SkyPortal

An astronomical data platform

Theophile du Laz - 23/05/10

What is it?

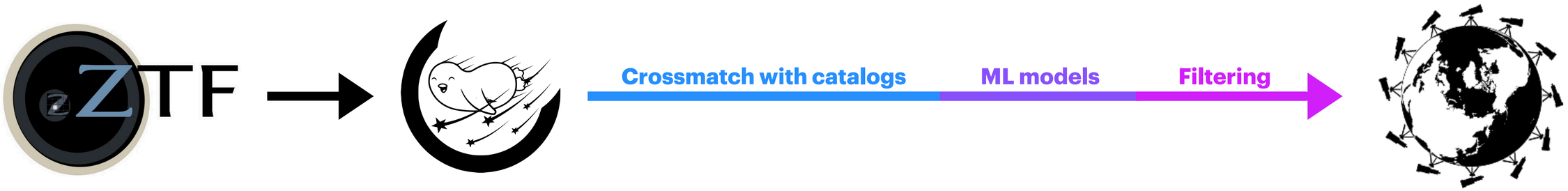
All-in-one astronomical tool

- Discover interesting transients.
- Manage follow-up.
- Perform characterization.
- Visualize the results.
- Work as a team, collaborate.
- Stay up to date.
- Integrate all of the above with multi-messenger events.

Discover interesting transients

With the help of alert brokers

- Receive candidates/alerts from alert brokers (e.g. Kowalski, Fink).
- Filter which candidates you get and their annotations using filters.
- Candidate scanning/vetting.
- Save interesting candidates as sources / Reject irrelevant candidates



Dashboard
Sources
Candidates
Favorites
Alerts
Persistent Sources
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Summary Search
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Scan candidates for sources

Start (Local Time) 04/29/2023 06:00 am

End (Local Time)

Show only candidates which passed a filter from the selected groups...

regardless of saved status

Classifications

Redshift

Minimum

Maximum

Show/hide rejected candidates

Show rejected candidates

Annotation Sorting

GCN Filtering

GCN Event: 2023-04-30T07:47:19

crossmatch-9457-9455.fits

Cumulative Probability: 0.95

First Detection After (UTC): 2023-04-30 07:47:19

Last Detection Before (UTC): 2023-05-07 07:47:19

Minimum Number of Detections: 1

Program Selection

Selected scanning profile: None
Click “Manage Scanning Profiles” to select a new profile.

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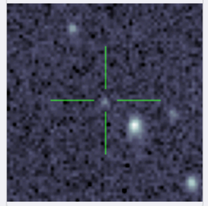
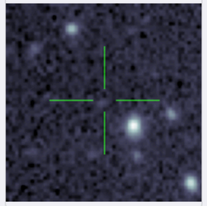
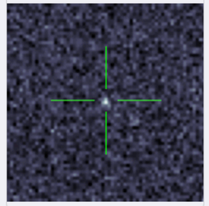
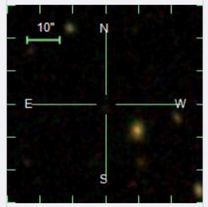
Source

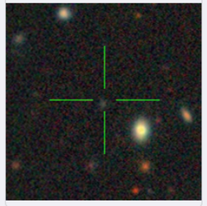
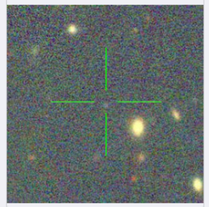
Images | Info | Photometry | Autoannotations

NEW | REF | SUB

SDSS | LEGACY SURVEY DR9 | PANSTARRS DR2



ZTF23aaitpey

Previously Saved

MANAGE GROUPS

ADD CLASSIFICATIONS

Saved groups: grb emgw

Last detected: 06:42:34 2023-05-01

Coordinates:

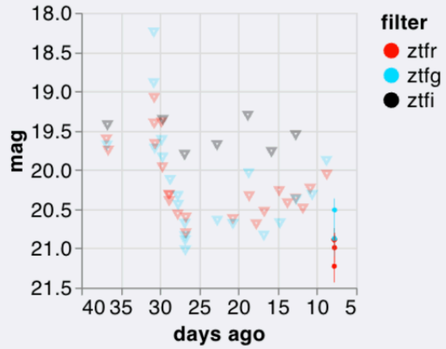
12h38m11.07s +36d30m02.28s

(α,δ= 189.546, 36.501)

Gal. Coords (l,b): 138.798 80.216

TNS: No matches found

Photometry Statistics:



GRB:GRB

WIS_TEST:WEIZMANN_TEST

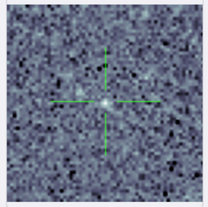
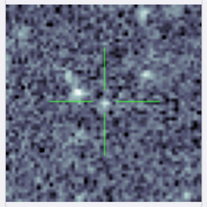
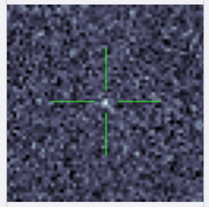
DLAB:ORPHAN

EMGW:LOOSE EMGW

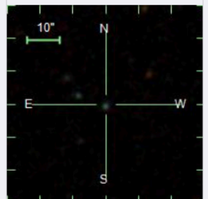
INFANT:INFANT

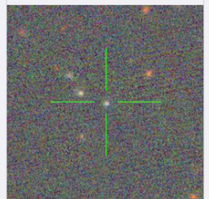
ORPH:ORPHAN

NEW | REF | SUB

SDSS | LEGACY SURVEY DR9 | PANSTARRS DR2



ZTF23aaitrmv

Previously Saved

MANAGE GROUPS

ADD CLASSIFICATIONS

Saved groups: grb emgw

Last detected: 06:42:34 2023-05-01

Coordinates:

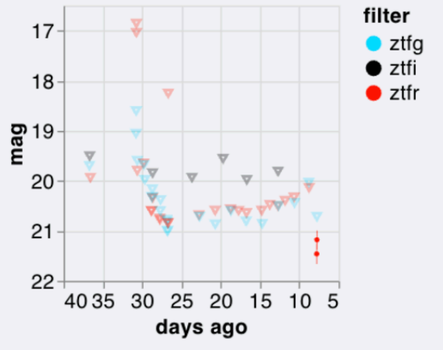
12h45m45.19s +38d04m36.98s

(α,δ= 191.438, 38.077)

Gal. Coords (l,b): 128.798 78.986

TNS: No matches found

Photometry Statistics:



VII/290-SDSS J124545.18+380436.6

z: 1.0000

GRB:GRB

rb: 0.5440

age: 0.0200

drb: 0.9990

fwhm: 1.4800

Manage follow-up

Schedule observations from telescopes

- First visualize the source’s photometry, annotations, thumbnails, and more.
- Trigger follow-up (photometry and spectra) of any telescope (with an API).
- Monitor request status.
- Retrieve observations once completed.
- Assign target to an observing run.

ZTF23aadqhae

Redshift: 0.0647 Classifications: - Ia Comments (given in reverse chronological order): - LRIS spectra of the SN and the host galaxy uploaded - strong host lines suggest z = 0.0647 - Potential host: WISEA J195200.26+590610.9, ra = 298.00088, dec = 59.10289, type = G. Host page: http://gayatri.caltech.edu:88/query/host/ZTF23aadqhae - The LRIS spectrum appears to be 3 or 4 weeks after peak light, which is consistent with the explosion time. The light curve is unusual. - Submit classification to TNS: http://gayatri.caltech.edu:88/query/tns/ZTF23aadqhae - P3 rea, rebrightening - @joeljo and I have been considering the possibility that there could be two SNe exploding a couple of weeks apart. There are a few detections >30 days before what seems to be the peak. This rise-time is too long, not to mention the earlier "peak." - Gah, was just about to write "do not upload to tns"... - Again, matches to SNIa @ z=0.065 for new (

Classification:
Ia

Position (J2000): **19:51:59.65 +59:06:10.09** (α,δ= 297.9985283, 59.1028014; *l*,*b*=91.928652, 15.778654) *E(B-V)*=0.10

Similar Sources: ZTF21acekmmm ZTF23aaekwbn ZTF20ackgfep

SEARCH ZTF ALERT ARCHIVE | SEARCH ZTF LIGHT CURVE ARCHIVE

TNS: SN 2023egs

Redshift: 0.0647 ± 0.0001 **DM:** 37.390 mag D_L: 300.56 Mpc

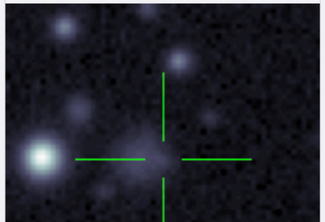
Photometry Statistics:

Finding Chart: PDF | INTERACTIVE

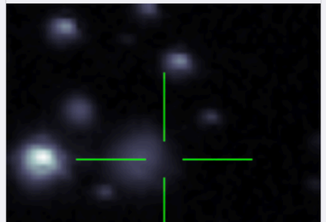
SHOW STARLIST | OBSERVABILITY | OBSERVABILITY CHART

slsn2 | RCF Deep | rcf | fritz-tns | au-caltech

NEW

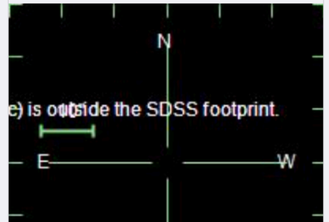


REF



SUB

SDSS



HIDE RIGHT PANE

Latest Summary

Auto-annotations

Origin	Spectrum Obs. at	Key	Value	Author	Created	I
BTS-bot-test:bts-bot-test		bts	0.5562	kowalski-bot	8 days ago	
RCF Deep:RCF Deep		jd	2460065.9474	kowalski-bot	a month ago	
RCF				kowalski-	a month	

Rows per page: 10 1-10 of 460

GAIA | WISE COLORS | MILLION QUASAR | GALEX | PHOTOZ | SCOPE FEATURES

Comments

SS steve-schulze 4 days ago

@tahumada , @ptgcliu, could you carefully check your reductions? Specifically, 1) you see two traces, 2)

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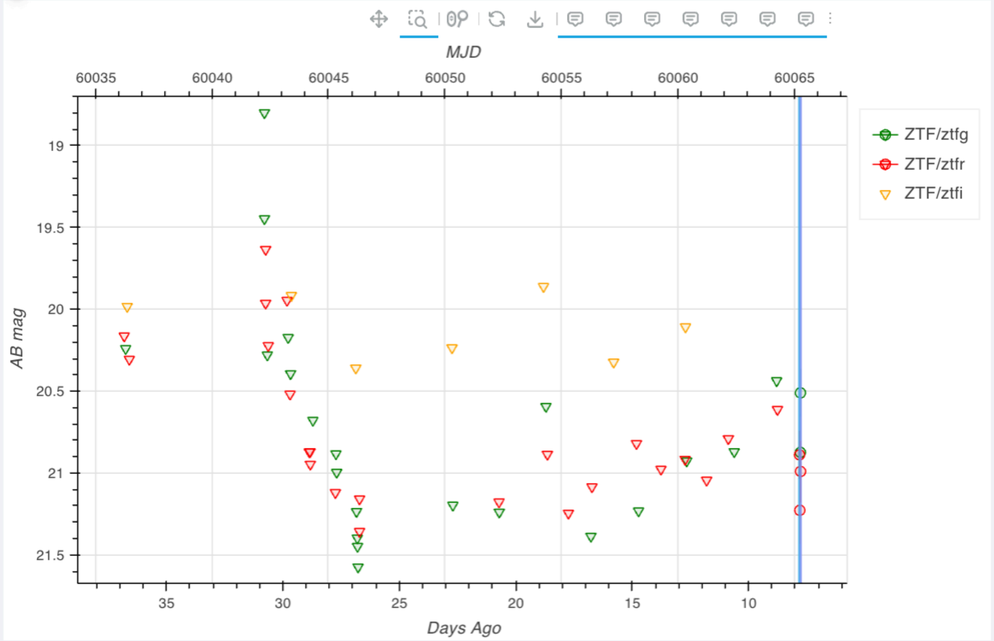
Photometry

