-05-22 03:57 | 2022-10-10 20:15 | 1467 execution blocks | |
| + TPUL0001 | EVLA | No title found | 2011-11-29 19:14 | 2022-10-10 19:05 | 913 execution blocks | |
| + TSub0001 | EVLA | No title found | 2011-04-30 07:38 | 2022-10-10 17:12 | 848 execution blocks | |
| + TCAL0003 | EVLA | No title found | 2010-10-22 03:08 | 2022-10-10 17:02 | 1396 execution blocks | |
| + 22B-034 | EVLA | A blind survey of narrow-line Seyfert 1 galaxies - The quest for invisible jets | 2022-10-10 14:26 | 2022-10-10 16:36 | 1 execution blocks | 🔒 |

Archive Access Tool (AAT)

Data lists: per observation

<https://data.nrao.edu/portal/>



The list of data sets can be presented in various ways

View Projects | **View Observations** | View Images

Page 1

Show 25 of 509881 Observations

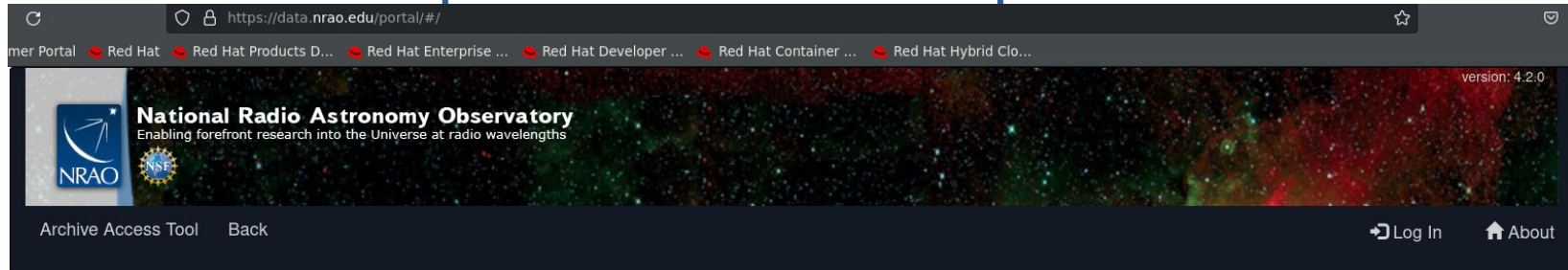
0/100: selected (0/10.0 TB)
View Selection(s) | Clear All | Download

| Archive File | Project | Instrument | Observation Start | Observation Stop | File Size | Array Config | Bands | Type | Cals | Scans |
|--|------------|------------|---------------------|---------------------|------------|--------------|-------|------------|------|-------|
| 21B-286.sb41543679.eb42916406.59863.0074566088 | 21B-286 | EVLA | 2022-10-11 00:10:44 | 2022-10-11 01:34:26 | 111.284 GB | C | S | visibility | | 55 |
| sysstartS.59862.9865046875 | Operations | EVLA | 2022-10-10 23:40:42 | 2022-10-10 23:42:29 | 155.859 MB | C | S | visibility | | 4 |
| sysstartL.59862.98459487269 | Operations | EVLA | 2022-10-10 23:37:52 | 2022-10-10 23:40:27 | 226.341 MB | C | L | visibility | | 5 |
| K3delay.59862.96867989583 | Operations | EVLA | 2022-10-10 23:15:02 | 2022-10-10 23:37:42 | 3.918 GB | C | K | visibility | | 43 |
| sysstartC.59862.96729078704 | Operations | EVLA | 2022-10-10 23:13:02 | 2022-10-10 23:14:51 | 158.811 MB | C | C | visibility | | 4 |
| sysstartX.59862.96254613426 | Operations | EVLA | 2022-10-10 23:06:13 | 2022-10-10 23:12:45 | 575.422 MB | C | X | visibility | | 13 |
| 22B-174_sb42877148_1_1_000.59862.93733528935 | 22B-174 | EVLA | 2022-10-10 22:29:49 | 2022-10-10 22:42:44 | 46.676 GB | C | C | visibility | | 9 |

