

# AGENDA

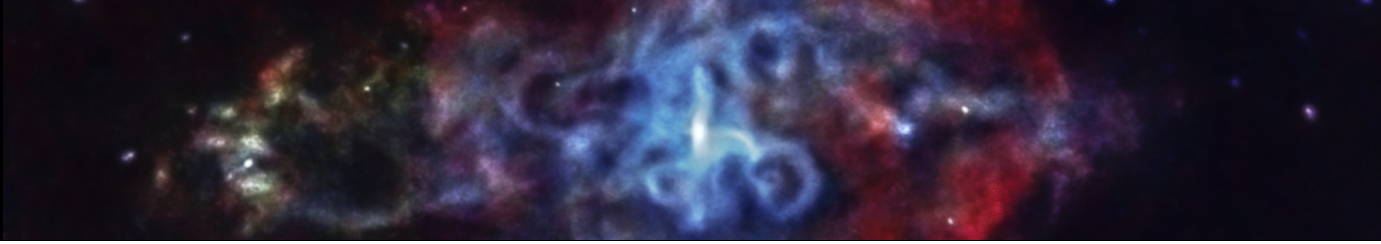
## Director's Report

- Quick Status
- HRC Return to Science
- Responses to Previous CUC Report
- Cool Target Program Planning

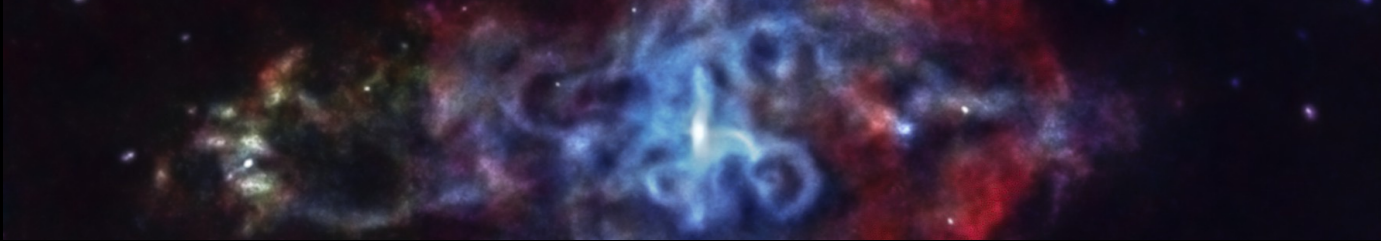
## CDO Report

- Updates to the CfP from Previous CUC Meeting
  - TOO Panel Breakdown
- Update on Current Cycle 25 Submission Statistics
- Initial Demand on JWST/Chandra Joint Program
  - Plans for Cycle 25 Peer Review