Mag | Flux | Period

Binsize (days): 0

Export Bold Light Curve to CSV



Show All Photometry | Hide All Photometry

Data point size

8.5

UPLOAD ADDITIONAL PHOTOMETRY | MANAGE DATA | SHOW PHOTOMETRY TABLE | PERIODOGRAM ANALYSIS

Taxonomy *

SUBMIT

External Analysis

Analysis Requests

Analysis Page	Status	Last Activity	Analysis Service	Message
1046	completed	a few seconds ago (duration 2.48 sec)	2	Good res chi^2/dof

Rows per page: 10 | 1-1 of 1

Start New Analysis

SN Ia Fitter (sncosmo)

Share Data With

source *

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Offsets from nearest sources in reference catalogs:

TNS: 1.10"
PS1_DR1: 4.00"
Gaia_EDR3: 4.03"
GALEX: 4.57"
AllWISE: 4.16"

Follow-up

Allocation

Palomar 1.5m / SEDM - Gamma Ray Bursts (PI Ahumada)

Share Data With

grb

Mode *

IFU

Priority *

1.2

Start Date (UT) *

05/01/2023

End Date (UT) *

05/08/2023

Show Advanced Options

SUBMIT

SEDM Requests

ATLAS Requests

Source Notification

Share Data With

Level

Soft Alert (email)

Hard Alert (email + SMS)

Additional Notes

SEND NOTIFICATION

Reminders

Text	Next Reminder (UTC)	Number of Reminders	Reminder Delay

Sorry, no matching records found

Jump to Page: 1 Rows per page: 5 0-0 of 0

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SEDM Requests

Allocation	Start Date	End Date	Mode	Priority	Status	Modify	Watch?
Redshift Completeness Factor	2023-03-29	2023-04-05	IFU	2	Complete 20230404T10:42:27	DELETE EDIT	☆
Redshift Completeness Factor	2023-04-08	2023-04-15	IFU	2	Expired	DELETE EDIT	☆
Redshift Completeness Factor	2023-04-23	2023-04-30	IFU	3	Complete 20230423T09:08:55	DELETE EDIT	☆
Redshift Completeness Factor	2023-04-29	2023-05-03	3-shot+IFU	2	Complete 20230429T08:49:02	DELETE EDIT	☆
Sollerman Research Group	2023-05-01	2023-05-08	IFU	1.2	Expired	DELETE EDIT	☆

Jump to Page: 1 Rows per page: 10 1-7 of 7

ATLAS Requests

Text	(UTC)	Reminders	Delay

Sorry, no matching records found

Jump to Page: 1 Rows per page: 5 0-0 of 0

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Assign Target to Observing Run

Choose Run: 2023-06-20 DBSP/P200 (PI: Kulkarni / Group: Redshift Completeness Factor)

Priority: 1

Comment

SUBMIT

Assignments

Run Id	Requester	Instrument	Run Date	PI	Priority	Status	Comment	Delet
1425	qinyj	DBSP	2023-04-15	Matthew Graham	1	pending	BTS classification	
1423	jlwise98	KAST	2023-04-17	Michael Rich	3	not observed	Strange lightcurve, possible Ia/Ic. r = 18.345, g = 18.58	
1428	khinds	KAST	2023-04-23	Michael Rich	4	not observed	Strange lightcurve, possible Ia/Ic, rebrightening r = 18.2 g = 18.58	
1427	jesper	DBSP	2023-	Mansi	1	pending	see Joel	

Perform characterization

Analyse the data, run inference

- Visualize the photometry and spectra plots of course.
- Run analysis service(s) using the photometry, spectra, images, redshift...
- Image reduction to extract limits directly from image using stdpipe (beta).
- Compare/crossmatch with archive data.
- Once characterized/classified => submit to TNS.

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MMADetectors
Allocations
Observations
Galaxies
Spatial Catalogs
Analysis Services
Recurring API
Taxonomies
Admin
Source

List of Analysis Services

SN Ia Fitter (sncosmo)
Description: `source` is the model kw name defined in SNcosmo (https://sncosmo.readthedocs.io/en/stable/source-list.html) / URL: http://localhost:6801/analysis/demo_analysis
(Default Share Groups: Sitewide Group)

Core Collapse Fitter (sncosmo)
Description: `source` is the model kw name defined in SNcosmo (https://sncosmo.readthedocs.io/en/stable/source-list.html) / URL: http://localhost:6801/analysis/demo_analysis
(Default Share Groups: Sitewide Group)

NMMA Analysis
Description: Use NMMA to fit fast transient light curves / URL: https://nmma-standalone-api.herokuapp.com/analysis/nmma_analysis
(Default Share Groups: Sitewide Group)

NMMA AWS
Description: NMMA AWS / URL: https://nmma-container-service.4tlrdec1td1tk.us-west-2.cs.amazonlightsail.com/analysis/nmma_analysis
(Default Share Groups: Sitewide Group)

NMMA AZURE
Description: Use NMMA to fit fast transient light curves / URL: https://nmma-standalone-api.ambitiouscoast-a751984b.eastus.azurecontainerapps.io/analysis/nmma_analysis
(Default Share Groups: Sitewide Group)

Next Generation SuperFit (NGSF) analysis
Description: Use NGSF to fit spectra / URL: http://localhost:7001/analysis/ngsf_analysis
(Default Share Groups: Sitewide Group)

Add a New Analysis Service

Analysis Name *

Analysis Display Name *

Analysis Description

Analysis Version
1.0

Contact Name

Contact Email

Analysis URL *

Optional analysis parameters (i.e. {"test_parameters": ["test_value_1", "test_value_2"]}

Input data types

Analysis Type *
lightcurve_fitting

Authentication Type *
none

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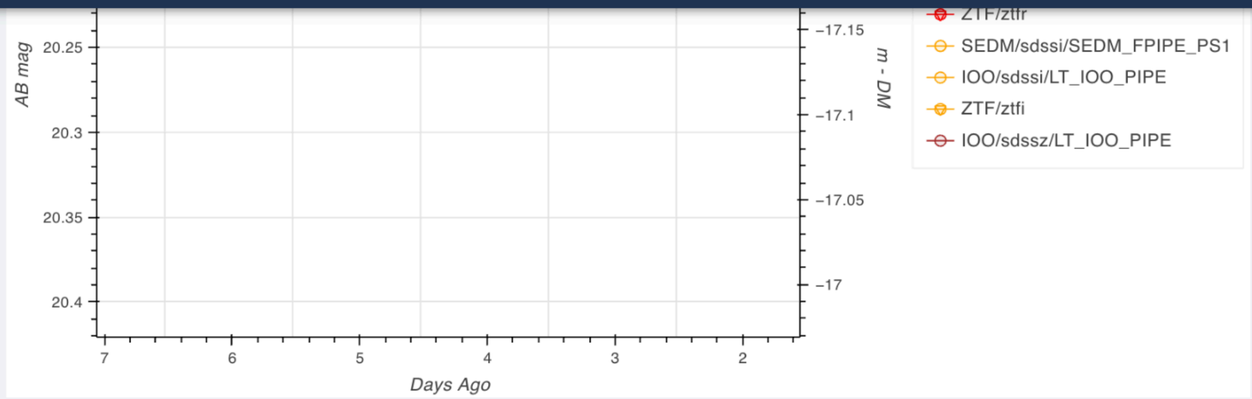


Show All Photometry | Hide All Photometry

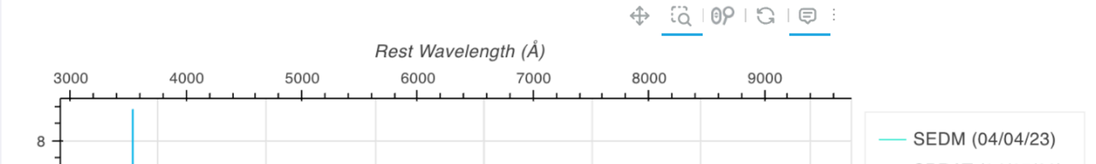
Data point size 8.5

UPLOAD ADDITIONAL PHOTOMETRY | MANAGE DATA | SHOW PHOTOMETRY TABLE | PERIODOGRAM ANALYSIS

IMAGE ANALYSIS

Spectroscopy

source | host



External Analysis

Analysis Requests

Start New Analysis

SN Ia Fitter (sncosmo)

Share Data With

source *

fix_z

Whether to render the parameters of this analysis

Show Parameters

Whether to render the plots of this analysis

Show Plots

Whether to render the corner of this analysis

Show Corner

SUBMIT

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Analysis Page for ZTF23aaitpey (#1046)

completed | Last activity a minute ago (duration 2.48 sec) | Service: SN Ia Fitter (sncosmo)

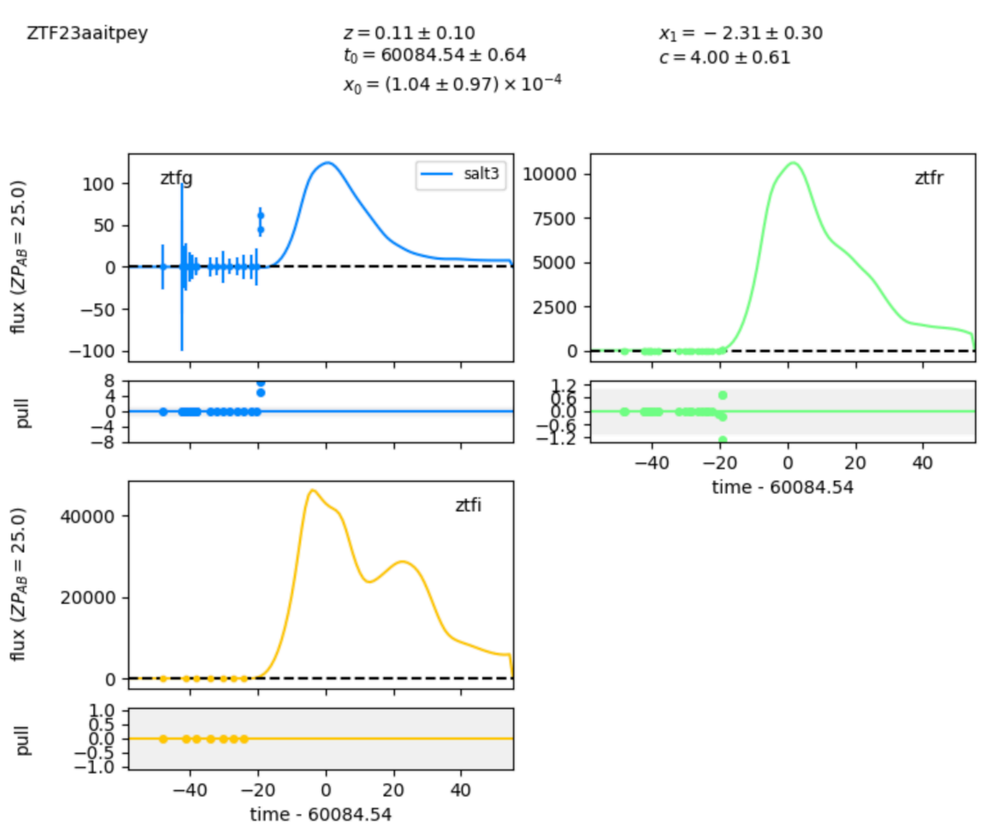
Message: Good results with chi^2/dof=2.907754359714462/29