Archive Access Tool (AAT)

Data lists: images

<https://data.nrao.edu/portal/>



The list of data sets can be presented in various ways



(for VLA: future)

0/50: selected (0/10.0 TB)

View Selection(s) Clear All Download View In Carta

| | Project | Longitude | Latitude | Band | Sp Resolution | Beam Axis Ratio | File Name |
|--|----------|-------------|---------------|------|---------------|-----------------|---|
| | VLASS1.1 | 0h2m28.328s | -36°30'0.000" | S | 2.520 | 2.554 | VLASS1.1.ql.T01t01.J000228-363000.10.2048.v1.l.iter1.image.pbcor.tt0.subim.fits |
| | VLASS1.1 | 0h2m30.256s | -37°30'0.000" | S | 2.460 | 1.975 | VLASS1.1.ql.T01t01.J000230-373000.10.2048.v1.l.iter1.image.pbcor.tt0.subim.fits |
| | VLASS1.1 | 0h2m32.282s | -38°30'0.000" | S | 2.486 | 1.534 | VLASS1.1.ql.T01t01.J000232-383000.10.2048.v1.l.iter1.image.pbcor.tt0.subim.fits |
| | VLASS1.1 | 0h2m34.411s | -39°30'0.000" | S | 2.621 | 1.270 | VLASS1.1.ql.T01t01.J000234-393000.10.2048.v1.l.iter1.image.pbcor.tt0.subim.fits |
| | VLASS1.1 | 0h7m24.984s | -36°30'0.000" | S | 2.518 | 2.440 | VLASS1.1.ql.T01t01.J000724-363000.10.2048.v1.l.iter1.image.pbcor.tt0.subim.fits |
| | VLASS1.1 | 0h7m30.769s | -37°30'0.000" | S | 2.455 | 1.881 | VLASS1.1.ql.T01t01.J000730-373000.10.2048.v1.l.iter1.image.pbcor.tt0.subim.fits |
| | VLASS1.1 | 0h7m36.847s | -38°30'0.000" | S | 2.502 | 1.462 | VLASS1.1.ql.T01t01.J000736-383000.10.2048.v1.l.iter1.image.pbcor.tt0.subim.fits |

Archive Access Tool (AAT)

Data lists: images

<https://data.nrao.edu/portal/>

The screenshot shows the NRAO Archive Access Tool (AAT) portal. The header includes the NRAO logo and the text "National Radio Astronomy Observatory Enabling forefront research into the Universe at radio wavelengths". The main content area features a search bar, a "Show Search Inputs" dropdown menu (circled in red), and a "Page 1" indicator. Below the search bar, there are buttons for "View Projects", "View Observations", and "View Images". A selection summary shows "0/50: selected (0/10.0 TB)" with buttons for "View Selection(s)", "Clear All", "Download", and "View In Carta". A table of image data is displayed below, with columns for Project, Longitude, Latitude, Band, Sp Resolution, Beam Axis Ratio, and File Name. A red arrow points from the text "The search inputs are hidden by default" to the "Show Search Inputs" dropdown menu.

0/50: selected (0/10.0 TB)