**Concluding remarks; update on CUC composition and membership dates; plans for next CUC meeting**

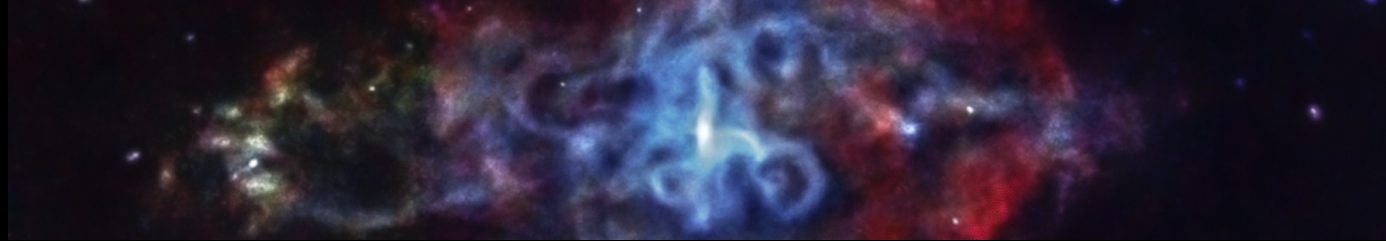


# Director's Report



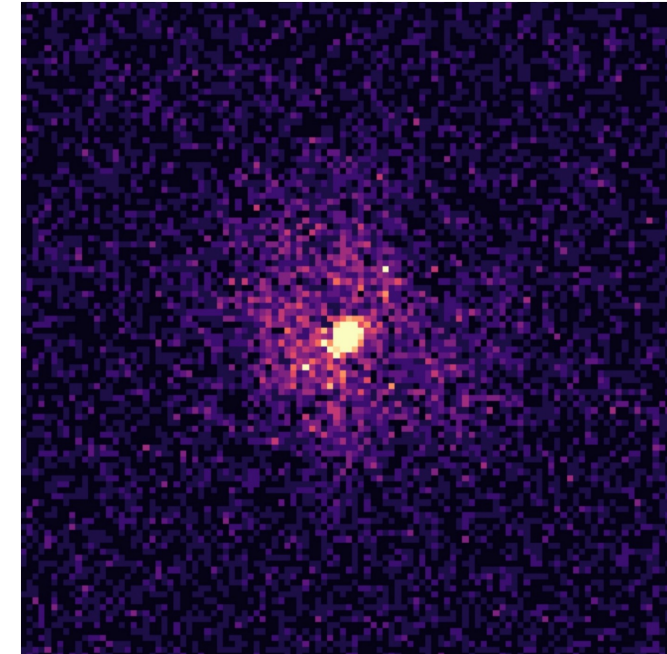
## Quick Status

- Observatory functioning nominally.
- Data processing and delivery functioning nominally.
- Since last CUC meeting, two spacecraft anomalies and three radiation events:
  - Nov 6: ACIS thermal monitor trip due to inaccuracy of predictive thermal model. 75 ks lost science time.
  - Feb 13: Safe mode transition. Sun Position Monitor trip, involving bad FSS-B data. 700 ks lost science time.
  - Feb 26, Mar 15, Apr 23: Three manual solar radiation safings. 270 ks lost science time (combined).
- CSC2.1 processing nearly complete, with primary remaining work on most source-rich regions. Expect completion in ~1 month.
- Cycle 25 proposal Cycle underway. (See CDO report)