Analysis Parameters: source: 0

Analysis Results

Posterior Corner Plot

Plots



Visualize the results

1. Photometry plot

- Magnitude, flux, period
- Show/hide data points by instrument and filter
- Periodogram analysis
- See data in tabular format
- Export data as csv

Visualize the results

2. Spectra plot

- See spectra of a source and its host
- Show/hide by instrument and date
- Display elements, galaxy lines, sky lines and tellurics
- Shift the lines by redshift and Vexpansion

Visualize the results

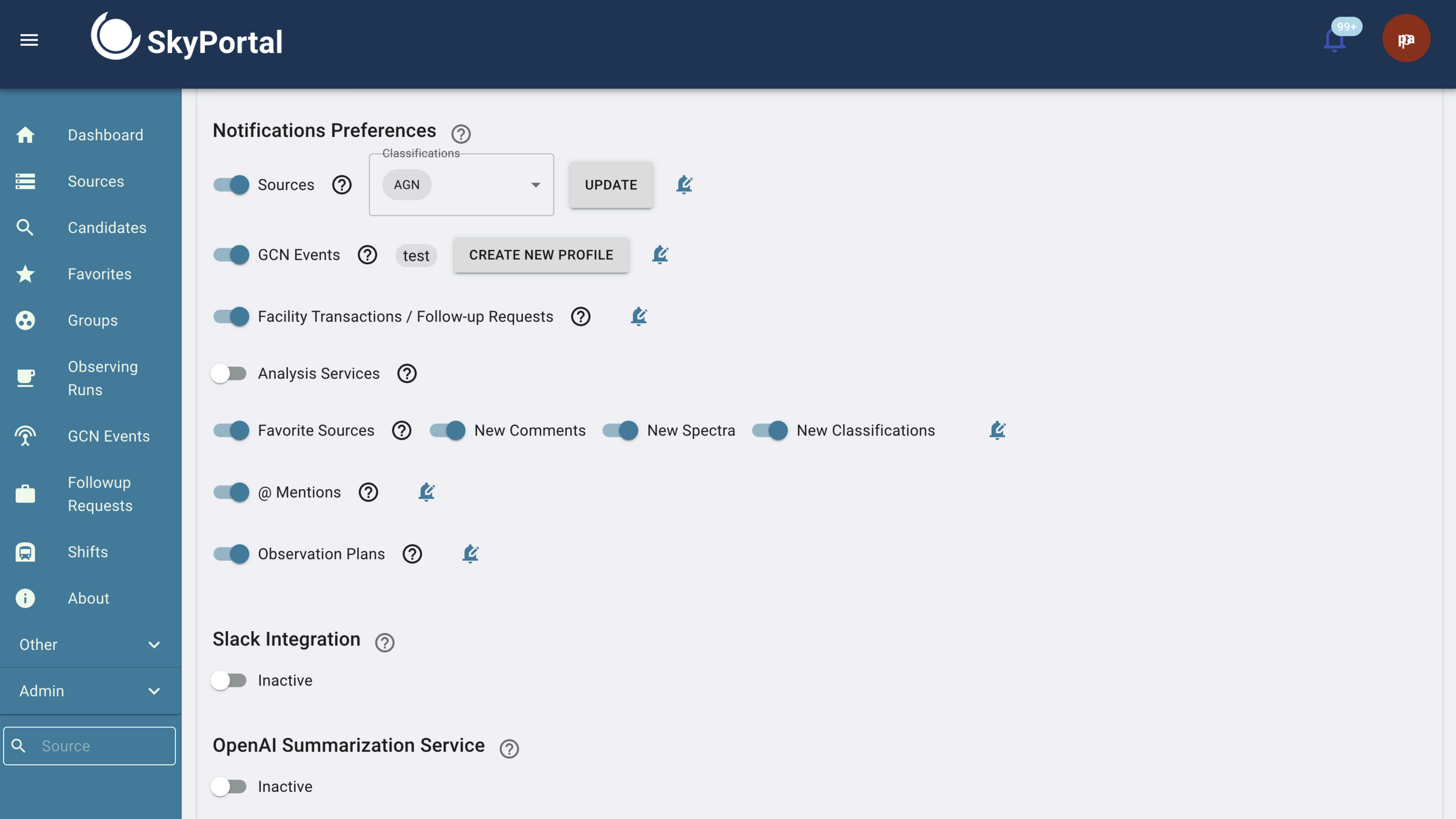
3. Many more

- Thumbnails
- Annotations from broker
- Finding chart
- Observability
- Surveys
- Centroid plots
- Archive
- Photometry statistics

Stay up to date

Be notified on selected events

- Fine-grain notification on: sources, favorite sources (new classification, spectra, comments), GCN events, mentions, facility transactions.
- Receive notifications on different channels: email, SMS, phone call, WhatsApp message, slack channel.
- Constraint Phone calls and SMS to a specific time period only.
- Program “reminders”, which are recurring notifications at fixed times.


SkyPortal
99+
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New Spectra
New Classifications
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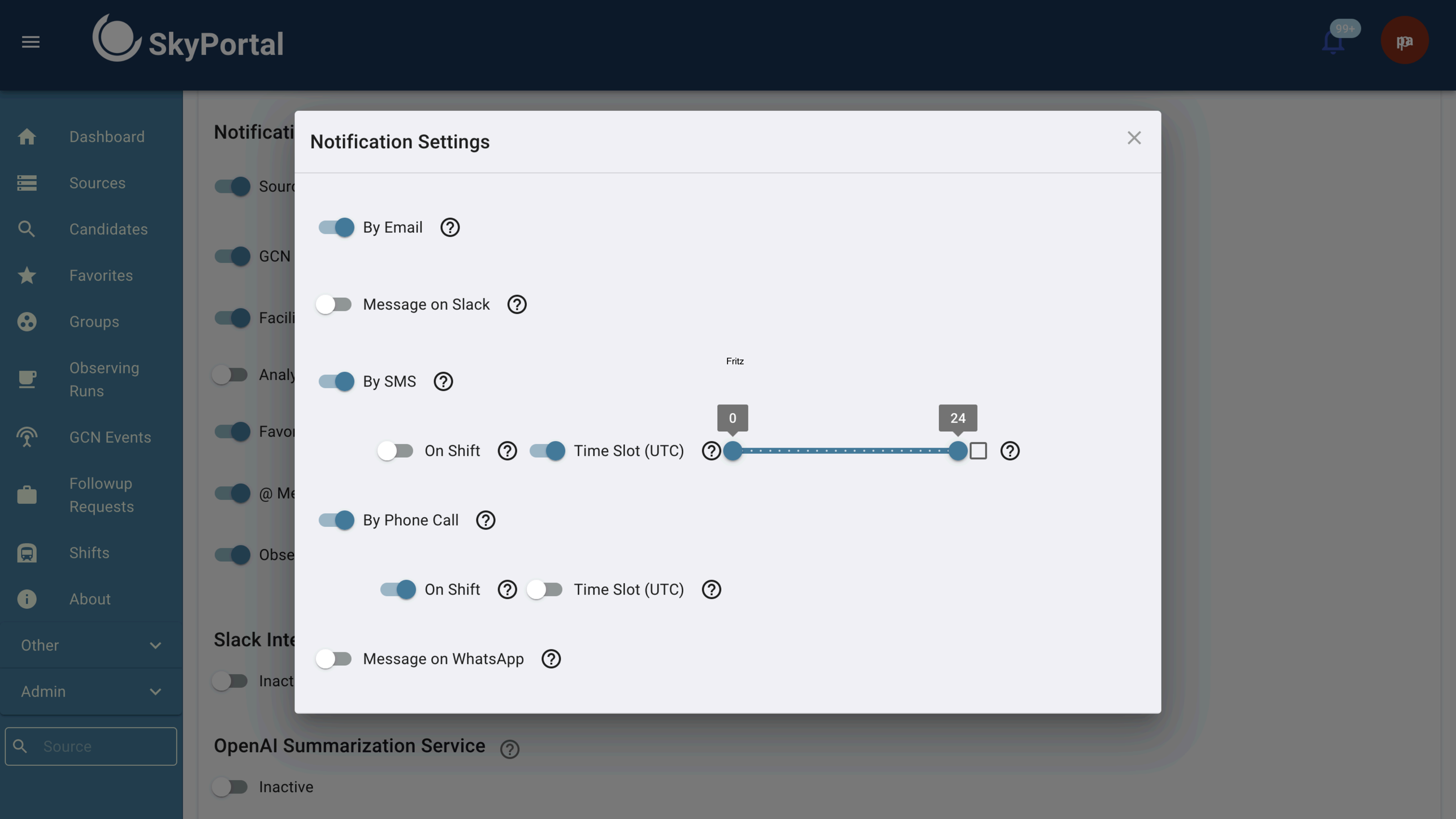
Observation Plans
Slack Integration
Inactive
OpenAI Summarization Service
Inactive