View Selection(s) Clear All Download View In Carta

| Project | Longitude | Latitude | Band | Sp Resolution | Beam Axis Ratio | File Name |
|----------|-------------|---------------|------|---------------|-----------------|---|
| VLASS1.1 | 0h2m28.328s | -36°30'0.000" | S | 2.520 | 2.554 | VLASS1.1.ql.T01t01.J000228-363000.10.2048.v1.l.iter1.image.pbcor.tt0.subim.fits |
| VLASS1.1 | 0h2m30.256s | -37°30'0.000" | S | 2.460 | 1.975 | VLASS1.1.ql.T01t01.J000230-373000.10.2048.v1.l.iter1.image.pbcor.tt0.subim.fits |
| VLASS1.1 | 0h2m32.282s | -38°30'0.000" | S | 2.486 | 1.534 | VLASS1.1.ql.T01t01.J000232-383000.10.2048.v1.l.iter1.image.pbcor.tt0.subim.fits |
| VLASS1.1 | 0h2m34.411s | -39°30'0.000" | S | 2.621 | 1.270 | VLASS1.1.ql.T01t01.J000234-393000.10.2048.v1.l.iter1.image.pbcor.tt0.subim.fits |
| VLASS1.1 | 0h7m24.984s | -36°30'0.000" | S | 2.518 | 2.440 | VLASS1.1.ql.T01t01.J000724-363000.10.2048.v1.l.iter1.image.pbcor.tt0.subim.fits |
| VLASS1.1 | 0h7m30.769s | -37°30'0.000" | S | 2.455 | 1.881 | VLASS1.1.ql.T01t01.J000730-373000.10.2048.v1.l.iter1.image.pbcor.tt0.subim.fits |
| VLASS1.1 | 0h7m36.847s | -38°30'0.000" | S | 2.502 | 1.462 | VLASS1.1.ql.T01t01.J000736-383000.10.2048.v1.l.iter1.image.pbcor.tt0.subim.fits |

The search inputs are hidden by default

Archive Access Tool (AAT)

Archive search inputs

Search

Clear

Show only CMS data

Show only data flagged public

Archive Access Tool (AAT)

Archive search inputs

| | | |
|---|---|---|
| Coordinate Frame: <input type="text" value="Equatorial"/> | Equinox: <input type="text" value="J2000"/> | Right Ascension <input type="text"/> |
| Radius: <input type="text"/> <input type="text" value=""/> | Source Name: <input type="text"/> | |
| Telescope: <input type="text" value="ALMA"/> <ul style="list-style-type: none"><input checked="" type="checkbox"/> Clear All<input checked="" type="checkbox"/> ALMA (51713)<input type="checkbox"/> EVLA (109917)<input type="checkbox"/> GBT (8797)<input type="checkbox"/> GMVA (209)<input type="checkbox"/> VLA (74448)<input type="checkbox"/> VLBA (273971) | Array Configuration: <input type="text" value="Click to Select"/> | Receivers: <input type="text" value="C"/> |
| | Archive Filename: <input type="text"/> | PI Name: <input type="text"/> |
| <input type="button" value="Search"/> <input type="button" value="Clear"/> | | |
| <input type="checkbox"/> Show only CMS data | | |
| <input type="checkbox"/> Show only data flagged public | | |

Archive Access Tool (AAT)

Selecting data for download

TPUL0001 EVLA No title found 2011-11-29 19:14 2022-10-10 19:05 913 execution blocks

TSUB0001 EVLA No title found 2011-04-30 07:38 2022-10-10 17:12 848 execution blocks

TCAL0003 EVLA No title found 2010-10-22 03:08 2022-10-10 17:02 1396 execution blocks

Title: No title found
Abstract: No abstract found
PI: Emmanuel Momjian

Observations Images

« < Page 1 > » Show 25 of 1396 Observations

1/100: selected (2.3 GB/10.0 TB)