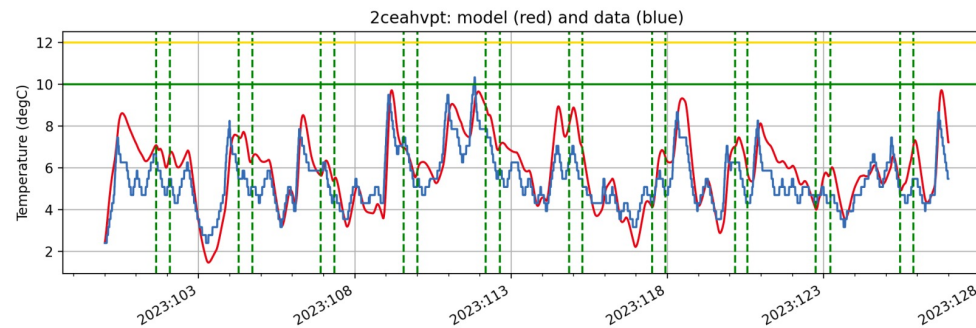


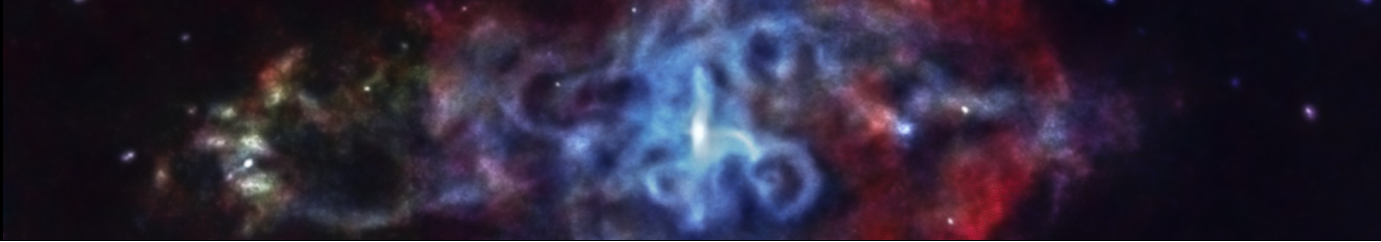
## HRC Return to Science

- Following diagnosis of  $\pm 15$  V power supply, a new concept for operating the HRC was designed, and **many** software/procedural updates were developed:
  - 15ks maximum on-duration for the HRC; 30ks minimum time between successive 15ks blocks of HRC time.
  - No HRC observations immediately before or after a redzone.
  - Planning limit of  $10^{\circ}\text{C}$  on critical HRC electronics.
- ACIS txings algorithm now used for radiation monitoring during all observations.
- The HRC has been successfully operated since the 10 April 2023 schedule.
  - Inspection of science and engineering data do not reveal any unexpected issues.
  - Cycle 22-24 HRC observations back in Chandra long-term schedule.



HRC-S calibration observation of SNR G21.5-0.9 from 07 May 2023





## Responses to Previous CUC Report

- Adjust grants for inflation

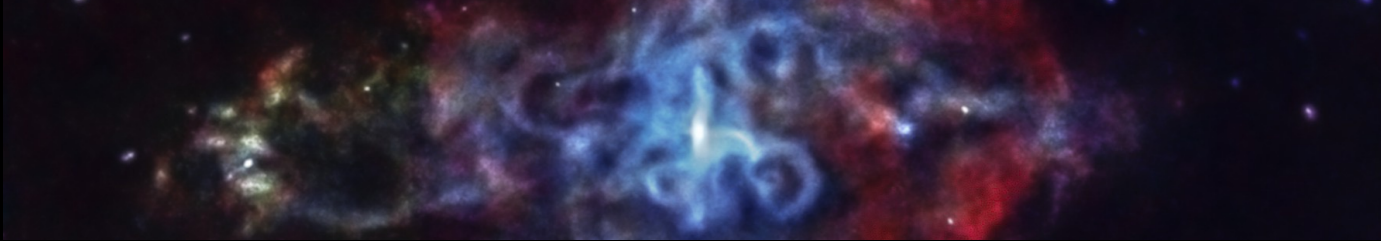
The CUC agrees that adjusting the grants to account for inflation would be very desirable and justified by the rising costs on everything from publication fees to conference travel. It is not sustainable to expect proposers to subsist and perform the same amount of work on shrinking grants.

- On recommendation from NASA HQ, the CXC did not request adjustment to GO funding levels in its annual PPBE process. However, information was provided on Chandra GO funding levels relative to other projects, to continue making point that the program is underfunded.

- ToO Proposal Evaluation Procedure

The CUC agrees with the CXC that to enable a more direct comparison of science vs. resources, and to avoid potential duplication of science, that ToO proposals should be ranked in topical panels, without the panel allocation the time, and be passed on to BPP or an equivalent merging panel for allocation. The CUC recommends that this be implemented on a trial basis for Cycle 25.

- Following discussions with CUC, this was addressed in a different manner. TOO proposals will be evaluated in dedicated TOO panels. Chair will discuss top proposal to identify any concerns about duplication. Panels will provide trigger priorities for proposals with potential overlapping targets or science goals.



## Responses to Previous CUC Report

The CUC agrees with the CXC that they should look into implementing a new resource metric for evaluating the difficulty in executing long ToO over a shorter ToO.

- MP has investigated this and drafted an approach along the lines of Resource Costs, but as a separate entity that would apply to TOO's. This is under review for implementation as a stand-alone tool similar to the RC calculator.