SkyPortal
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Inact
OpenAI Summarization Service
Inactive
Notification Settings
By Email
Message on Slack
By SMS
Fritz
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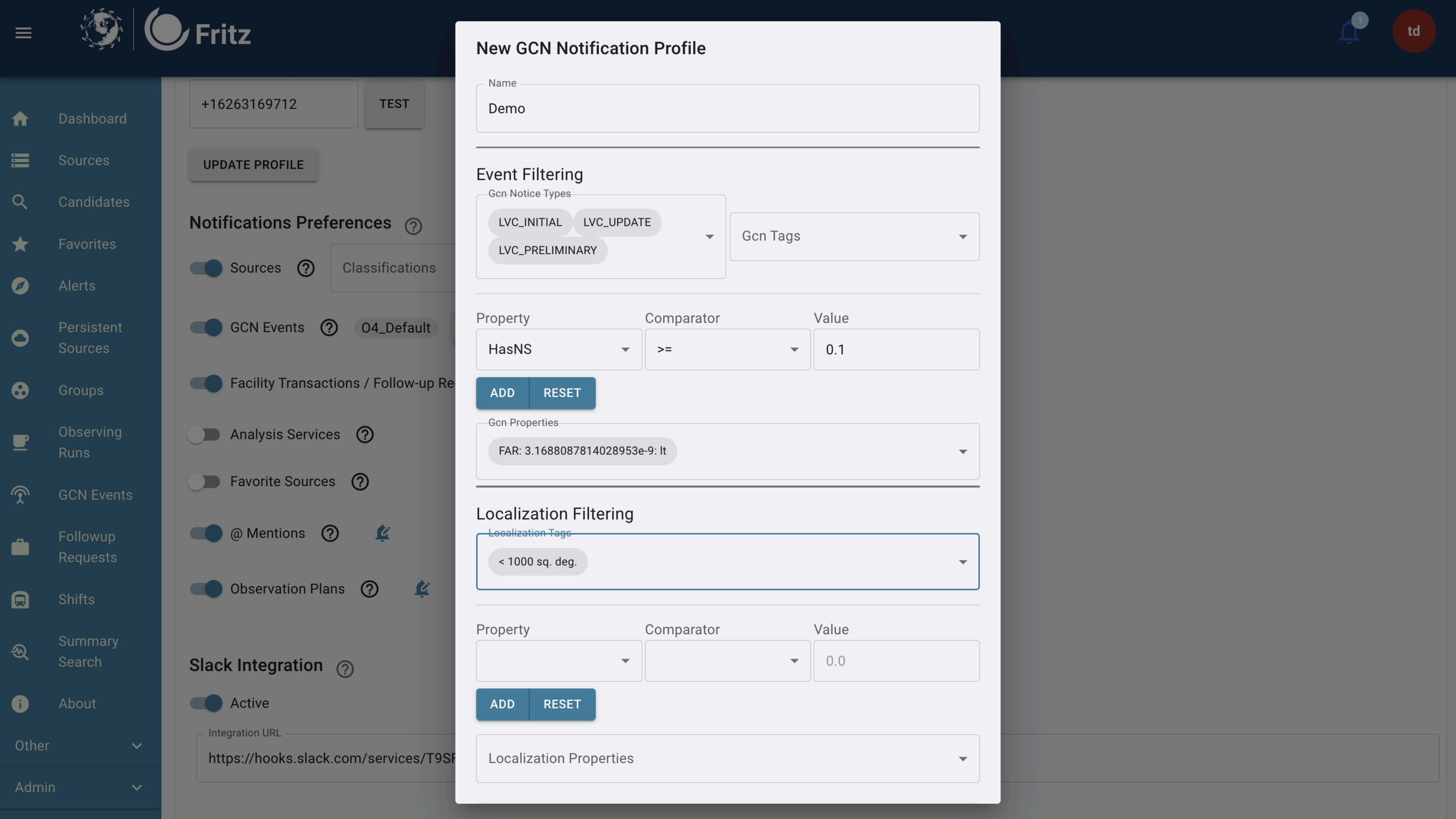
24
On Shift
Time Slot (UTC)
By Phone Call
On Shift
Time Slot (UTC)
Message on WhatsApp


Fritz
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Slack Integration
Active
Integration URL
https://hooks.slack.com/services/T9SF
New GCN Notification Profile
Name
Demo
Event Filtering
Gcn Notice Types
LVC_INITIAL
LVC_UPDATE
LVC_PRELIMINARY
Gcn Tags
Property
Comparator
Value
HasNS
>=
0.1
ADD
RESET
Gcn Properties
FAR: 3.1688087814028953e-9: lt
Localization Filtering
Localization Tags
< 1000 sq. deg.
Property
Comparator
Value
0.0
ADD
RESET
Localization Properties

Work as a team, collaborate

Planning, and data sharing

- Groups
- Shifts
- Allocations
- Fine-grain data accessibility

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Summary Search
About
Other
Admin
Source

Group: EM+GW (emgw)

Candidates counterparts to GW events

Sources

GROUP SOURCES

Members

Name	Username	Admin	Actions
Tomas Ahumada	tahumada	Admin	REVOKE ADMIN STATUS | REVOKE SAVE ACCESS |
Mansi Kasliwal	mansi	Admin	REVOKE ADMIN STATUS | REVOKE SAVE ACCESS |
Shreya Anand	sganand	Admin	REVOKE ADMIN STATUS | REVOKE SAVE ACCESS |
Robert Stein	robertstein	Admin	REVOKE ADMIN STATUS | REVOKE SAVE ACCESS |
			REVOKE ADMIN STATUS | REVOKE SAVE ACCESS |

Dashboard
Sources
Candidates
Favorites
Alerts
Persistent Sources
Groups
Observing Runs
GCN Events
Followup Requests
Shifts
Summary Search
About
Other
Admin
Source

Invite a new user to the site and add them to this group

Enter user email

Site-wide user role

Full user

Can save to this group Group Admin INVITE NEW USER

Add all users from other group(s)

Select Groups/Users

ADD USERS

Admission requests

Requesting User	Status	Actions
dlakaplan (David Kaplan)	accepted	

Jump to Page: 1 Rows per page: 10 1-1 of 1

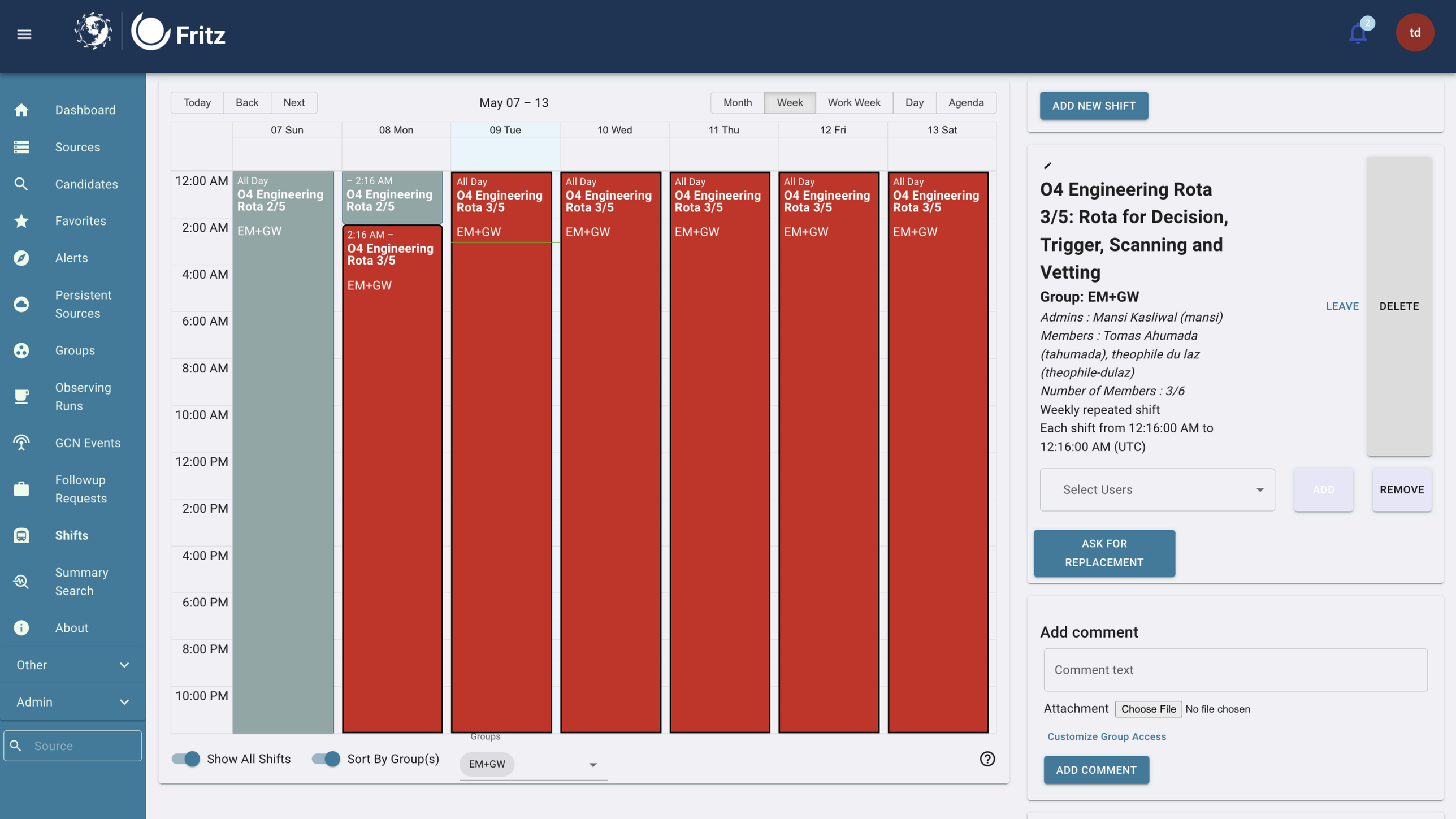
Alert streams and filters

ZTF Public+Partnership

loose emgw

ADD STREAM ADD FILTER

DELETE GROUP


Fritz
td
Dashboard
Sources
Candidates
Favorites
Alerts
Persistent Sources
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Observing Runs
GCN Events
Followup Requests
Shifts
Summary Search
About
Other
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Back
Next
May 07 – 13
Month
Week
Work Week
Day
Agenda
07 Sun
08 Mon
09 Tue
10 Wed
11 Thu
12 Fri
13 Sat
12:00 AM
2:00 AM
4:00 AM
6:00 AM
8:00 AM
10:00 AM
12:00 PM
2:00 PM
4:00 PM
6:00 PM
8:00 PM
10:00 PM
All Day
O4 Engineering Rota 2/5
EM+GW
– 2:16 AM
O4 Engineering Rota 2/5
2:16 AM –
O4 Engineering Rota 3/5
EM+GW
All Day
O4 Engineering Rota 3/5
EM+GW
Groups
Show All Shifts
Sort By Group(s)
EM+GW
ADD NEW SHIFT
O4 Engineering Rota 3/5: Rota for Decision, Trigger, Scanning and Vetting
Group: EM+GW
Admins : Mansi Kasliwal (mansi)
Members : Tomas Ahumada (tahumada), theophile du laz (theophile-dulaz)
Number of Members : 3/6
Weekly repeated shift
Each shift from 12:16:00 AM to 12:16:00 AM (UTC)
LEAVE
DELETE
Select Users
ADD
REMOVE
ASK FOR REPLACEMENT
Add comment
Comment text
Attachment
Choose File
No file chosen
Customize Group Access
ADD COMMENT

Allocations

Instrument Name	Telescope Name	Start Date	End Date	PI	Group	Default Share Groups	Admins
IOO	LT	2/12/3020, 01:00:00	7/12/3020, 02:00:00	Michael Coughlin	Program A		
SPRAT	LT	2/12/3020, 01:00:00	7/12/3020, 02:00:00	Michael Coughlin	Program A		
IOI	LT	2/12/3020, 01:00:00	7/12/3020, 02:00:00	Michael Coughlin	Program A		
SPECTRAL	LCO 2m Network	2/12/3020, 01:00:00	7/12/3020, 02:00:00	Michael Coughlin	Program A		
Sinistro	LCO 1m Network	2/12/3020, 01:00:00	7/12/3020, 02:00:00	Michael Coughlin	Program A		
FLOYDS	LCO 2m Network	2/12/3020, 01:00:00	7/12/3020, 02:00:00	Michael Coughlin	Program A		
MUSCAT	LCO 2m Network	2/12/3020, 01:00:00	7/12/3020, 02:00:00	Michael Coughlin	Program A		
ZTF	P48	2/12/3020,	7/12/3020,	Michael	Program		

Add a New Allocation

Select Group

Select Allocation Admins

PI *

Start Date (Local Time) *
05 / 09 / 2023 , 09 : 46 : 25 AM

End Date (Local Time) *
05 / 08 / 2024 , 09 : 46 : 25 AM

Hours allocated *

Instrument *
Nordic Optical Telescope / ALFOSC

Alternative json data (i.e. {'slack_token': 'testtoken'}

SUBMIT

Share Data With

The multi-messenger workflow

The search for transients in (unfortunately) large localizations

- Ingest multi-messenger events in real-time.
- Discover, characterize and visualize transients in an event’s sky map.
- Assess observability.
- Fine-tuned observation planning.
- Visualize executed observations.
- Automated GCN circulars-like reports.
- Submit observations to Treasure Map.