View Selection(s) Clear All Download

| Archive File | Project | Instrument | Observation Start | Observation Stop | File Size | Array Config | Bands | Type | Cals | Scans |
|--|----------|------------|---------------------|---------------------|-----------|--------------|--------------------------|------------|------|-------|
| <input checked="" type="checkbox"/> newstress.59862.692122754626 | TCAL0003 | EVLA | 2022-10-10 16:36:40 | 2022-10-10 17:02:54 | 2.276 GB | C | C, K, Ka, Ku, L, Q, S, X | visibility | | 18 |
| <input type="checkbox"/> newstress_000.59858.314527361115 | TCAL0003 | EVLA | 2022-10-06 07:32:55 | 2022-10-06 07:57:22 | 2.118 GB | C | C, K, Ka, Ku, L, Q, S, X | visibility | | 18 |
| <input type="checkbox"/> newstress.59855.68132069445 | TCAL0003 | EVLA | 2022-10-03 16:21:06 | 2022-10-03 16:47:11 | 2.094 GB | C | C, K, Ka, Ku, L, Q, S, X | visibility | | 18 |
| <input type="checkbox"/> newstress.59852.093027372684 | TCAL0003 | EVLA | 2022-09-30 02:13:58 | 2022-09-30 02:40:34 | 2.484 GB | C | C, K, Ka, Ku, L, Q, S, X | visibility | | 18 |

Selected for download

data.nrao.edu/portal/#/

cts D... Red Hat Enterprise ... Red Hat Developer ... Red Hat Container ... Red Hat Hybrid Clo...

| | | | 2010-05-22 03:57 | 2022-10-10 20:15 |
|----------------|--|--|------------------|------------------|
| No title found | | | | |
| No title found | | | 4 | 2022-10-10 19:05 |
| No title found | | | 8 | 2022-10-10 17:12 |
| No title found | | | 8 | 2022-10-10 17:02 |

Launch Workflow Task on: TCAL0003

User Email (required):

Request Description:

Destination Directory: Specify directory (must be logged in)

Create tar file: Return results as a tar file

Choose download data format:
 SDM tables only (metadata only)
 SDM-BDF dataset (metadata + visibilities)
 Basic Measurement Set (uncalibrated)
 Calibrated Measurement Set

Apply telescope flags: Apply flags generated during observing

CASA|Pipeline Version:

Title: No title found
Abstract: No title found
PI: Emmanuel
Observations

ted (2.3 GB)
Clear All

54626 TCAL
527361115 TCAL
9445 TCAL0003 EVLA
72684 TCAL0003 EVLA

07:32:55 07:57:22
2022-10-03 2022-10-03 2.094 GB C
16:21:06 16:47:11
2022-09-30 2022-09-30 2.484 GB C

Bands
C, K, Ka, Ku, L, Q, S, X
C, K, Ka, Ku, L, Q, S, X
C, K, Ka, Ku, L, Q, S, X

Scans
18
18
18

Archive Access Tool (AAT)

Scan list

| | | | | | | |
|--------------------------|----------|------|----------------|------------------|------------------|-----------------------|
| <input type="checkbox"/> | TPUL0001 | EVLA | No title found | 2011-11-29 19:14 | 2022-10-10 19:05 | 913 execution blocks |
| <input type="checkbox"/> | TSUB0001 | EVLA | No title found | 2011-04-30 07:38 | 2022-10-10 17:12 | 848 execution blocks |
| <input type="checkbox"/> | TCAL0003 | EVLA | No title found | 2010-10-22 03:08 | 2022-10-10 17:02 | 1396 execution blocks |

Title: No title found

Abstract: No abstract found

PI: Emmanuel Momjian

Observations

Images

Page 1

Show 25 of 1396 Observations

1/100: selected (2.3 GB/10.0 TB)


