Verifying Chandra Absolute Times

Allyn Tennant(*MSFC, SD50*)

Abstract

Calibrating the absolute time accuracy of Chandra requires requires the efforts of many people. Here we present some attempts to verify this accuracy. HRC observations of the Crab indicated that the Chandra clock is within 0.2 msec of being correct. Checking ACIS requires correcting for the time delays caused by the continuous clocking readout. A method is presented to correct ACIS data. This method was verified during a simultaneous RXTE/Chandra observation of the Rapid Burster which showed that the Chandra and RXTE clocks agreed to within 20 msec which allowed us to rule out mod(period) shifts in the Crab data. As a side effect of this, the position of the Rapid Burster was shown to be with 3.5 arcsec of the radio position. Finally, the absolute phase of the Crab was determined with ACIS to be within 1.5 msec well within the 3 msec expected error.

CATEGORY: SUPERNOVAE, SUPERNOVA REMNANTS AND ISOLATED NEUTRON STARS