Recent GCN Events

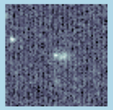
Displaying most-viewed events

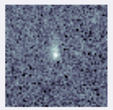
- 230508 21:19:27 (3 HOURS AGO) Fermi GRB +
- 230508 18:45:26 (6 HOURS AGO) LVC retracted GW +
- 230508 17:50:25 (7 HOURS AGO) LVC retracted GW +
- 230508 16:52:18 (8 HOURS AGO) LVC retracted GW +
- 230508 16:07:32 (9 HOURS AGO) Fermi GRB < 500 sq. deg. < 1000 sq. deg. > 0.9 in 500 sq. deg. +

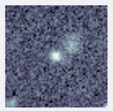
Top Sources

DAY | WEEK | MONTH | 6 MONTHS | YEAR

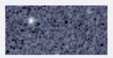

ZTF23aadqhae (Ia) — 139 view(s)
α, δ: 19h51m59.65s
+59d06m10.09s


ZTF20aafdzfo (QSO) — 117 view(s)
α, δ: 07h25m08.57s
+22d28m04.76s
QUICK VIEW


ZTF23aaeqonb (Type II) — 86 view(s)
α, δ: 14h38m27.13s
+30d01m44.93s


ZTF23aaawbsc (IIb) — 73 view(s)
α, δ: 17h40m51.40s
+66d12m22.62s


ZTF23aailjjs — 72 view(s)
α, δ: 16h48m42.73s
+35d56m57.39s


ZTF23aaftouh (Ia) — 56 view(s)

News Feed

- S New source saved — Source: ZTF20230508_tx3kul | 35 minutes ago
- S New source saved — Source: ZTF20230508_rqjsg5 | 35 minutes ago
- S New source saved — Source: ZTF20230508_ucdpot | 36 minutes ago
- ML forced phot 20230508 — Source: ZTF23aaimsja | an hour ago
- ML forced phot as of 20230508 — Source: ZTF23aaitrka | an hour ago
- S New source saved — Source: ZTF23aaixbbe | 7 hours ago
- Source saved to new group

319
New Sources
Last 7 days

My Groups

- BTS-bot-test
- EM+GW
- PTF
- Sitewide Group

Recently Saved Sources

Source


ZTF20230508_tx3kul — 35 minutes ago
α, δ: 00h38m53.49s
+38d52m11.87s


ZTF20230508_rqjsg5 — 35 minutes ago
α, δ: 00h38m53.29s
+38d52m17.77s


ZTF20230508_ucdpot — 36 minutes ago
α, δ: 00h38m53.36s
+38d52m16.35s

Palomar 1.2m Oschin

It is 11.4°C with 65% humidity & clear sky. Sunrise 12 hours ago, sunset in 2 hours.

Add a Source

Share Data With

object ID *

Right Ascension [decimal deg. or HH:MM:SS] *

Declination [decimal deg. or DD:MM:SS] *

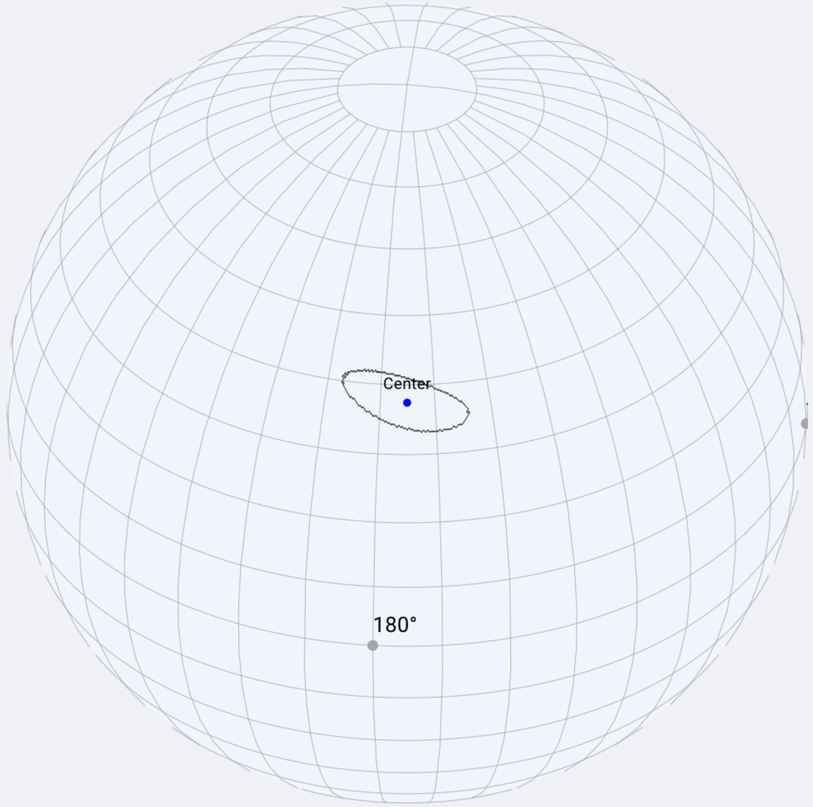
230430 07:47:19 (9 days ago)

GRB | short | Fermi | < 500 sq. deg. | < 1000 sq. deg. | > 0.9 in 500 sq. deg. | +

SOCIAL | PROPERTIES

Instruments triggered: SEDMv2 | UVOT | WINTER | ZTF | AuxTel

Analysis



Projection

orthographic

Show/Hide on Plot

- [x] localization
- [ ] sources
- [ ] galaxies
- [ ] instrument
- [ ] observations

QUERY FORM | SOURCES | GALAXIES | OBSERVATIONS

Localization

Skymap: crossmatch-9457-9455.fits / Created: 2023-05-01T03:37:52.300469

Instrument

Palomar 1.2m Oschin / ZTF

Start Date *: 2023-04-30 07:47:19

End Date *: 2023-05-07 07:47:19

Minimum Number of Detections: 2

Cumulative Probability *: 0.95

Maximum Distance [Mpc]: 150

- [ ] Do not display rejected sources

Query list *: sources, galaxies, observations

Groups: Gamma Ray Bursts

SUBMIT

SUMMARY | SIMSURVEY ANALYSIS | CATALOG QUERY | SEND TO TREASURE MAP | RETRACT FROM TREASURE MAP

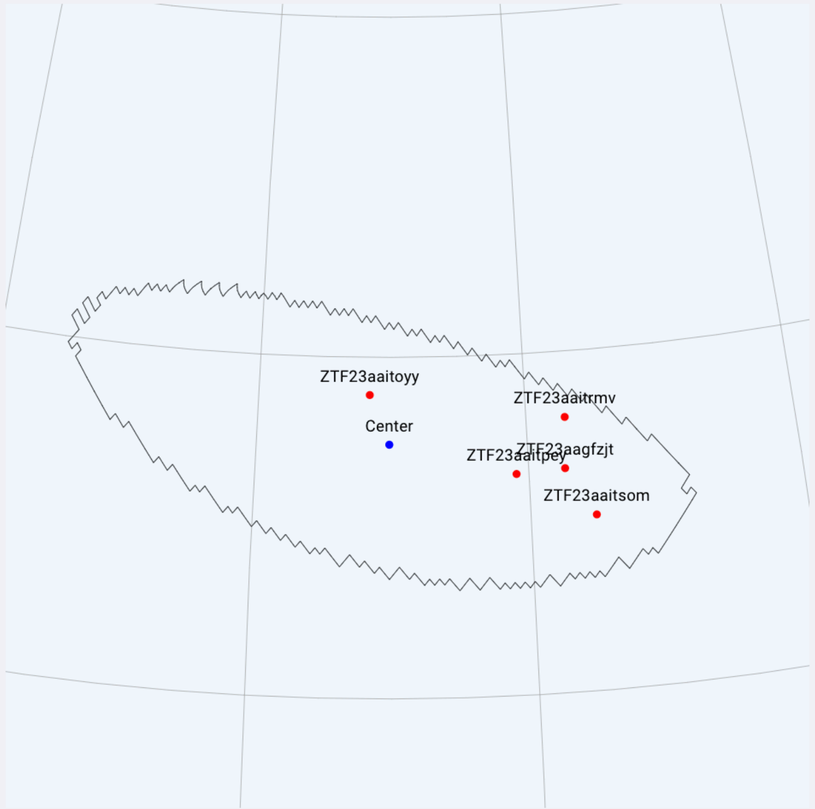
230430 07:47:19 (9 days ago)

GRB | short | Fermi | < 500 sq. deg. | < 1000 sq. deg. | > 0.9 in 500 sq. deg. | +

SOCIAL | PROPERTIES

Instruments triggered: SEDMv2 | UVOT | WINTER | ZTF | AuxTel

Analysis



Projection

orthographic

Show/Hide on Plot

☑ localization ☑ sources ☐ galaxies ☐ instrument ☐ observations

QUERY FORM | SOURCES | GALAXIES | OBSERVATIONS

Source ID	GCN Status	GCN Status Explanation	RA (deg)	Dec (deg)	Redshift	Classification	Photometry Statistics	Groups	Date Saved
ZTF23aaitsom	?		192.347874	35.166743				Anomalies, Gamma Ray Burst	2023-05-05T18:32:21
ZTF23aaitoyy	✗	AGN	184.190544	38.898700				Gamma Ray Burst, EM+GW	2023-05-02T16:50:48
ZTF23aagfzjt	✗	AGN	191.322972	36.584938				Gamma Ray Burst, EM+GW	2023-05-02T16:50:46
ZTF23aaitrmv	?		191.438274	38.076940				Gamma Ray Burst, EM+GW	2023-05-02T16:50:44
ZTF23aaitpey	?		189.546135	36.500634				Gamma Ray Burst, EM+GW	2023-05-02T16:43:19

