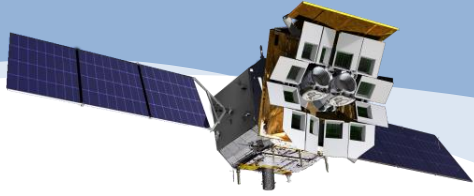




爱因斯坦探针
einstein probe



Transient Advocate Program

He-Yang Liu on behalf of EPSC

The 7th EP CAS-ESA-MPE-CNES joint workshop @ Beijing 2024-04-25

Outline

1. Transient Advocate Role

- What are they supposed to do?
- How do they do these?

2. Transient Advocate Group

- ✓ Call for Transient Advocates
- ✓ Transient Advocate workshop

3. Working plan

“To-Do” list of Transient advocate

Deal with ToO and DDT proposals



Monitor the status of satellite and payloads



Deal with Instrument update requirements



Beidou and VHF alerts



LIGO GCN Notice



Source identification



Data analysis



publish GCN circular & ATel



Write Transient report and notify the STP members



propose follow-up requests



TA tools : proposal system (will open later)



- Home
- Mission
- News
- Consortium
- Data Center
- User Support
- Proposal
- Activities
- Publications
- LEIA

Proposal List for Admin

Season:EP ToO Season Request:26400.0 Seconds Assigned:10500.0 Seconds

Total:14 P1 - P10: 0 X: 0 Other: 3

Back to list

Life-cycle of Stars and Int All NO, Name or Search Clear

NO	PI	Urgency	Seconds(R/A)	Grade	Obs Time	Anticipated Too	Project	Proposal	Operation
EP-EP_ToO_Season-0015	Heyang Liu	None (ToO)	1000.0 / 1000.0	2024-06-01T09:57:53Z	A	-	Y	View	Enter Withdraw Grade Project
EP-EP_ToO_Season-0014	Yunfei Xu	None (ToO)	1000.0 / --	2023-10-01T09:47:55Z	-	-	-	View	Enter Withdraw Grade Project
EP-EP_ToO_Season-0013	Wenjie Zhang	None (ToO)	4000.0 / 0.0	2024-06-01T13:45:16Z	D	-	-	View	Enter Withdraw Grade Project
EP-EP_ToO_Season-0012	Wenjie Zhang	None (ToO)	5000.0 / --	2024-06-01T12:26:16Z	-	-	-	View	Enter Withdraw Grade Project

EP Proposal Coverage

No: EP-Cycle1-0012

Proposal Title:

Anticipated-ToO Observations of X-ray Flares from Galactic Globular Clusters

Scientific Category: (tick all that apply)

- Life-cycle of Stars and Interstellar Medium
- Isolated and Binary Compact Objects
- Galaxies, Groups of Galaxies, Clusters of Galaxies and Superclusters
- Active Galactic Nuclei and Tidal Disruption Events
- Solar System Objects, Stars and Exoplanets
- Cosmology, Extragalactic Deep Fields and Large Extragalactic Areas
- Gravitational Wave Electromagnetic Counterpart
- Other

Proposal Abstract:

Globular clusters (GCs) are tightly bound clusters of thousands of stars. They contain various types of X-ray sources, such as X-ray binaries, cataclysmic variables, active main-sequence binaries, and millisecond pulsars. More importantly, both theoretical predictions and computational models suggest that GCs may host intermediate-mass black holes (IMBHs) capable of generating X-ray flares during the accretion process. EP/WXT may observe numerous Galactic GCs during all-sky monitoring, offering the potential to serendipitously detect X-ray flares from GCs. These events merit prompt follow-up observations using EP/FXT to verify their origins. This proposal aims to quickly follow up strong X-ray flares from a sample of Galactic GCs previously detected in X-rays with a deep EP/FXT observations of 20 ks, in the hope of uncovering signatures of IMBHs or the outbursts from other types of X-ray sources.

TA tools : Alert Notification

北斗 北斗警报全解析 36 | 1

消息 文件 +

警报解析博文 机器人 | 通过webhook将自定义服务的消息推送至飞书 昨天 00:16

```
[🔍🔍🔍 BD alert] {
  "alarmType": 0,
  "caldbver": "x20391113",
  "checksum": "jEdCIBZAJBdAjBZA",
  "clockapp": "F",
  "cmosNum": "32",
  "datasum": "0",
  "dateEnd": "2024-04-22T16:03:17.683",
  "dateObs": "2024-04-22T15:56:57.333",
  "dec": "-7.448000000",
  "decObj": "-7.448",
  "decPnt": "-7.448",
  "delflag": 0,
  "detnam": "CMOS32",
  "hr": "0.08",
  "instrume": "WXT",
  "mjdreff": "0.00080074074",
  "mjdrefi": "58849",
  "netRate": "0.18",
  "object": "01708651252",
  "obsId": "01708651252",
  "origin": "NAOC",
  "paPnt": "0",
  "posErr": "39.555999999",
  "procver": "3.17.13",
  "q1": "0.215376183",
  "q2": "0.087278634",
  "q3": "0.943379998",
  "q4": "-0.236705958",
  "ra": "195.394000000",
  "raObj": "195.394",
  "raPnt": "195.394",
  "reproc": "T",
  "segNum": "252",
  "seqpnum": "0",
  "softver": "Hea_15Aug2039_V6.22_epwxtas_11Jul39_v3.4.0",
  "srcSignificance": "8.4"
```

