

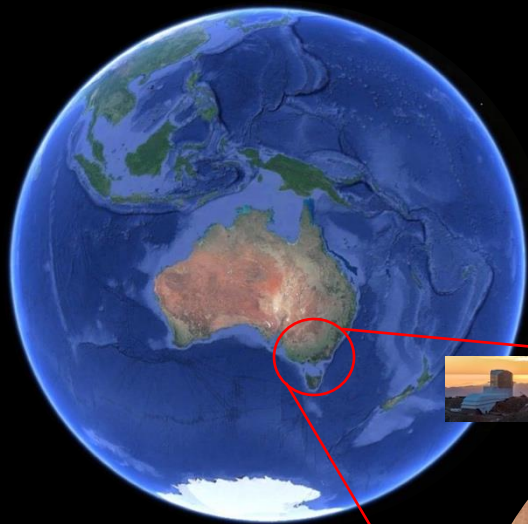
SIDING SPRING OBSERVATORY ALERT SYSTEM

Jamie Soon (jamie.soon@anu.edu.au) on behalf of the SSOTF and SSO Alert
System teams.

Research School of Astronomy and Astrophysics
Australian National University



Australian
National
University



KMTNet

ANU 2.3m

SkyMapper



GOTO South

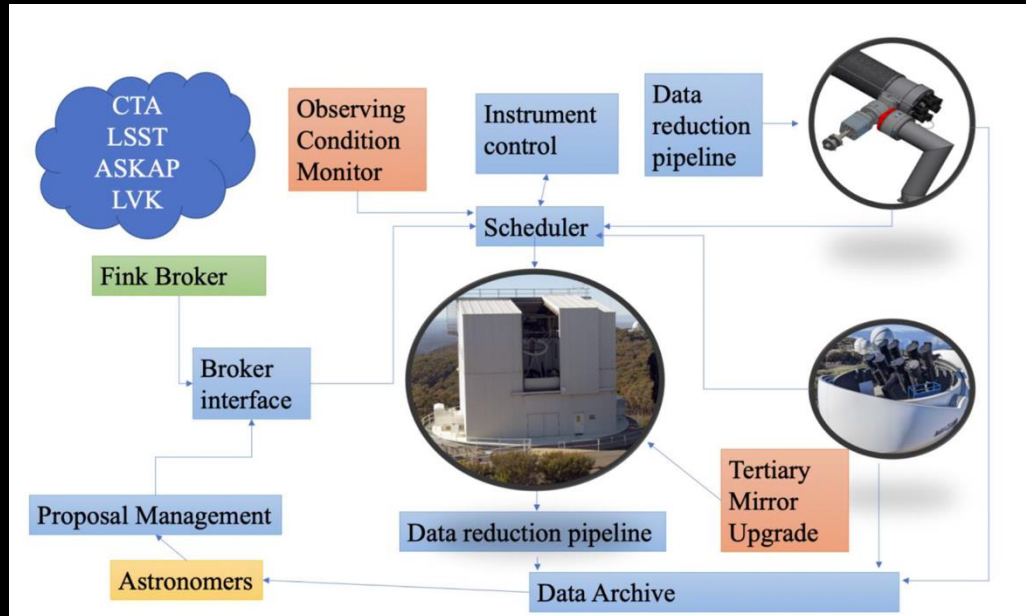
DREAMS

AAT 3.9m

LCOGT



Explosive Astrophysics from Siding Spring Observatory aka Siding Spring Observatory Transient Factory




Broker Interface aka Siding Spring Observatory Alert System

- A robotic network for automatic follow-up.
- Built upon the TOM Toolkit
- Originally developed by ADACS as part of an ARC LIEF grant (PI: C Lidman) with A. Moller.
- <https://github.com/ANU-RSAA/sso-alert>

SSO Alert System Targets Alerts Observations Chains Stream Alerts Jamie Logout

Welcome to the Alert System for Siding Spring Observatory.



Latest Targets

ID	Created
ZTF25acbnchv	2025-11-09
ZTF25acbnbws	2025-11-09
ZTF25accibqq	2025-11-09
ZTF25accsxys	2025-11-09
ZTF25accibqo	2025-11-09

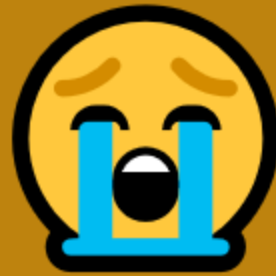




LIVE DEMONSTRATION

WORK IN PROGRESS





The dangers of a live demonstration



Welcome to the Alert System for Siding Spring Observatory.