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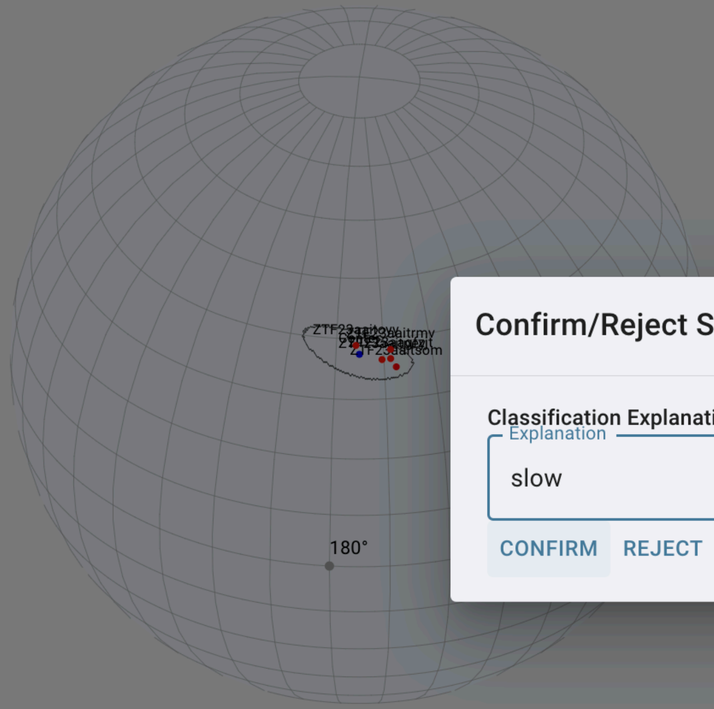
Summary Search
About
Other
Admin

Analysis



Projection

orthographic

Show/Hide on Plot

- [x] localization
- [x] sources
- [ ] galaxies
- [ ] instrument
- [ ] observations

QUERY FORM | SOURCES | GALAXIES | OBSERVATIONS

Source ID	GCN Status	GCN Status Explanation	RA (deg)	Dec (deg)	Redshift	Classification	Photometry Statistics
				35.166743			
				38.898700			
ZTF23aagfzjt	✗	AGN	191.322972	36.584938			
ZTF23aaitrmv	?		191.438274	38.076940			
ZTF23aaitpey	?		189.546135	36.500634			

Jump to Page: 1 Rows per page: 10 1-5 of 5

Confirm/Reject Source ZTF23aaitsom in GCN 2023-04-30T07:47:19

Classification Explanation

Explanation: slow

CONFIRM REJECT UNDEFINED

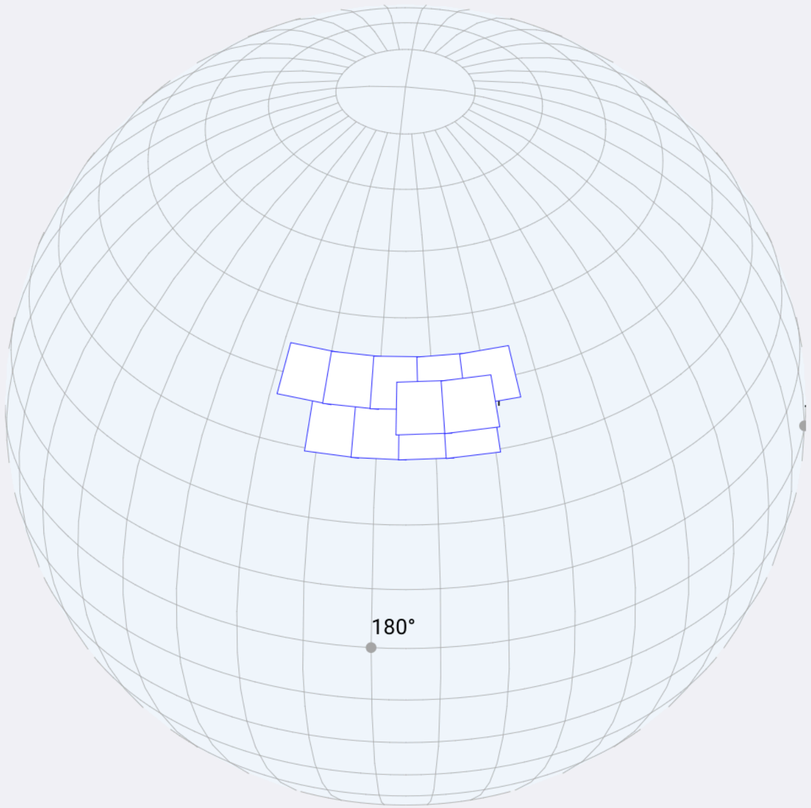
230430 07:47:19 (9 days ago)

GRB | short | Fermi | < 500 sq. deg. | < 1000 sq. deg. | > 0.9 in 500 sq. deg. | +

SOCIAL | PROPERTIES

Instruments triggered: SEDMv2 | UVOT | WINTER | ZTF | AuxTel

Analysis



Projection

orthographic

Show/Hide on Plot

- [x] localization
- [x] sources
- [ ] galaxies
- [ ] instrument
- [x] observations

QUERY FORM | SOURCES | GALAXIES | OBSERVATIONS

Executed Observations

Telescope	Instrument	Observation ID	Field ID	Right Ascension	Declination	Target Name	Observation time	Filter	Exposure time [s]	Airmass
Palomar 1.2m Oschin	ZTF	231328251	670	172.61679	33.35000		2023-05-03T06:46:49.002225	ztfg	30	
Palomar 1.2m Oschin	ZTF	231121064	671	180.47007	33.35000		2023-05-01T05:03:19.995831	ztfr	30	
Palomar 1.2m Oschin	ZTF	231121170	671	180.47007	33.35000		2023-05-01T05:04:51.000970	ztfr	30	
Palomar 1.2m Oschin	ZTF	231125505	671	180.47007	33.35000		2023-05-01T06:07:17.002578	ztfr	299	
Palomar 1.2m Oschin	ZTF	231130349	671	180.47007	33.35000		2023-05-01T07:17:02.002570	ztfg	30	
Palomar 1.2m Oschin	ZTF	231131634	671	180.47007	33.35000		2023-05-01T07:35:32.000653	ztfg	30	
Palomar 1.2m Oschin	ZTF	231139035	671	180.47007	33.35000		2023-05-01T09:22:07.000326	ztfg	30	
Palomar 1.2m Oschin	ZTF	231140783	671	180.47007	33.35000		2023-05-01T09:47:16.995837	ztfr	30	

Event 2023-04-30T07:47:19

Title: Gcn Summary

Subject: Follow-up on GCN Event 2023-04-30T07:47:19

Number (Optional): 1

Group: Gamma Ray Bursts

Users (Optional)

Instruments (Optional)

Start Date: 2023-04-30 07:47:19

End Date: 2023-05-07 07:47:19

Localization Name: crossmatch-9457-9455.fits

Localization Cumulative Probability: 0.95

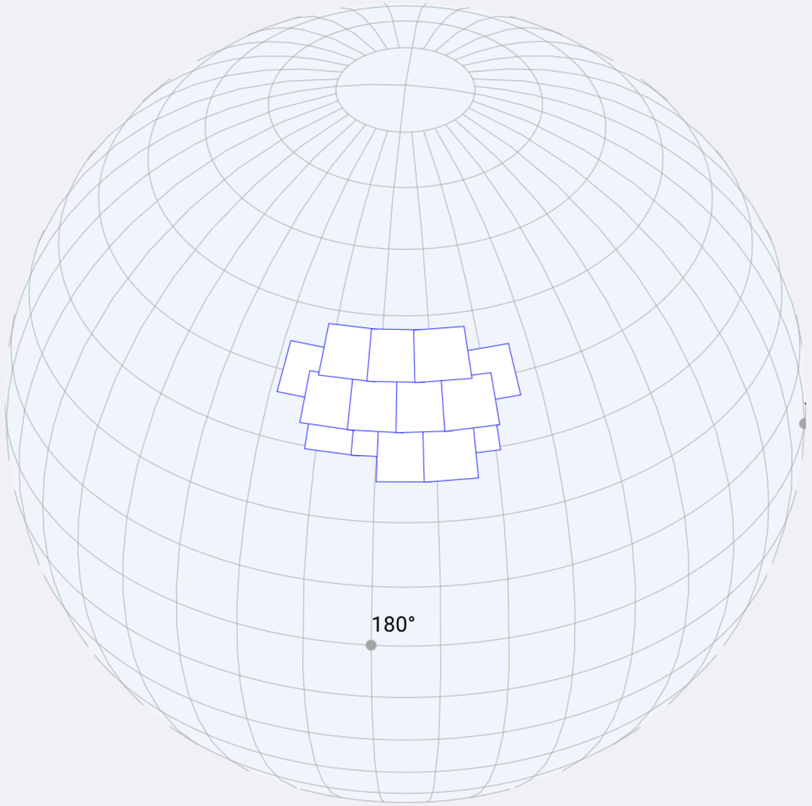
Minimum Number of Detections: 2

GCN SUMMARIES LIST | SAVE | SUMMARY TEXT

Text

```
TITLE: GCN SUMMARY TEST SOURCES AND OBSERVATIONS

SUBJECT: Follow-up on GCN Event 2023-04-30T07:47:19

DATE: 2023-05-07 21:33:17.447363

FROM:  Theophile du Laz at ... <tdulaz@caltech.edu>


on behalf of the Gamma Ray Bursts group, report:


Found 5 sources in the event's localization, given the specified date range:

+--------------+---------+----------+---------+------------+
| id           | alias   |       ra |     dec | redshift   |
|--------------+---------+----------+---------+------------|
| ZTF23aaitsom | --      | 192.3479 | 35.1667 | --         |
| ZTF23aaitoyy | --      | 184.1905 | 38.8987 | --         |
| ZTF23aagfzjt | --      | 191.3230 | 36.5849 | --         |
| ZTF23aaitrmv | --      | 191.4383 | 38.0769 | --         |
| ZTF23aaitpey | --      | 189.5461 | 36.5006 | --         |
+--------------+---------+----------+---------+------------+


Photometry for source ZTF23aaitsom:

+-------------+----------------+----------+----------+--------------+
|         mjd | mag±err (ab)   | filter   | origin   | instrument   |
|-------------+----------------+----------+----------+--------------|
| 60046.24484 | < 20.8         | ztfg     | None     | ZTF          |
| 60046.24484 | < 20.8         | ztfg     | None     | ZTF          |
| 60055.31181 | < 20.6         | ztfr     | None     | ZTF          |
| 60055.31181 | < 20.6         | ztfr     | None     | ZTF          |
| 60055.31274 | < 20.6         | ztfr     | None     | ZTF          |
| 60055.31274 | < 20.6         | ztfr     | None     | ZTF          |
| 60059.25012 | < 20.5         | ztfr     | None     | ZTF          |
| 60059.25012 | < 20.5         | ztfr     | None     | ZTF          |
| 60059.28681 | < 20.4         | ztfr     | None     | ZTF          |
| 60059.28681 | < 20.4         | ztfr     | None     | ZTF          |
| 60061.23804 | < 20.2         | ztfr     | None     | ZTF          |
```

Observation Plans



Projection

orthographic

Airmass Time

Time to compute airmass (UTC)

04/30/2023 07:47 am

UPDATE AIRMASS CALCULATION

OBSERVABILITY CHART | AIRMASS CHART | WORLD MAP CHART

Fields to use

CLEAR ALL SELECT ALL

Allocation

Palomar 1.2m Oschin / ZTF - EM+GW (PI Michael Coughlin)