Beidou Alert

GW GCN引力波警报 41 | 1

消息 Pin +

刘禾阳: 引力波警报通过本群推送, 请各位值班人员及时关注; 优先关注significant为1且NS概率... 由刘禾阳 置顶

```
"pipeline": "MBTA",
"properties": {
  "hasMassGap": "0.004807692307692308",
  "hasNS": "0.0",
  "hasRemnant": "0.0"
},
"search": "AllSky",
"significant": "1"
}
```

LIGO GCN Notice

GW 机器人 | GW

```
[🔔🔔🔔 LIGO Notice] {
  "ISOTime": "2024-04-21T05:29:35.734400Z",
  "alertType": "Update",
  "classification": {
    "BBH": "0.41391150101247964",
    "BNS": "0.0",
    "NSBH": "0.0",
    "terrestrial": "0.5860884989875204"
  },
  "createdTime": "2024-04-23T17:16:38Z",
  "eventPage": "https://gracedb.ligo.org/superevents/S240421ar/view/",
  "far": "3.59706e-08",
  "graceID": "S240421ar",
  "group": "CBC",
  "instruments": "H1,L1",
  "pipeline": "CWB",
  "properties": {
    "hasMassGap": "0.0",
    "hasNS": "0.0",
    "hasRemnant": "0.0"
  },
  "search": "BBH",
  "significant": "1"
}
```

认证 源证提醒 35 | 1

消息 Pin +

刘禾阳: 本群将推送流水线运行情况, TA收到提醒后请在第一时间进行... 由刘禾阳 置顶

[👉👉👉二级产品流水线完成] 可以去认证源啦! TraceID: 1236

流水线状态 机器人 | proc/#

[❤️❤️❤️二级产品流水线启动] ObsID: 10202561058. No metadata

[❤️❤️❤️二级产品流水线启动] ObsID: 10202561059. No metadata

[❤️❤️❤️二级产品流水线启动] ObsID: 10202561060. No metadata

[❤️❤️❤️二级产品流水线启动] ObsID: 10202561061. No metadata

Pipeline status

刘禾阳: 本群消息较多, 建议非值班时段开启免打扰 @所有人

OK | 胡静维

momo

现在流水线启动和INFO两条消息已合并为一条

👍 | 胡静维

流水线状态 机器人 | proc/#

[👉👉👉二级产品流水线完成] 可以去认证源啦! TraceID: bc61

流水线状态 机器人 | proc/#

[👉👉👉二级产品流水线完成] 可以去认证源啦! TraceID: 660e

[👉👉👉二级产品流水线完成] 可以去认证源啦! TraceID: 6c4e

[👉👉👉二级产品流水线完成] 可以去认证源啦! TraceID: 7278

TA tools : generate ToO-MM observation plan

NADC National Astronomical Data Center
Gravitational Wave Follow-up Observation Plan & Transient Identification Center

GW Event: Select Alert S231118ab- UPDATE

QUERY CURRENT CENTER POSITION

RA

Dec

Radius

Start Time: 2023/12/27 00:00

End Time: 2023/12/29 00:00

QUERY

Telescopes

ALERT DETAILS

Atel ID	Title	RA DEC	sources	Publish Date	Email	Tags	Atel Type	Authors
16394	MAXI/GSC observation of th...	(91.966 ,22.073)		2023-12-27T11:36:00	nakajima.motoki@nihon-u.ac...	X-ray, Binary, Neutron Star, Tr...	observation	M. Nakajima (Nihon U.), T. Mi...

TA tools : source identification

Multi-Wavelength Cross Matching ESA Sky ASAS-SN

Legend: Error Circle (5 arcmins) EP WXT Ref EP FXT Ref 2RXS 4XMM DR11 Chandra CSC2.0 SIMBAD SWIFT 2SXPS MAXI AllWISE DES Gaia DR3

GAL 143.1156615 -11.2204263 AIT

Image layers
Add image layer

Overlay layers
08500000076

Base layer
ROSAT All Sky Survey (f)

Overlay layers

- WXT Ref(from FXT ref)
- current_fov
- fxt_fov
- wxt_fov
- search error circle
- EP FXT Ref
- EP WXT Ref
- Dark Energy Survey Catalog
- AllWISE Catalog
- SIMBAD Database
- 2RXS Catalogue
- SWIFT 2SXPS Catalogue
- 4XMMDR11 Catalogue
- Gaia DR3 Catalogue
- MAXI Catalogue
- Chandra Catalogue