View Selection(s) Clear All Download

You can see scan list before download too

| Archive File | Project | Instrument | Observation Start | Observation Stop | File Size | Array Config | Bands | Type | Scans |
|--|----------|------------|---------------------|---------------------|-----------|--------------|--------------------------|------------|-------|
| <input checked="" type="checkbox"/> newstress.59862.692122754626 | TCAL0003 | EVLA | 2022-10-10 16:36:40 | 2022-10-10 17:02:54 | 2.276 GB | C | C, K, Ka, Ku, L, Q, S, X | visibility | 18 |
| <input type="checkbox"/> newstress_000.59858.314527361115 | TCAL0003 | EVLA | 2022-10-06 07:32:55 | 2022-10-06 07:57:22 | 2.118 GB | C | C, K, Ka, Ku, L, Q, S, X | visibility | 18 |
| <input type="checkbox"/> newstress.59855.68132069445 | TCAL0003 | EVLA | 2022-10-03 16:21:06 | 2022-10-03 16:47:11 | 2.094 GB | C | C, K, Ka, Ku, L, Q, S, X | visibility | 18 |
| <input type="checkbox"/> newstress.59852.093027372684 | TCAL0003 | EVLA | 2022-09-30 02:13:58 | 2022-09-30 02:40:34 | 2.484 GB | C | C, K, Ka, Ku, L, Q, S, X | visibility | 18 |

Archive Access Tool (AAT)

Customer Portal Red Hat Red Hat Products D... Red Hat Enterprise ... Red Hat Developer ... Red Hat Container ... Red Hat Hybrid Clo... version: 4.2.0

 **National Radio Astronomy Observatory**
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Archive Access Tool Back Log In About

Observation ID: newstress.59862.692122754626

Obs ID: newstress.59862.692122754626
Project Code: TCAL0003
Estimated Size: 2.276 GB
Obs Release Date: 2022-10-10T23:02:54.550Z
Data Product Type: visibility
Receiver Band: C, K, Ka, Ku, L, Q, S, X
Array Configuration: C

Request Data

| RA | Dec | Target Name | Min Frequency | Max Frequency | Scan Intent | Polarizations | Temporal Res | Scan Duration |
|---------------|---------------|-------------|---------------|---------------|---------------------------------------|--------------------|--------------|---------------|
| 11h53m12.499s | 80°58'29.155" | 1153+8058 | 8.3320000 GHz | 8.3320000 GHz | ["CALIBRATE_PHASE","CALIBRATE_AMPLI"] | ["RR, RL, LR, LL"] | 1.008 | 120 sec |
| 11h53m12.499s | 80°58'29.155" | 1153+8058 | 8.3320000 GHz | 8.3320000 GHz | ["SYSTEM_CONFIGURATION"] | ["RR, RL, LR, LL"] | 1.023 | 45 sec |
| 11h53m12.499s | 80°58'29.155" | 1153+8058 | 4.8320000 GHz | 4.8320000 GHz | ["CALIBRATE_PHASE","CALIBRATE_AMPLI"] | ["RR, RL, LR, LL"] | 1.008 | 120 sec |
| 11h53m12.499s | 80°58'29.155" | 1153+8058 | 4.8320000 GHz | 4.8320000 GHz | ["SYSTEM_CONFIGURATION"] | ["RR, RL, LR, LL"] | 1.023 | 45 sec |
| 11h53m12.499s | 80°58'29.155" | 1153+8058 | 3.0200000 GHz | 3.0200000 GHz | ["CALIBRATE_PHASE","CALIBRATE_AMPLI"] | ["RR, RL, LR, LL"] | 1.008 | 120 sec |
| 11h53m12.499s | 80°58'29.155" | 1153+8058 | 1.3880000 GHz | 1.3880000 GHz | ["SYSTEM_CONFIGURATION"] | ["RR, RL, LR, LL"] | 1.004 | 149.55 sec |
| 11h53m12.499s | 80°58'29.155" | 1153+8058 | 3.0200000 GHz | 3.0200000 GHz | ["SYSTEM_CONFIGURATION"] | ["RR, RL, LR, LL"] | 1.023 | 45 sec |
| 11h53m12.499s | 80°58'29.155" | 1153+8058 | 1.3880000 GHz | 1.3880000 GHz | ["CALIBRATE_PHASE","CALIBRATE_AMPLI"] | ["RR, RL, LR, LL"] | 1.008 | 120 sec |

Archive Access Tool (AAT)