Latest Targets	
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ZTF25acbnchv	2025-11-09
ZTF25acbnbws	2025-11-09
ZTF25accibqq	2025-11-09
ZTF25accsxys	2025-11-09



ZTF25acbnchv

1 upcoming observation

[Update](#) [Delete](#)

Names	ZTF25acbnchv
Target Type	SIDEREAL
Permissions	PUBLIC
Right Ascension	133.6456676
	08:54:34.960
Declination	41.6376201
	+41:38:15.43
Epoch	2460983.0174537

Tags

fink broker link <https://fink-portal.org/ZTF25acbnchv>

Survey View

J2000
25 34 34.960 +41 38 15.43

Field of view 10 arcmin

Scale bar 1 arcmin

[Update](#) [Save Image](#)

[Observe](#) [Observations](#) [Manage Groups](#)

Observe

[DREAMS](#) [ANU 2.3m](#)

Apply an observation template

Observation template*

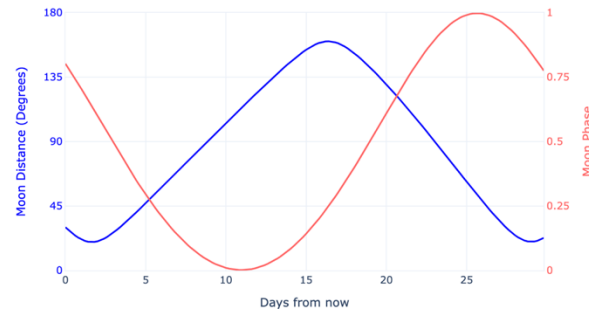
[Apply](#)

Plan

Start Time

End Time

Maximum Airmass

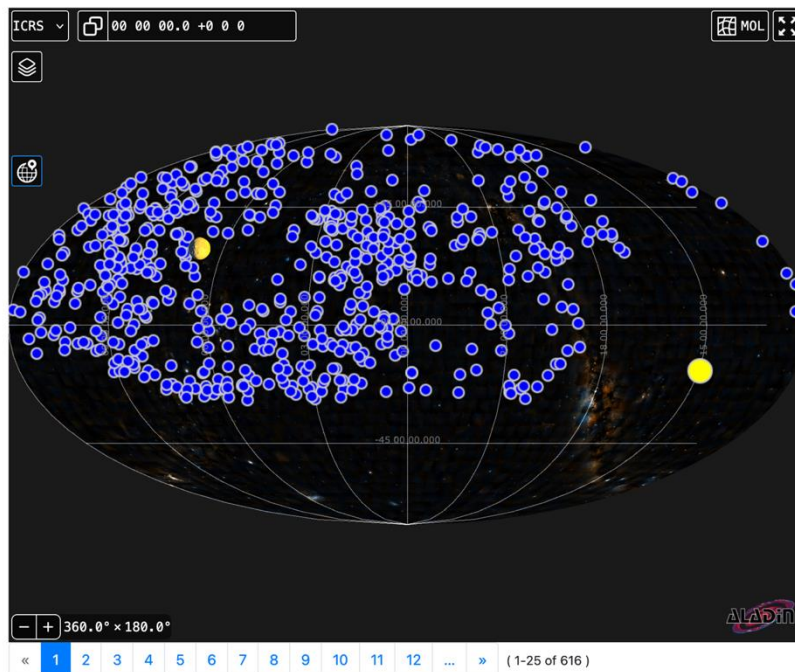
[Plan](#)

616 Targets

Create Targets ▾

Update Broker Data

Export Filtered Targets



Target Type

 ✓

Name

 ✓

Key

 ✓

Value

 ✓

Cone Search

 ✓RA, Dec, Search
Radius (degrees)

Target Grouping

 ▾

Name (Fuzzy)

 ✓Cone Search
(Target) ✓Target Name, Search
Radius (degrees)

Ordering



Query a Broker

Create a new query using:

[ALeRCE](#)[ANTARES](#)[Gaia](#)[Lasair](#)[Scout](#)[TNS](#)[Fink](#)

Name	Broker	Created	Last Run	Run	Delete
No saved queries yet, Try creating a query from one of the alert brokers listed above.					

Filter Saved Queries

Broker

Name contains

[Filter](#)[Reset](#)

« 1 2 3 4 5 6 7 8 9 10 11 12 ... » (1-25 of 1985)

Update Observations

Ordering

----- ▾

Observation id

Observation id

Target

AT2025vdq
test-jamies
ZTF18aafnauy
ZTF18acecugr

Facility

DREAMS
ANU 2.3m

Status

Status

Scheduled end

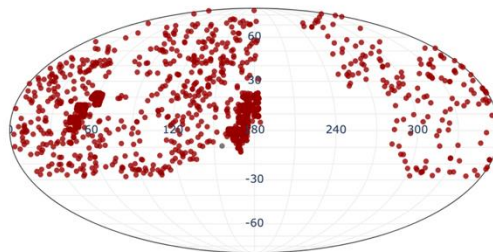
min Scheduler

max Scheduler

Filter

Reset

Observation Distribution (sidereal)