Add catalogue

X-ray Counterpart from EP Reference Catalog

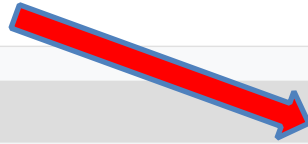
▲	Name	▲	RA	▲	Dec	▲	Pos Err	▲	Sep	▲	Flux	▲	Prob	▲	P_single	▲	ID
1	2RXS J093225.6-111102	143.107	-11.184	2.509	135.950	9.053e-11	1.000e+0	5.295e-2	8238104								
2	1eRASS J093225.2-111103	143.105	-11.184	2.367	136.686	2.833e-11	1.000e+0	4.150e-1	8266426								

Also see Dongyue's talk

TA tools : Data Analysis online

Data List (Find 3944 results.) [Open Data Analysis Tool](#) [Export CSV](#)

	OBS ID	CMOS ID	Source Number	Goto	Quick Look	Download	Show Detail	Pointing RA	Pointing Dec	Exposure (s)	Obs Start Time (UT)
1	<input checked="" type="checkbox"/>	08500000073	CMOS1	2	📄	📄	📄	241.333	-24.817	9615	2024-04-21 03:58:45
2	<input type="checkbox"/>	08500000073	CMOS10	2	📄	📄	📄	196.688	-32.412	9600	2024-04-21 03:52:33
3	<input type="checkbox"/>	08500000073	CMOS11	2	📄	📄	📄	212.525	-31.328	9368	2024-04-21 03:55:46
4	<input type="checkbox"/>	08500000073	CMOS12	1	📄	📄	📄	205.466	-38.67	9636	2024-04-21 03:53:46
5	<input type="checkbox"/>	08500000073	CMOS13	2	📄	📄	📄	233.831	22.379	9790	2024-04-21 04:02:10
6	<input type="checkbox"/>	08500000073	CMOS14	0	📄	📄	📄	228.34	14.765	9634	2024-04-21 04:01:37
7	<input type="checkbox"/>	08500000073	CMOS15	0	📄	📄	📄	242.12	16.823	9689	2024-04-21 04:03:48
8	<input type="checkbox"/>	08500000073	CMOS16	2	📄	📄	📄	236.305	9.3	9668	2024-04-21 04:01:37
9	<input type="checkbox"/>	08500000073	CMOS17	1	📄	📄	📄	221.447	-3.25	9550	2024-04-21 03:57:56
10	<input type="checkbox"/>	08500000073	CMOS18	0	📄	📄	📄	229.148	-8.785	9614	2024-04-21 03:57:56
11	<input type="checkbox"/>	08500000073	CMOS19	3	📄	📄	📄	226.972	4.572	9677	2024-04-21 03:58:26



analyze the WXT data online without building the environment

```
[20]: import unittest
      from nadc_datahub.ep_tdic import EP_TDIC
      import os
      import uuid
      import subprocess
      from IPython.display import Image

[21]: # 设置3个变量
      email = "zhangzhen@nao.cas.cn"
      password = "mengdan@501"
      outputdir = "downloads/lv1" # 请先创建该文件夹

[22]: # 读取新上传的数据
      import json
      with open("file_list.txt") as f:
          obses = json.load(f)
      for obs in obses:
          print(obs)

{'obs_id': '08500000072', 'cmos_id': '1'}
{'obs_id': '08500000072', 'cmos_id': '10'}
{'obs_id': '08500000072', 'cmos_id': '11'}
{'obs_id': '08500000072', 'cmos_id': '13'}

[26]: from nadc_datahub.ep_tdic import EP_TDIC
      ep = EP_TDIC.get_entry("csdb")
      ep.auth(email, password)
      for obs in obses:
          output_path = ep.download(outputdir, "wxt1", {
              "OBS_ID": obs['obs_id'],
              "CMOS_ID": str(obs['cmos_id']),
              "VERSION": "v2",
          })
          print(output_path)

downloads/lv1/ep08500000072wxt1lv1.zip
downloads/lv1/ep08500000072wxt10lv1.zip
```

Also see the talk of Haiwu and Yunfei

TA management

- ◆ TAs are from EPSC or STPs
- ◆ Working in three shifts: 9:00-16:00, 16:00-23:00, 23:00-9:00; 2 TAs per shift (2-3 TAs @ 9:00-21:00 during the commissioning phase)
- ◆ Workplace: the operation room at NAOC, on-line in the future
- ◆ Appointment: The duty schedule per month
- ◆ Report the operation at the regular meeting

First TAs are from EPSC



Schedule of TA mission

- 2022.7-2024.1: serving for LEIA as TA
- 2023.12: Call for TAs from the EP STP members
- 2023.12.29: 1st TA workshop
- 2024.1.9: EP launched!
- 2024.1-now: Update the TA tools
- 2024.4.8-11: 2nd TA workshop



EP TA workshop @ NAOC 2024-04-08

Working plan

1. Organize the 3rd EP workshop in June or July 2024

2. Develop and update the TA tools and procedures

- List the recent alert information (GCN & ATel & TNS) on the source page
- Update the ToO-MM procedures
- Seek transients with short timescale
- Some little tools not complicated but much helpful
- More guidelines

Thank you!