- Archive & Theory

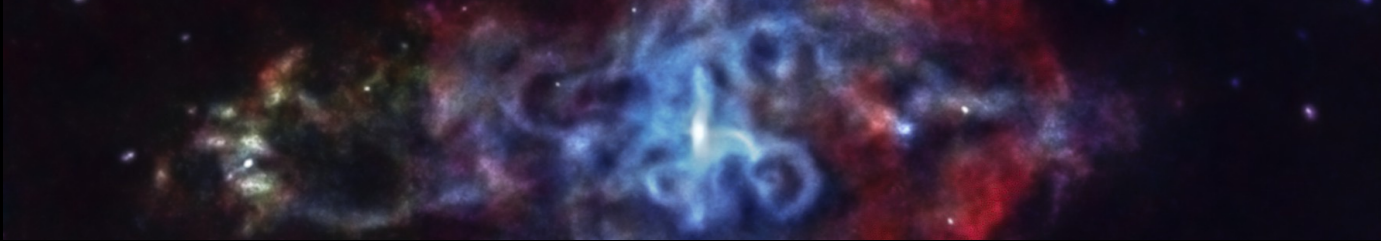
The CUC therefore thinks that the science return for Theory and Archival could benefit from being evaluated by a merging panel in the same way as is proposed for the ToO.

- This has not been implemented for the current review. It is being studied for future Cycles.

- Distributed Review

CUC supports and encourages the CXC to look into the challenge of turning the traditional review into a "Distributed review"

- Initial discussions have been carried out. Both advantages and disadvantages identified. Further study of process, application to Chandra reviews, and implementation requirements underway.



## Responses to Previous CUC Report

CUC recommends that the CXC make the Chandra community aware of the great disparity in the number of PIs that have never served on a panel despite having had accepted proposals.

- Mentioned in Director's Log in upcoming Newsletter. Further measures await decision on distributed review.

- Multi-cycle restriction

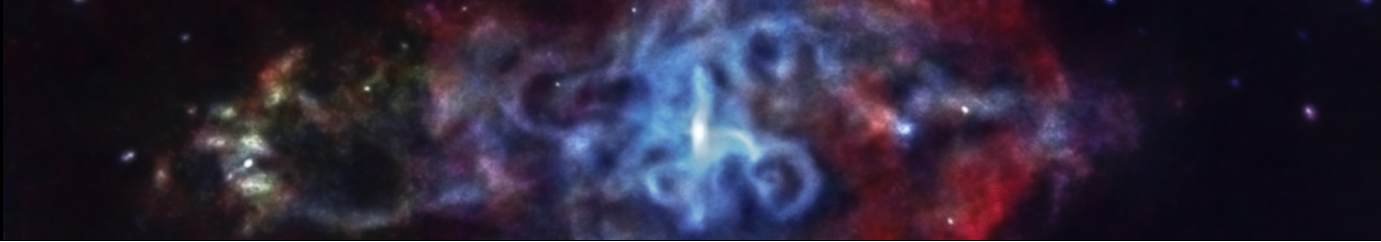
The CUC supports the suggestion that the time domain requirement be removed from the multi-cycle proposals

- This was implemented for Cycle 25.

- Non-compliance policies

The CUC suggests that the CXC review the instructions given to reviewers on how to look for non-compliance.

- This will be implemented in peer review. "Both proposers and reviewers are capable of violating the spirit of DAPR."



## Responses to Previous CUC Report

- Legacy initiative

The CUC agrees with the Senior Review that the "Legacy Initiative" is very important. Call for white papers should go out in 2023.

- Initial discussions have begun, including assessments of total time. Process may begin with a committee to identify science themes unique to Chandra in order to focus white papers, which will be peer reviewed.

