

Density of X-ray Sources

Basic Steps:

1. Find Chandra Observation of 3C295 cluster
Obsid:
2. What detector configuration and mode were used in this observation?
3. Does data need to be reprocessed? Why or why not?
4. Where is the location of the aim point for this observation?
5. Does the PSF vary across the field of view?

Advanced Topics:

1. Does the data need to be time filtered due to the background flares?
Was there any flare during the observation?
2. Create the images in soft (0.5-2keV) and hard (2-10keV) bands. Do you see the same sources in both?
3. Run `wavedetect` for this observation. How many sources were found?
Is this an indication of overdensity?
4. Overlay the detected source region on the image.
5. How would you calculate the flux for each source?
6. What is the flux limit in this observation?

Suggested reading: “Chandra Study of an Overdensity of X-Ray Sources around Two Distant ($z \sim 0.5$) Clusters”, Cappi et al 2001 Ap.J. 548, 624