

GRANDMA Reporting

When and what to report ?

On external triggers, like GW, GRB, Neutrinos, GRANDMA will start to observe on multiple telescopes.

The Burst Advocate in charge of the follow-up of an alert will report to the outside community the results of our investigations, either we found something or nothing.

It is the main objective of the « Reporting » task to help the reporting by Burst Advocate.

GCN

The GCN system
centralizes the
informations.
[https://
gcn.gsfc.nasa.gov/
gcn3_archive.html](https://gcn.gsfc.nasa.gov/gcn3_archive.html)

GCN Circulares Archive

Example

This page changes after each Circular submission, so hit the <reload> button NOW.

1. [The Latest Circulares](#)
2. [Older Circulares](#)
3. [Tarfile of all Circulares](#)
4. [Circulares grouped by GRB/transient](#)

This is the archive of the GCN Observation Report Circulares.

To learn more about the [GCN Circulares](#) and [how to subscribe](#). and to [unsubscribe here](#).

(Listed in reverse serial number order -- newest first)

- [23424](#) Konus-Wind observation of GRB 181110A
- [23423](#) GRB 181110A: optical observations in Chilescope observatory
- [23422](#) GROND observations of GRB181110A
- [23421](#) GRB 181110A: VLT/X-shooter redshift
- [23420](#) GRB 181110A, Swift-BAT refined analysis
- [23419](#) GRB 181110A: Swift/UVOT Detection
- [23418](#) GRB 181110A: Swift-XRT refined Analysis
- [23417](#) GRB 181110A: Enhanced Swift-XRT position
- [23416](#) GRB 181110A: optical observations from iTelescope SSO
- [23415](#) GRB 181110A: MITSuME Akeno optical observation
- [23414](#) GRB 181110A: Kanata 1.5m optical observation
- [23413](#) GRB 181110A: Swift detection of a burst with an optical counterpart
- [23412](#) Swift Trigger 871103 is not an astrophysical event
- [23411](#) Fermi GRB 181105.31: Global MASTER Net optical observations
- [23410](#) GRB 181103A: AbAO optical upper limit
- [23409](#) GRB 181028A: Insight-HXMT/HE detection
- [23408](#) GRB 181103A: MITSuME Okayama optical upper limits
- [23407](#) GRB 181103A: Swift/UVOT Detection
- [23406](#) GRB 181103A: Nanshan-1m optical upper limit
- [23405](#) GRB 181103A: Swift-BAT refined analysis
- [23404](#) GRB 181103A: Swift-XRT refined Analysis
- [23403](#) GRB 181103A: Enhanced Swift-XRT position
- [23402](#) GRB 181103A: Swift detection of a burst

Notices

Some external trigger will appear in the GCN system as the form of a notice (a notice is a short, automated, message to give the basic informations to allow its follow-up).

After the initial notice, circulars are emitted. It gives more information on the triggers (refined analysis) or informations given by other facilities related to the same event.

Circulars

After the initial notice, circulars are emitted. It gives more information on the triggers or informations given by other facilities related to the same event.

In case you identified a possible counterpart to the event, or despite investigations you found nothing : **REPORT !**

In the first case, one needs to give all the relevant informations on the source, position, magnitude, magnitude evolution...

Example

TITLE: GCN CIRCULAR
NUMBER: 23415
SUBJECT: GRB 181110A: MITSuME Akeno optical observation
DATE: 18/11/10 12:11:22 GMT
FROM: Katsuhiro L. Murata at Nagoya U <murata@u.phys.nagoya-u.ac.jp>

K. L. Murata, R. Itoh, Y. Tachibana, S. Harita, K. Morita, K. Shiraishi, K. Iida, M. Oeda, M. Niwano, R. Adachi, Y. Yatsu, and N. Kawai (Tokyo Tech) report on behalf of the MITSuME collaboration

We searched for the optical counterpart of GRB 181110A (Evans et al., GCN Circular #23413) with the optical three color (g', Rc, and Ic) CCD cameras attached to the MITSuME 50 cm telescope of AkenoObservatory, Yamanashi, Japan.

The observation for the position of the 1st GCN of this trigger (trigger #871316) started on 08:44:56 UT which corresponds to 85 sec after the trigger.