- CIAO, DS9, and srcflux

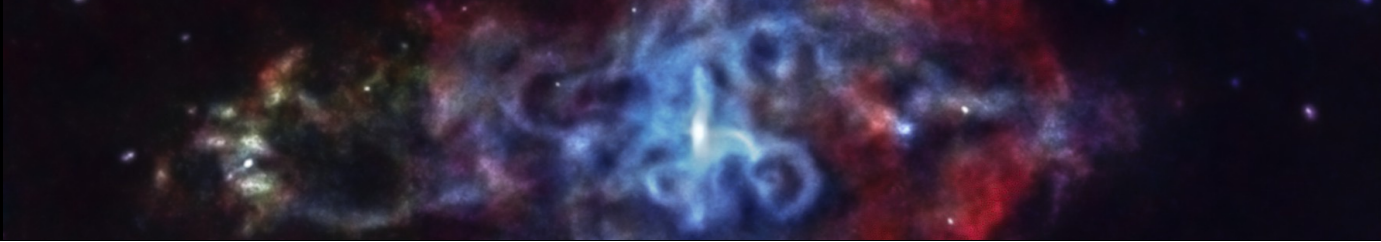
CUC is not opposed to discontinuing ciao-install if it frees up resources better used elsewhere.

- DS plans to replace ciao-install. A prototype has been developed that runs like the old-style ciao-install but uses conda behind the scenes. The hope is that we can have a fully functional new conda-based ciao-install script which satisfies all the requirements in time for the December release.

The CXC asked the CUC opinion on new ways of reaching users, and recommendations or ideas for how to best teach CIAO to the new generations.

- We have added two new links under the section "Where should I begin" pointing to the YouTube Videos and the CIAO Workshops. We are currently evaluating how and where to incorporate Jupyter notebooks relative to our threads. We have introduced them for a few threads and at different levels of documentation.





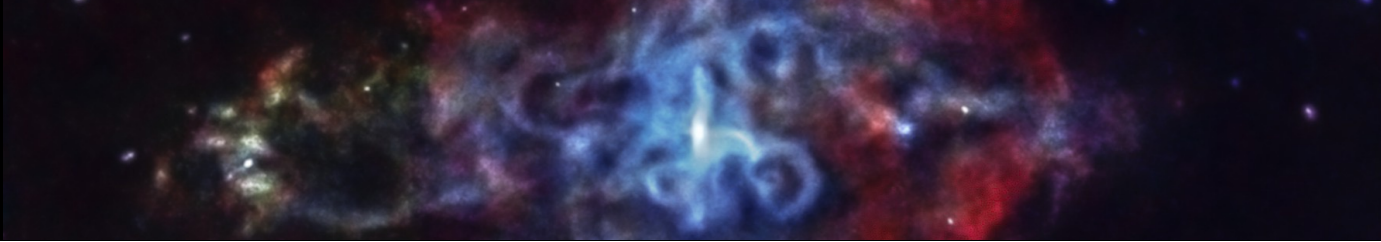
## Responses to Previous CUC Report

The CUC recommends that the CXC consider devoting a campaign to update documentation and showcasing the current DS9 functionality to the user base.

- DS9 and DAX were subject of a themed article in Chandra Newsletter #28 (Fall 2020), and DS9 was the focus of an article in the Chandra Newsletter #32 (Fall 2022).
- DS9 website has links several tutorials including the CIAO YouTube Channel with many DS9 and DAX demos.
- DS9 is also the subject of a dedicated thread. True color image thread has its own FAQ section and two specific analysis guides which include links to Jupyter notebooks and sample data files describing how to use DS9 and DAX.
- Planned activities include demo loop for summer AAS.

CUC recommends that the CXC continue with implementing the `acis_extract` functionality into `srcflux`.

- New thread `srcflux_plugin` introduced in CIAO contrib 4.14.0, along with scripts for creation of source and background regions that will be integrated into `srcflux` to provide remaining `acis_extract` functionality.