Localization

Skymap: crossmatch-9457-9455.fits / Created: 2023-05-01T03:37:52.300469

Share Data With

emgw

Start Date (UT) * 2023-05-08 23:53:48.170350	End Date (UT) * 2023-05-09 12:56:15.297	filter_strategy * block
schedule_type * greedy_slew	schedule_strategy * tiling	galaxy_catalog CLU
galaxy_sorting equal	Exposure Time [s] * 300	filters * ztfg,ztfr,ztfg
Maximum Airmass (1-3) * 2	Integrated Probability (0-100) * 90	Minimum time difference [min] (0-180) * 30
☐ Avoid the Galactic Plane?	Galactic latitude to exclude 10	☐ Threshold on number of fields?
Maximum number of fields 100	☐ Balance exposures across fields	☐ RA Slicing
Minimum RA 0	Maximum RA 360	queue_name * ToO_2023-05-08T23:53:48.170378
program_id * Partnership	subprogram_name * GW	

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Source

List of Default Observation Plans

Default Observation Plan	GCN Event Filters	Filters	Program	Queue	Expos Tim
ZTF/P48 - ToO_300_grg_default	{"gcn_tags":[],"notice_types":["LVC_INITIAL","LVC_PRELIMINARY","LVC_UPDATE"],"localization_tags":[]}	ztfg,ztfr,ztfg	Partnership	ToO_2023-04-25T23:16:59.438201	300
ZTF/P48 - ToO_240_gr_default	{"gcn_tags":[],"notice_types":["LVC_INITIAL","LVC_PRELIMINARY","LVC_UPDATE"],"localization_tags":[]}	ztfg,ztfr	Partnership	ToO_2023-04-25T23:20:45.800362	240
AuxTel/AuxTel-1p2m - DEFAULT-PLAN-AuxTel	{"gcn_tags":[],"notice_types":[],"localization_tags":[]}	lsstr,lssti		ToO_2023-05-05T23:09:54.735356	300

List of Default Survey Efficiencies

Default Plan	Model Name	Number of Injections	Maximum Phase (days)	Minimum Phase (days)	Number of Detections	Detection Threshold (sigma)	Cumulative Probability	Optional Injection Parameters

Sorry, no matching records found

30

Avoid the Galactic Plane?

Galactic latitude to exclude
10

Threshold on number of fields?

Maximum number of fields
100

Balance exposures across fields

RA Slicing

Minimum RA
0

Maximum RA
360

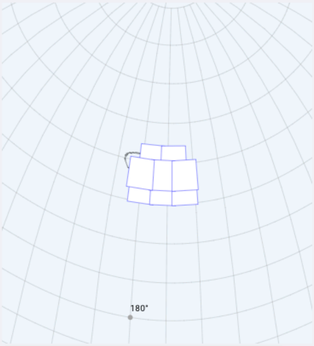
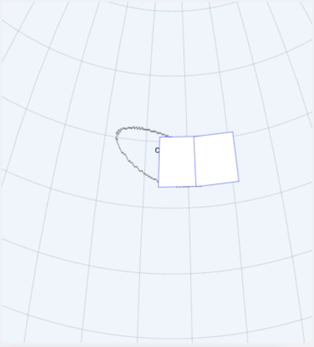
default_plan_name
DEFAULT-PLAN-NAME

SUBMIT

Add a New Default Survey Efficiency

Default Plan

ZTF Requests

queue_name	ra_slice_max	ra_slice_min	schedule_strategy	schedule_type	subprogram_name	Status	Summary Statistics	Delete	Interact	Telescope Queue	Treasure Map	Skymap
ToO_ipn_GBM_1	360	0	tiling	greedy_slew	GW	complete	• Number of Observations: 27 • Delay from Trigger: a moment • Start of Observations: 2023-04-30T07:47:19.000 • Unique filters: ztfr, ztfg • Total time [s]: 8100 • Probability: 0.988 • Area [sq. deg.]: 295.1	DELETE	GCN DOWNLOAD GIF CREATE OBSERVING RUN SIMSURVEY ANALYSIS	SEND TO QUEUE REMOVE FROM QUEUE	SEND TO TREASURE MAP RETRACT FROM TREASURE MAP	 DELETE SELECTED FIELDS
ToO_ipn_gbm_2	360	0	tiling	greedy_slew	GW	submitted to telescope queue	• Number of Observations: 4 • Delay from Trigger: a moment • Start of Observations: 2023-04-30T07:47:19.000 • Unique filters: ztfr, ztfg • Total time [s]: 1200 • Probability: 0.538 • Area [sq. deg.]:	DELETE	GCN DOWNLOAD GIF CREATE OBSERVING RUN SIMSURVEY ANALYSIS	SEND TO QUEUE REMOVE FROM QUEUE	SEND TO TREASURE MAP RETRACT FROM TREASURE MAP	 DELETE SELECTED FIELDS

Event Properties

Created at	Data_Integ	Burst_Inten	Burst_Signif	Data_Signif	Data_Timescale	Hardness_Ratio	Trig_Timescale
2023-04-30T07:56:27.829107	0	0	0				
2023-04-30T07:48:18.417009	0.5120	0	29.6000				
2023-04-30T07:48:06.054859	0.5120	0	29.6000				
2023-04-30T07:47:48.500936		820.0000		29.7000	0.5120	0.4500	0.5120

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Localization Properties

Created at	Name	Center	Tags	area_90	probability_500
2023-05-02T16:45:49.153088	IPN_2	**Position (J2000): 12:45:21.09 +33:52:07.34** (α,δ= 191.33789062499997, 33.8687046016565; *l*,*b*=133.558940, 83.133523)*E(B-V)*=0.01	< 500 sq. deg. > 0.9 in 500 sq. deg. < 1000 sq. deg.	0.0148	1.0000
2023-05-01T03:38:29.602933	IPN_ANNULI.FITS	**Position (J2000): 01:18:03.19 +79:39:39.91** (α,δ= 19.513274336283185, 79.66108736675162; *l*,*b*=124.176973, 16.853737)*E(B-V)*=0.30		1096.8968	0.5464
2023-05-01T03:37:52.300469	CROSSMATCH-9457-9455.FITS	**Position (J2000): 12:19:41.25 +37:27:01.05** (α,δ= 184.921875, 37.45029235016902; *l*,*b*=153.905212, 77.700333)*E(B-V)*=0.02	> 0.9 in 500 sq. deg. < 1000 sq. deg. < 500 sq. deg.	101.4072	1.0000
2023-05-01T02:58:51.108124	IPN.FITS	**Position (J2000): 12:19:41.25 +40:54:56.52** (α,δ= 184.921875, 40.9157008389484; *l*,*b*=146.291025, 74.740332)*E(B-V)*=0.02	< 1000 sq. deg. < 500 sq. deg. > 0.9 in 500 sq. deg.	271.3714	0.9801
2023-04-	GLG_HEALPIX_ALL_BN230430325.FIT	**Position (J2000): 12:19:41.25 +40:54:56.52**	< 500 sq. deg. > 0.9 in 500 sq. deg.	271.3713	0.9801

30T07:47:48.514578 | (α,δ= 174.6867469879518, 51.35264675819054; *l*,*b*=147.578795, 62.155874)*E(B-V)*=0.02 | < 1000 sq. deg.

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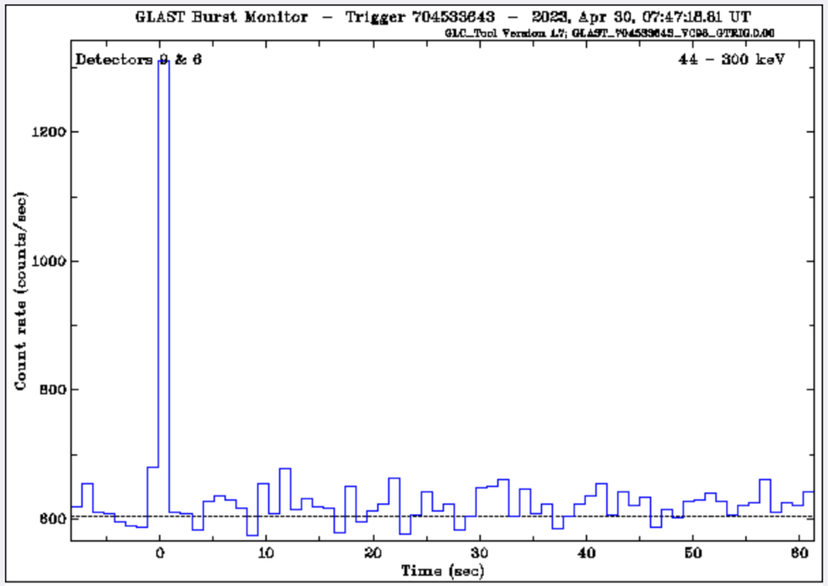
Light curve



GCN Notices

ivo://nasa.gsfc.gcn/Fermi#GBM_Flt_Pos_2023-04-30T07:47:18.81_704533643_47-849

ivo://nasa.gsfc.gcn/Fermi#GBM_Gnd_Pos_2023-04-30T07:47:18.81_704533643_58-850

ivo://nasa.gsfc.gcn/Fermi#GBM_Gnd_Pos_2023-04-30T07:47:18.81_704533643_58-851

INGEST LOCALIZATION

ivo://nasa.gsfc.gcn/Fermi#GBM_Fin_Pos2023-04-30T07:47:18.81_704533643_0-878

GCN Aliases

FERMI#bn230430325 | GRB230430A | GRB230430

UPDATE

GCN Circulars

GRB 230430A: Fermi GBM Final Real-time Localization

GRB 230430A: AstroSat CZTI detection

GRB 230430A: Fermi GBM observation

IPN triangulation of GRB 230430A (short)

Konus-Wind detection of GRB 230430A

GRB 230430A: A short GRB from a neutron star merger

UPDATE

Comments

td **theophile-dulaz** a minute ago

test comment on GCN

Add comment

Comment text

Attachment Choose File No file chosen

Customize Group Access

ADD COMMENT

Reminders

Reminders

Text	Next Reminder (UTC)	Number of Reminders	Reminder Delay
Look at executed observations	2023-05-10T08:00:41	7	1

Jump to Page: 1 Rows per page: 5 1-1 of 1

A lot of great people

Core


Sarah Antier


Joshua Bloom


Michael Coughlin


Matthew Graham


Theophile Jegou du Laz


Mansi Kasliwal


Jada Lilleboe


Don Neill


Guy Nir


Leo Singer


Stéfan van der Walt

Alumni


Arien Crellin-Quick


Thomas Culino


Dmitry Duev


Daniel Goldstein


Kyung Min Shin

New paper!