VLBA segments

| | ↕ Project | ↕ Instrument | Title | ↕ First Obs | ↕ Last Obs | |
|---|-----------|--------------|--|------------------|------------------|----------------------|
| + | PPM2022 | VLBA | No title found | 2022-03-21 06:00 | 2022-09-27 11:53 | 5 execution blocks |
| + | UC003 | VLBA | No title found | 2021-09-01 05:00 | 2022-09-27 05:59 | 304 execution blocks |
| - | BS298 | VLBA | Exploring Post-merger SMBH Evolution with the VLBA | 2021-06-01 13:59 | 2022-09-27 02:38 | 116 execution blocks |

Title: Exploring Post-merger SMBH Evolution with the VLBA

Abstract: We will continue a survey of six massive, major galaxy mergers, seeking signatures of the dual, binary, or recoiling SMBHs that should reside there. High-resolution VLBA observations of the remaining four targets will characterize the active emission history of the SMBHs and seek evidence of widely separated cores (at tens of parsec separations), and gravitational-wave searches with NANOGrav data will provide complementary searches for sub-parsec binary systems. With these two components, this program will represent a comprehensive probe of binary and active nucleus evolution within the final stages of major galaxy mergers, and will directly advance modern gravitational-wave astrophysics in the nanohertz gravitational waveband. Discoveries of dual, binary, coalescing, and recoiling SMBHs will raise our confidence in surveyable signatures that mark the presence of such systems, and will directly constrain the efficiency of binary evolution.

PI: Sarah Spolaor

Legacy ID: BS298

Co-Authors: Peter Breiding, Joseph Lazio, Caitlin V

VLBA is different to VLA due to its very nature, with often many correlations done in Socorro which are grouped into separate Segments

Segments Images

Page 1 of 53 Segments

| | Segment | ↕ Segment Start | ↕ Segment Stop | File Size | Bands | Correlation Files |
|---|---------|------------------|------------------|-----------|---------|-------------------|
| ☑ | BS298F2 | 2022-09-26 21:00 | 2022-09-27 02:38 | 8.320 GB | S, X, C | 2 |
| ☑ | BS298F1 | 2022-09-18 21:59 | 2022-09-19 03:46 | 8.263 GB | S, X, C | 2 |
| ☑ | BS298F0 | 2022-09-16 21:59 | 2022-09-17 03:38 | 8.352 GB | S, X, C | 2 |
| ☑ | BS298E9 | 2022-09-15 21:54 | 2022-09-16 01:16 | 6.474 GB | S, X, C | 2 |
| ☑ | BS298E8 | 2022-09-06 01:49 | 2022-09-06 04:45 | 6.626 GB | S, X, C | 2 |
| ☑ | BS298E6 | 2022-09-05 01:59 | 2022-09-05 04:47 | 6.258 GB | S, X, C | 2 |

Archive Access Tool (AAT)

ALMA Products (briefly)

ALMA has used its own data repository: <https://almascience.nrao.edu/aq/>
Roll-out to new integrated NRAO Archive is ongoing.

Screenshot of ALMA entries in new NRAO AAT (<https://data.nrao.edu/>):

The screenshot displays the NRAO AAT interface for the project "Measuring Central Black Hole Masses in Low-mass Galaxies". The interface includes a title, abstract, PI, and co-authors. Below this, there are tabs for "MOUSes" and "Images". A table lists the data entries with columns for MOUS, Observation Start, Observation Stop, File Size, Array Config, Ang Res, Bands, and EBs. Each entry has a dropdown arrow and buttons for "Download Restored MS" and "Re-Imaging".