Add

Remove

Select	View	Target	Facility	Status	Groups
<input type="checkbox"/>	Details	ZTF25accsxtx	DREAMS		
<input type="checkbox"/>	Details	ZTF25abzmbay	DREAMS		
<input type="checkbox"/>	Details	ZTF25accsxxr	DREAMS		



Create a new Observation Template for ANU 2.3m

Template name*
2.3m_test_template

Observation

Proposal ID*

2400456

User Def. Priority

0

No. Obs. Blocks

1

Primary Instrument

WiFeS

Image Type

Object

Max Seeing (")

Max. Lunar Phase (%)

100

Time Constraint

Flexible

Time Ref. (UTC)

Time Window

Mode

Classical Equal

Instrument Configuration

Dichroic

RT480

Red Grating

R3000

Blue Grating

B3000

Aperture Wheel

Clear

Exposure

Exposure time (s)

150

Sky Exp. time (s)

Num. Exposures

1

Region of Interest

Full Field

Spectral Binning

1

Spatial Binning

2

Object, Acquisition & Guide

☐ Blind Acquisition

A&G Filter

R

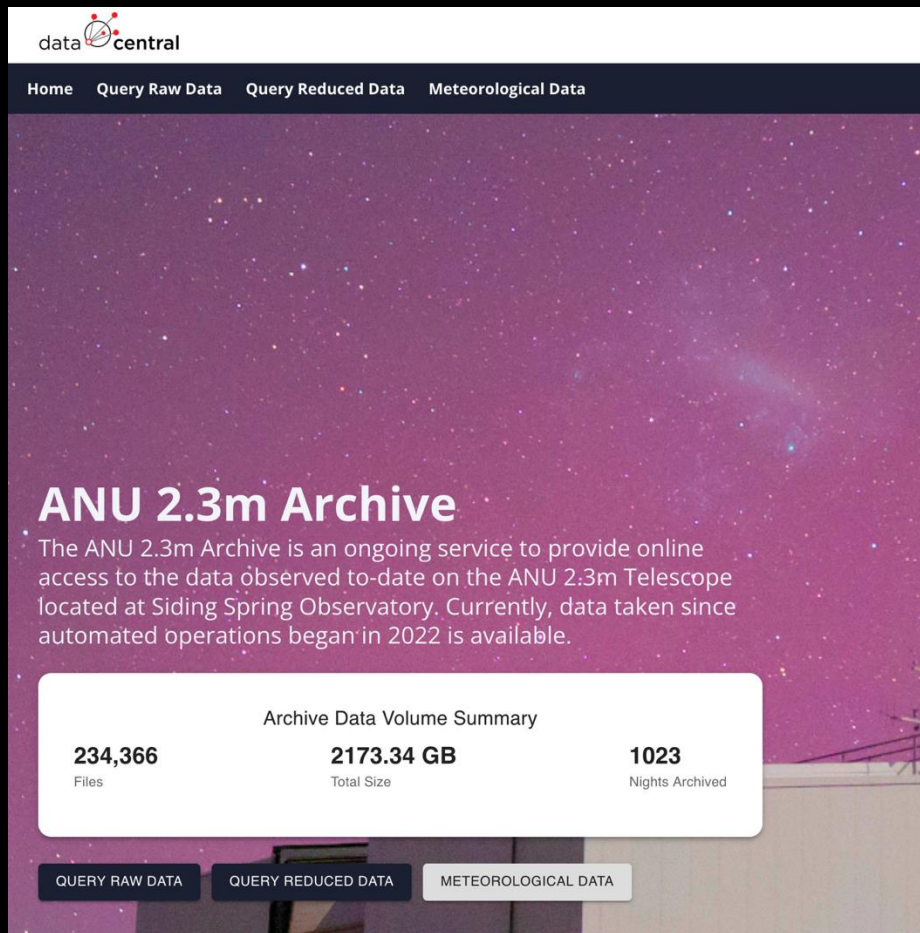
Guiding

Best Effort

Submit



Data Reduction



datacentral

Home Query Raw Data Query Reduced Data Meteorological Data

ANU 2.3m Archive

The ANU 2.3m Archive is an ongoing service to provide online access to the data observed to-date on the ANU 2.3m Telescope located at Siding Spring Observatory. Currently, data taken since automated operations began in 2022 is available.

Archive Data Volume Summary		
234,366 Files	2173.34 GB Total Size	1023 Nights Archived

QUERY RAW DATA QUERY REDUCED DATA METEOROLOGICAL DATA




Siding Spring Observatory Alert System

- Australia is uniquely placed to rapidly observe transients from Rubin and LSST.
- We are developing the system that would allow for this to happen automatically.
- <https://github.com/ANU-RSAA/sso-alert>

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ZTF25accsys	2025-11-09
ZTF25accibq	2025-11-09