## Responses to Previous CUC Report

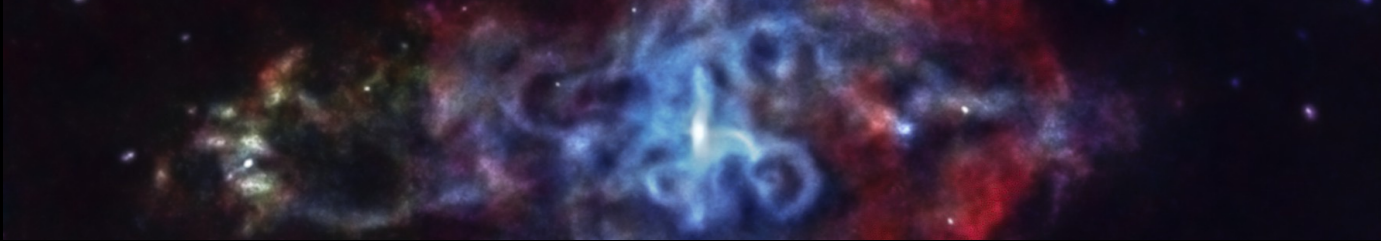
- Time Domain

CUC recommends that in the interim until such funding is made available, that instructions are relayed to proposers on how to go about identifying and reporting transients in their data.

- This item is still on the “to do” list.

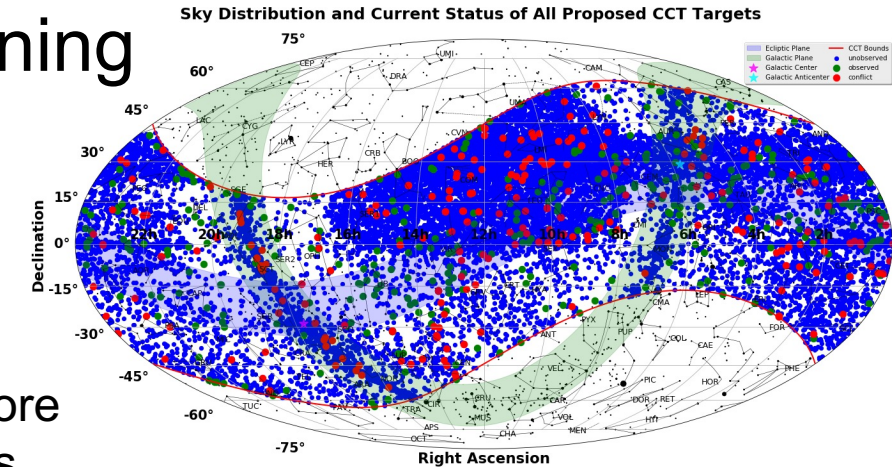
The CUC would like to see a prioritized list for what resources could potentially be freed up to write code for the transient search algorithm.

- This item requires a more complete specification of the transient search process and how it would be integrated into the data processing pipeline. A likely result of effort on this capability, should it be possible, would be to delay subsequent source catalog work following the release of CSC2.1. A more complete assessment of this question is underway.



# Cool Target Program Planning

- CCT Program Completion - Call for CCT targets did not include science science “completion” criterion. We are reviewing proposals to ascertain scientific usefulness of continued observing.
- Usage Statistics:  $N_{obs} = 353$ ,  $t_{obs} = 4.9$  Ms;  $N_{unobs} = 17736$ ,  $t_{unobs} = 384$  Ms
- CCT Program Usability - Programs with exposures longer than 15 ks or more than 2 CCs are rarely selected for use. They don't solve thermal problems.
- CCT Program Needs
  - $t \leq 15$  ks,  $N_{CCD} < 3$ , well-distributed on sky with heavier concentration near ecliptic plane ( $|b| \leq 10^\circ$ ).
- New CCT Call – Anticipate call later this year.
- Questions:
  - “Update” current programs, or all new programs?  
⇒ Many targets are useful now. What if they aren't resubmitted?
  - If “updates” allowed, how are changes justified?



Weekly Cold Time Distribution of All Unobserved CCT Targets