Here we report the result of the images after 08:55:15 UT. We detected the point source at the position consistent with the Swift/UVOT observation (Evans et al., GCN Circular #23413) and the Kanata observation (Yamanaka et al., GCN Circular # 23414). The measured magnitudes are listed as follows.

T0+[min]	MID-UT	T-EXP[sec]	g'	Rc	Ic
~12	09:00:58.3	420	~14	~14	~14

T0+ : Elapsed time after the burst
T-EXP: Total Exposure time
We used GSC2.3 catalog for flux calibration.
The magnitudes are expressed in the AB system.

Further analysis is ongoing.

Circulars

Example

In the second case, one needs to give all the relevant informations on the follow-up performed and give the upper limit in magnitude for each pointing.

TITLE: GCN CIRCULAR
NUMBER: 23379
SUBJECT: GRB 180728B: Zwicky Transient Facility Follow-Up of a Fermi Short GRB
DATE: 18/10/24 19:40:05 GMT
FROM: Michael Coughlin at Caltech/LIGO <mcoughli@caltech.edu>

Authors: Michael W. Coughlin (Caltech), Tomis Ahumada (UMD), S. Bradley Cenko (NASA GSFC), Shaon Ghosh (UWM), Virginia Cunningham (UMD), Eric C. Bellm (UW), Mansi M. Kasliwal (Caltech) and Leo P. Singer (NASA GSFC) on behalf of the ZTF and GROWTH collaborations

We observed the localization region of the short GRB 180728B (trigger 554505003) detected by the Gamma-Ray Burst Monitor (GBM) on the Fermi satellite with the Palomar 48-inch telescope equipped with the 47 square degree Zwicky Transient Facility (ZTF) camera. The observations taken during the night of July 29 did not cover the IPN updated localization of GRB 180628B available the next day. The IPN region was observed with ZTF beginning at 04:06 UT on 2018 July 30 (30:58 hours after the trigger time). The observations covered 334 square degrees, corresponding to ~ 76% of the probability enclosed in the localization region.

The images were processed through the ZTF reduction and image subtraction pipelines at IPAC to search for potential counterparts. 7 high-significance transient and variable candidates were identified by our pipeline in the area observed, all of which had previous detections with ZTF in the days and weeks prior to the GRB trigger time (e.g., supernovae, active galactic nuclei). No viable optical counterparts were thus identified.

The median 5-sigma upper limit for an isolated point source in our images was $r > 18.7$ and $g > 20$. mag for the observations made on July 30.

ZTF is a project led by PI S. R. Kulkarni at Caltech (see ATEL #11266), and includes IPAC; WIS, Israel; OKC, Sweden; JSI/UMd, USA; UW, USA; DESY, Germany; NRC, Taiwan; UW Milwaukee, USA and LANL USA. ZTF acknowledges the generous support of the NSF under AST MSIP Grant No 1440341. Alert distribution service provided by DIRAC@UW. Alert filtering is being undertaken by the GROWTH marshal system, supported by NSF PIRE grant 1545949.

Reporting Task

In assistance to the shifter, a Python code will generate, on demand, a template to help for the writing of the circular.

It must be callable within the web server which will display all the informations on the follow up.

Structure of the circular

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Header

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Author list

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Scientific informations

The images were processed through the ZTF reduction and image subtraction pipelines at IPAC to search for potential counterparts. 7 high-significance transient and variable candidates were identified by our pipeline in the area observed, all of which had previous detections with ZTF in the days and weeks prior to the GRB trigger time (e.g., supernovae, active galactic nuclei). No viable optical counterparts were thus identified.

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Footer with acknowledgments

Header : automatically filled by the GCN server

Author list : start with GRANDMA and core team list, then add for a given telescope some additional authors. (List to be provided)

Scientific informations : will use informations from the database and available on the web server as a json file (I will work with Damien during this week on this).

It is the most difficult part and will have to be checked carefully by the shifter before sending. At first basic informations will complexify with time.

Footer : like author list, a standard GRANDMA footer followed by a specific part for a given telescope

VOEvents

In addition to the GCN reporting, we can produce directly VOEvents containing the same information...

Not know much about it, but I'll learn...

Goal of the week

Start the python project in the Git repository with the help of Nicolas TheGitKing :)

Trigger the code from the web server

Display of a GCN circular prototype

Work on the exchange of the scientific informations through a json file with Damien

Future : after the prototype works I will need all the informations for the different telescopes (specific author list and footer acknowledgments...)