A data science platform to enable time-domain astronomy

Michael W. Coughlin,[1] Joshua S. Bloom,[2,3] Guy Nir,[2,3] Sarah Antier,[4] Theophile Jegou du Laz,[5] Stéfan van der Walt,[6] Arien Crellin-Quick,[7] Thomas Culino,[8] Dmitry A. Duev,[7] Daniel A. Goldstein,[7] Brian F. Healy,[1] Viraj Karambelkar,[5] Jada Lilleboe,[1] Kyung Min Shin,[9] Leo P. Singer,[10] Tomás Ahumada,[5] Shreya Anand,[5] Eric C. Bellm,[11] Richard Dekany,[12] Matthew J. Graham,[5] Mansi M. Kasliwal,[5] Ivona Kostadinova,[5] R. Weizmann Kiendrebeogo,[1,4,13] Shrinivas R. Kulkarni,[14] Sydney Jenkins,[15] Natalie LeBaron,[2] James D. Neill,[5] B. Parazin,[1,16] Julien Peloton,[17] Reed Riddle,[12] Ben Rusholme,[18] Jakob van Santen,[19] Jesper Sollerman,[20] Robert Stein,[5] D. Turpin,[21] Avery Wold,[18] Carla Amat,[8] Adrien Bonnefon,[8] Adrien Bonnefoy,[8] Manon Flament,[8] Frank Kerkow,[1] Sulekha Kishore,[5] Shloke Jani,[1] Stephen K. Mahanty,[1] Céline Liu,[8] Laura Llinares,[8] Jolyane Makarison,[8] Alix Olliéric,[8] Inès Perez,[8] Lydie Pont,[8] and Vyom Sharma[1]

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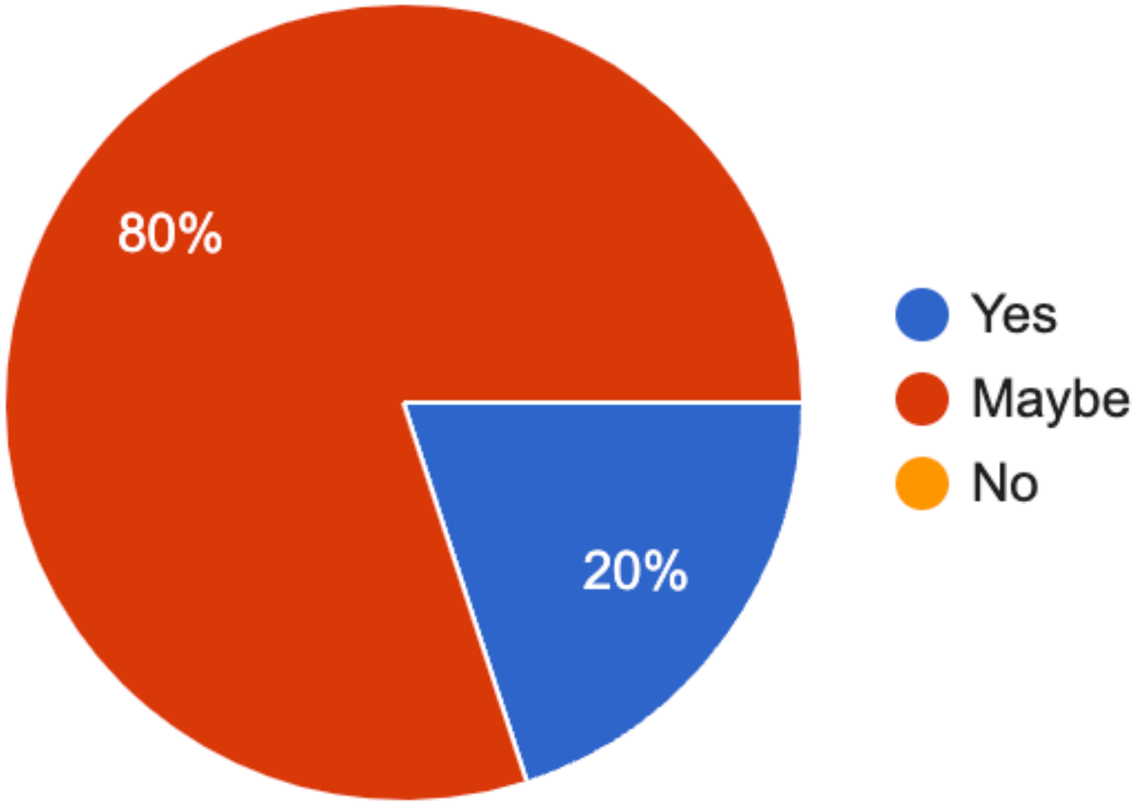
SkyPortal survey

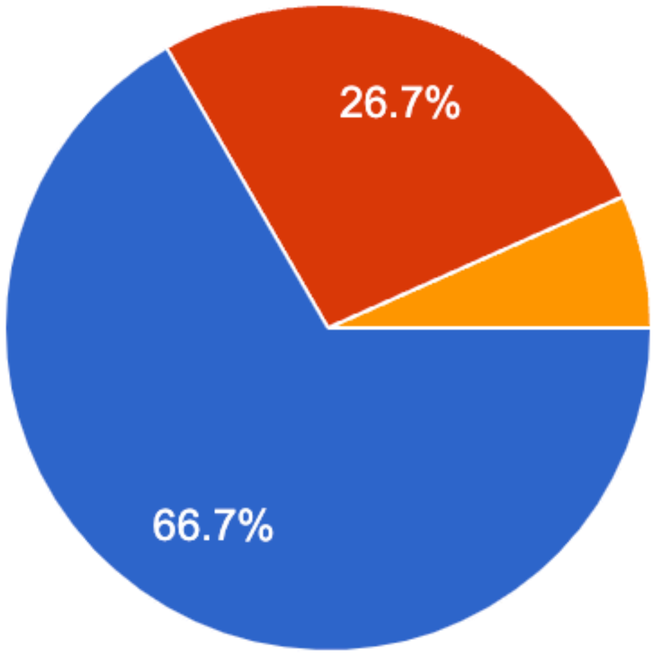
Do you have the required functionality for O4?



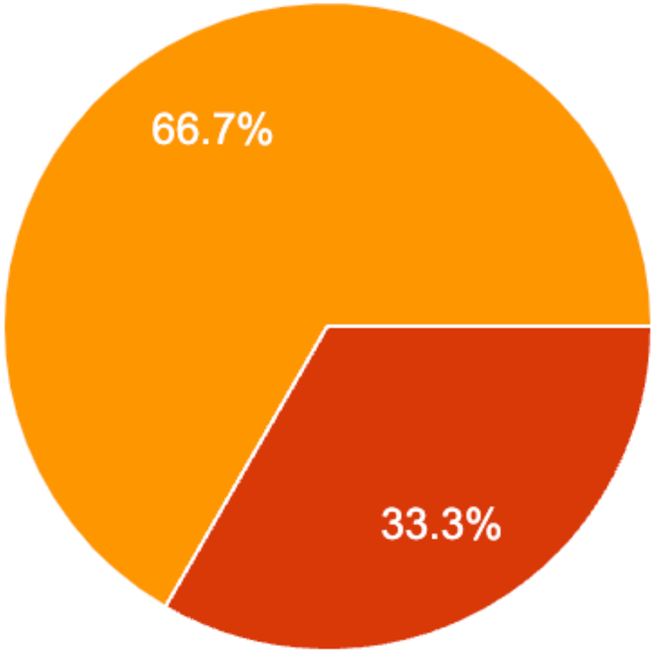
SkyPortal survey

Usage

API



Frontend



- Rarely (~10% of usage)
- Regularly (~50% of usag
- Often (~90% of usage)

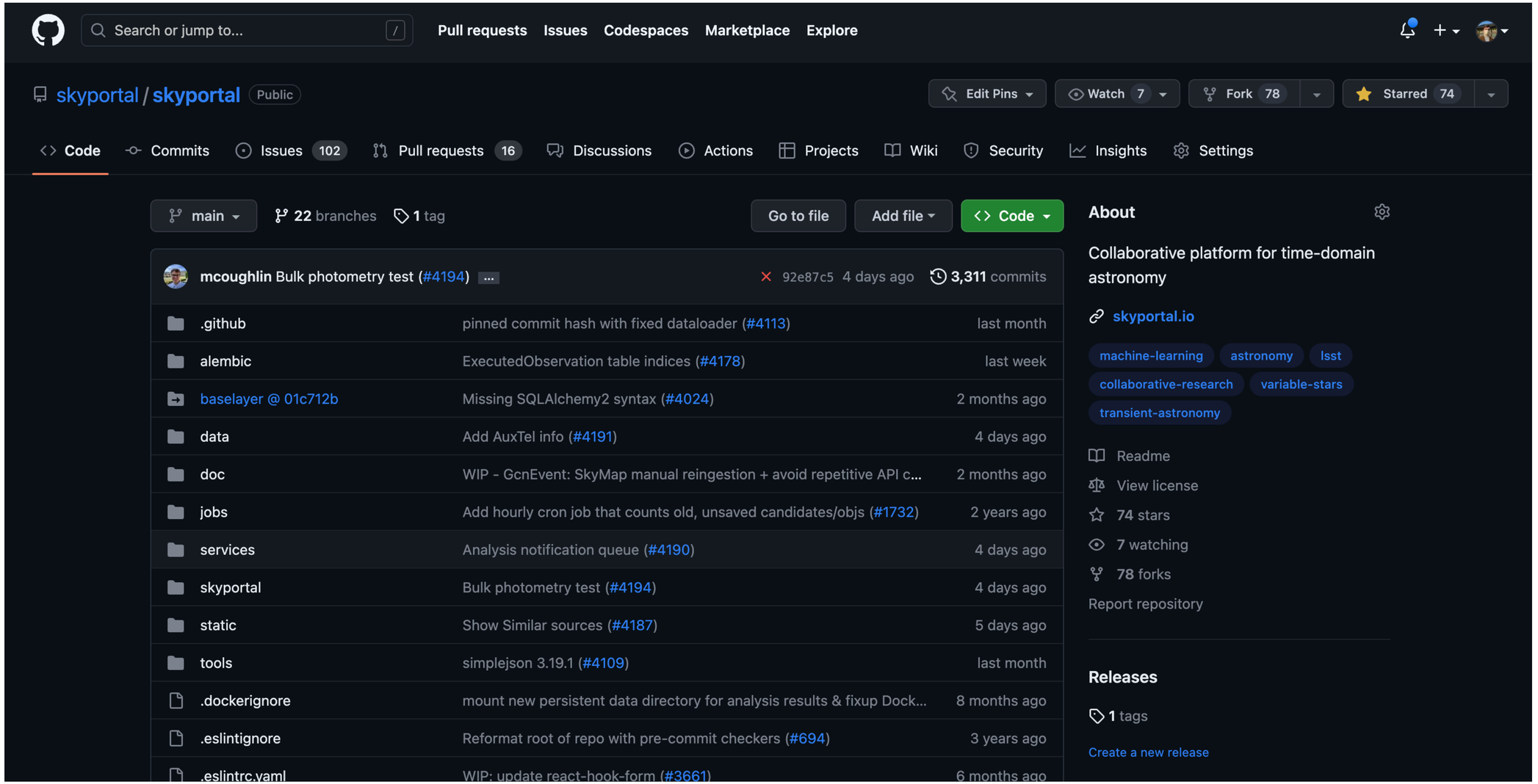
Lessons we learned

Nothing's ever finished or perfect, stability is very hard to reach

- Build diverse teams, at least one person for each aspect of the app
- The 6 lines of code might look good, but still try them before merging.
- Deploy often, fix more often
- Tests, tests, and even more TESTS
- Have a robust deployment pipeline
- Monitor performance in real-time
- Question each others code
- New features is great, good features is better

SkyPortal is open-source

Please open issues when you find a bug, or just want need features



Learn how to use it

SkyPortal is well documented, but never enough!

- Read the documentation at **skyportal.io**
- Watch the tutorials at **www.youtube.com/@skyportalastronomy**
- Reach out to us on **Slack**
- Open issues on GitHub at **github.com/skyportal**
- Email me at **tdulaz@caltech.edu**
- Most importantly, asks us questions **today, tomorrow, and the day after!**

Thanks for listening!

Find us: skyportal.io

Theophile du Laz - 23/05/10