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*Spring 2022 CUC Briefing*

Chandra X-Ray  
Observatory

## **High Resolution Camera Status**

HRC Status

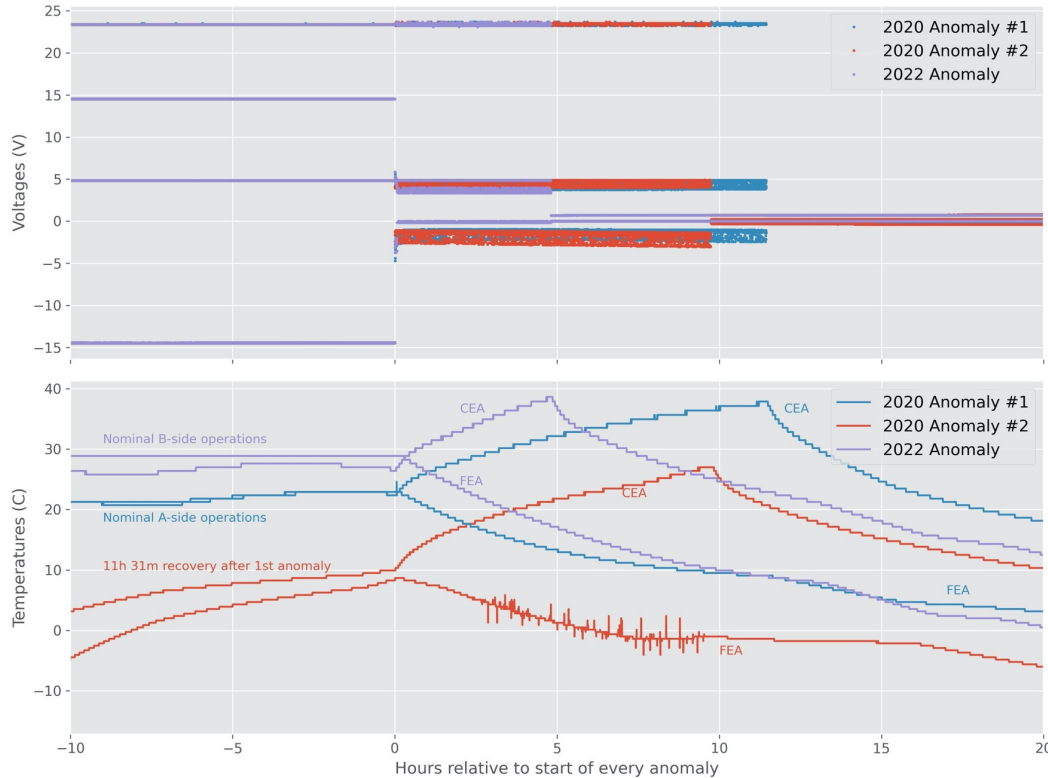
Side-B Anomaly

HRC Recovery Roadmap



- The HRC is currently powered off as the HRC science and engineering teams evaluate various options for a possible return to science under new operational constraints
- The HRC Anomaly Working Group is working with parts experts at Goddard Space Flight Center and engineers at Crane Interpoint (a parts vendor) to pinpoint the root cause of the electronics anomalies

# HRC Side-B Anomaly



- On February 9, 2022, the HRC again showed an anomalous power configuration
  - 15V power supply was reading ~ 0V
  - Box temperature profiles were similar to Side-A anomaly
  - Housekeeping and science data were corrupted
- A recovery of the Side-B electronics was attempted on March 11, 2022
  - Telemetry indicated that, upon power up, the 15V power supply remained in an anomalous state



- Two paths currently exist for a return to constrained use of the HRC in Chandra operations:
  1. Operate the anticoincidence shield with the Side-B electronics and use the HRC for radiation monitoring only
  2. Attempt a swap back to the Side-A electronics
- That the HRC operated nominally for 11 hours on the Side-A electronics before returning to an anomalous state suggests that a path exists to use the HRC for science observations under a new paradigm (option 2)
  - The HRC teams are working with the flight team to inventory and develop any new products or procedures necessary for a swap back to Side-A
  - An extended activity is planned for May 19, 2022, to swap back to the Side-A electronics, and then power on the detector
- Several once in a generation observations are still planned for the HRC (e.g., proper motions in a LMC SNR, and motion of the jet in M87) – the HRC teams remain committed to restoring the HRC for operations in some capacity