Chandra X-ray Center



Director's Report



Quick Status

- Observatory functioning nominally. 107 HRC observing segments carried out since April.
- Data processing and delivery functioning nominally.
- TOO/DDT support continues on normal pace.
- Cycle 25 Peer Review completed successfully. Continued high oversubscription.
- Uplinked a clever and complex software patch to the on-board star tracker which drastically improves performance and effectively erases eight years of thermal degradation.
- Planning underway for Chandra 25th Anniversary and Chandra Legacy Program.
- FY24 budget issues will impact Chandra over the next year. Budgets beyond FY24 are unknown.



DDT Summary: 26 Nov 2022 - 26 Nov 2023

Cycle	Accepted Proposals		Rejected Proposals	
23	3	90	5	204
24	11	349.9	13	402

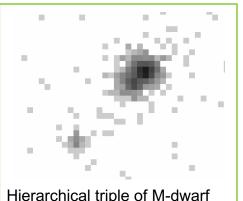
Notes:

- 1: Rejected #s do not include informal requests that went untriggered.
- 2: Two non-transient programs were approved since 26 Nov 2022 (out of six requested).

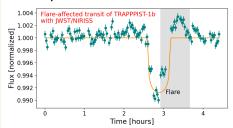
Chandra X-ray Center



X-ray binary showing showing evidence of torque reversal event. HETG study of Ne X line emission to probe inner disk.



Hierarchical triple of M-dwarf stars, one containing rocky exoplanet. Correlate X-ray flares with JWST spectral features to probe effects of flares on planet atmosphere.



DDT Summary: 05 Nov 2021 - 25 Nov 2022

Target	Classification	PI	t _r	t _a	SI	GRAT	P
V404 Cyg	BH AND NS BINARIES	Hynes	15	15	ACIS-S	NONE	N
GRB 230812B	BH AND NS BINARIES	Pathak	50	50	ACIS-S	NONE	D
4U 1626-67	BH AND NS BINARIES	Ng	60	60	ACIS-S	HETG	N
AT2023lcr	SN, SNR AND ISOLATED NS	Martin-Carrillo	20	20	ACIS-S	NONE	D
AT2021lwx	ACTIVE GALAXIES AND QUASARS	Guolo	50	25	ACIS-S	NONE	N
SN 2023ixf	SN, SNR AND ISOLATED NS	Chandra	40	40	ACIS-S	NONE	D
LTT 1445A	SOLAR SYSTEM AND EXOPLANETS	Howard	29.9	29.9	ACIS-S	NONE	N
GRB 230307A	BH AND NS BINARIES	Fong	100	50	ACIS-S	NONE	N
Terzan 5	BH AND NS BINARIES	Heinke	10	10	ACIS-S	NONE	N
WISEA J045649.8-2037	ACTIVE GALAXIES AND QUASARS	Liu	40	30	ACIS-S	NONE	D
RX J0440.9+4431	BH AND NS BINARIES	Reynolds	20	20	ACIS-S	HETG	D

 t_r = requested (ks)

 $t_a = approved (ks)$

P = proprietary N=None D=Default

> Cycle 24

Cycle 23

Blue: Student or Postdoc

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SDSS-g Swift XRT Chandra archival (pre-SN) Chandra archival (smoothed) Search for variable emission in

DDT Summary: 05 Nov 2021 - 25 Nov 2022

Target	Classification	PI	t _r	t _a	SI	GRAT	P
SN 2022jli	SN, SNR AND ISOLATED NS	Chen	30	30	ACIS-S	NONE	N
AT 2022tsd	SN, SNR AND ISOLATED NS	Но	40	40	ACIS-S	NONE	N
Gaia J1350-5914	STARS AND WD	El-Badry	20	20	ACIS-S	NONE	D
Swift J1913.1+1946	GALACTIC DIFFUSE EMISSION AND SURVEYS	Heinz	20	20	ACIS-S	NONE	D

 t_r = requested (ks)

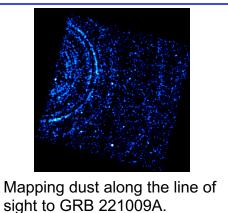
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Cycle 24

Cycle 23



light curve of unique SN Ic



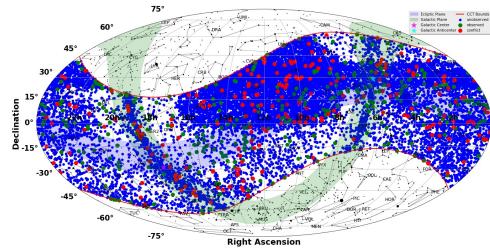
Chandra Legacy Program

- The Chandra Legacy Program (CLP) is an initiative to provide the community with crucial results that only Chandra can produce, that address scientific goals of the 2020 Decadal Survey, and that will break new scientific ground and/or complement new and far-reaching observations in other wavelength regimes.
- Solicit white papers for projects up to 6 Ms. Time allocations anticipated from DDT, GTO, and GO programs.
- White papers will be reviewed by team of experts selected from former panel chairs and pundits, augmented as appropriate.
- Resource costs and HEL time scaled to GO program. HRC time likely limited.
- Data will become public immediately upon ObsID processing. Aim is to complete CLP observations within 2 years.
- Funding will be come from GO budget through separate call for dedicated Archive research.
- Draft plan has been generated.
- Waiting for final information from GTO teams, then Project Science review. Anticipate Call in early November.



Chandra Cool Target Program

- Existing programs have been reviewed for completion criteria and current progress toward goals.
- Multiple programs are inactive due to requests for longer observations or 4 required CCD chips. These are rarely selected.
- New call is required to provide more extended sky coverage with durations and observing modes most useful for intermediate observations in schedules.



Sky Distribution and Current Status of All Proposed CCT Targets

- Call for new proposals was anticipated by end of 2023, but has been delayed by efforts on budget planning.
- Anticipated early next year, subject to considerations of Cycle 26 proposal schedule.



Chandra Budget Status

- As briefed, federal budget cuts have impacted most agencies, including NASA.
- Impact has been felt by Chandra. Plans for mitigation of budget shortfalls are underway.
- Existing written direction from NASA is to address FY24 shortfalls by "preserving mission infrastructure while maximizing General Observer program funding."
- Chandra GO funding will be impacted. Extent is under investigation.
- Efforts are underway to minimize the GO impact. Some impacts to Chandra observing support may also result.
- Planning for immediate future and beyond is underway.