Variability in the Young Open Cluster 2516

Scott J. Wolk(*CfA*), N.R. Adams (*CfA*), F. Damiani (*Osservatorio Astronomico di Palermo*), E. Flaccomio (*Osservatorio Astronomico di Palermo*), F.R. Harnden Jr. (*CfA*), G. Micela (*Osservatorio Astronomico di Palermo*), S.S. Murray (*CfA*), S. Sciortino (*Osservatorio Astronomico di Palermo*)

Abstract

We discuss our ongoing analysis of *Chandra* observations of the young open cluster NGC 2516. NGC 2516 was observed by *Chandra* to boresight correct the spacecraft's focal plane instruments. Because of this, it observed NGC 2516 with all four imaging arrangements available with *Chandra*. In addition, it has been observed as part of the HRC guaranteed time program and is scheduled for return boresight calibration visits. This makes it the best cluster to study for long term variability. Sometimes referred to as the "Southern Pleiades", NGC 2516 is about 100 Myrs old and less than 400 pc away. We have detected about 250 sources, about half of which have been confirmed as cluster members. We explore techniques of quantifying variability, and for combining ACIS and HRC *Chandra* data for timing analysis. We have been able to combine almost 130 ks of observation time, spread over four epochs to study variability in this cluster on time scales of hours, minutes and months.

CATEGORY: NORMAL STARS AND WHITE DWARFS