Title: Measuring Central Black Hole Masses in Low-mass Galaxies
Abstract: We observed seven nearby ($D < 20$ Mpc) low-mass ($M^* < 10$ billion solar masses) galaxies in ALMA Cycle-5 to enable more robust detections and dynamical mass measurements of $\sim 10^6 M_{\text{sun}}$ mass central black holes. These measurements will provide constraints on the formation of black holes in the early universe, and on the physics underlying galaxy-black hole scaling relations. Our target galaxies were chosen across the Hubble sequence and based on the presence of molecular gas from single dish surveys. The high-resolution observations of ALMA clearly detected evidence of nuclear rotating molecular disks, which are so called circumnuclear gas disks (CNDs), surrounding their black holes of five targets, and two of them are of sufficient quality to measure their black hole masses. In two other galaxies, the detected gas was not in rotating disks, necessary to derive black hole masses. For the last three galaxies, unfortunately, we are lacking short baselines in the data obtained. Here we propose to use ALMA to obtain intermediate resolution observations of these three targets. A small amount of additional time is needed to maximize the already invested ALMA time.
PI: Dieu Nguyen
Co-Authors: Mark den Brok, Phuong Nguyen, Michele Cappellari, Andrea Silva, Masatoshi Imanishi, Taiki Kawamuro, Daisuke Iono, Takuma Izumi, Anil Seth, Satoru Iguchi, Jenny Greene, Kristina Nyland, Kouichiro Nakanishi, Takafumi Tsukui, Nadine Neumayer

MOUSes Images

| MOUS | ↑ Observation Start | ↓ Observation Stop | File Size | Array Config | Ang Res | Bands | EBs | |
|------------------|---------------------|--------------------|-----------|--------------|---------|-------|-----|---|
| NGC4414_a_06_TM2 | 2019-12-02 11:35 | 2019-12-02 11:52 | 6.767 GB | 12M | 1.400" | 06 | 1 | Download Restored MS Re-Imaging |
| NGC3773_a_06_TM2 | 2019-11-18 11:45 | 2019-11-18 12:00 | 8.226 GB | 12M | 1.106" | 06 | 1 | Download Restored MS Re-Imaging |
| NGC3049_a_06_TM2 | 2019-11-18 10:33 | 2019-11-18 10:48 | 8.226 GB | 12M | 1.095" | 06 | 1 | Download Restored MS Re-Imaging |
| NGC3773_a_06_TM1 | 2019-10-16 12:24 | 2019-10-16 12:50 | 26.933 GB | | | 06 | 2 | |
| NGC4414_a_06_TM1 | 2019-10-10 16:17 | 2019-10-10 16:45 | 42.034 GB | 12M | | 06 | 3 | |
| NGC3049_a_06_TM1 | 2019-10-04 11:09 | 2019-10-04 11:34 | 23.513 GB | | 0.261" | 06 | 2 | Download Restored MS Re-Imaging |

Archive Access Tool (AAT)

Current status: known issues and planned work

- SDM-BDF and MS of the same observations have to be requested separately.
- Only a single calibrated MS can be requested at any one time.
- Frequency-dependent FoV search is not yet supported
- Download requests are returned in a nested directory, with a sub-directory named exactly the same as what you asked for; you will have to go into that sub-directory to get to the requested file, e.g.
20B-099.sbXXX.ms/20B-099.sbXXX.ms/20B-099.sbXXX.ms
- Automated ways to get the data:
 - `wget` command → in place
 - Scripted access to the archive → VO TAP (Virtual Observatory Table Access Protocol) access standard to search the metadata, download not yet possible; see documentation here:
<https://science.nrao.edu/srdp/scripted-access-to-the-nrao-archive>

<https://science.nrao.edu/observing/nrao-archive-tool-enhancements>

Archive Access Tool (AAT)

Feedback

If you have issues with the archive, please send us Helpdesk ticket under the **VLA/VLBA Archive and Data Retrieval** department. For ALMA related issues there is **ALMA Data Products** or a separate dedicated ALMA science helpdesk (<https://help.almascience.org/>).

We also do really welcome feedback on current data archive, including requests for features, for this please send us Helpdesk ticket under the **AAT Feedback** department (for any telescope).

Scientific Helpdesk
<https://help.nrao.edu/>



www.nrao.edu
science.nrao.edu
public.nrao.edu

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