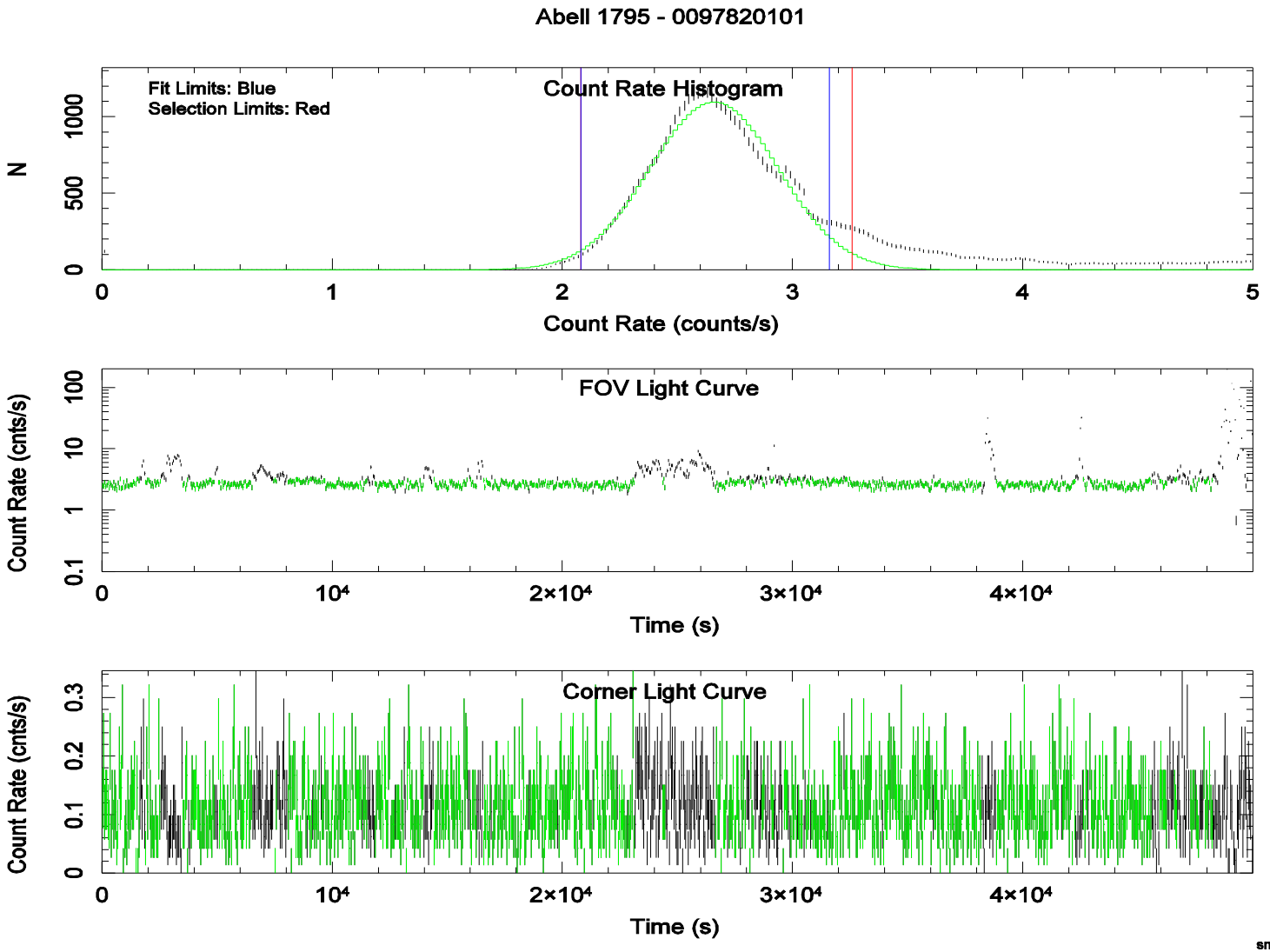
Clusters Galore

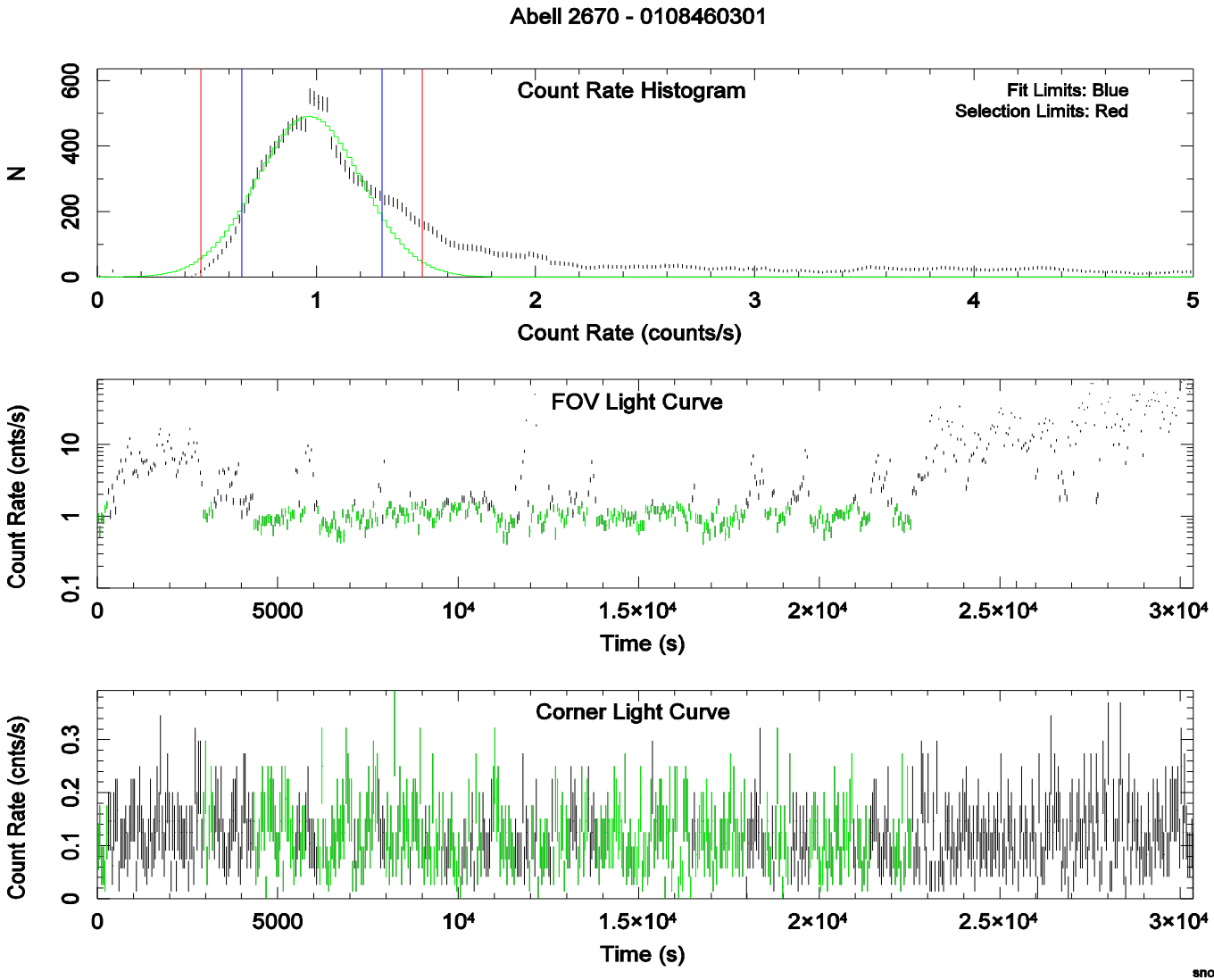
- So far 45 processed clusters
- Selection
  - >10 ks good time
  - Isolated and reasonably symmetric
  - Large enough to be interesting (RASS)
- Processing
  - Filter SP flares
  - Extract spectra from 10 standard annuli
  - Use XMM-ESAS to create background spectra
  - Use HEASARC X-ray Background Tool for RASS spectra
  - Use develop version arfgen to create cross arfs (thank you Richard)
  - Use Xspec V12 to fit the data (possible but needs work)
  - Remove brightest point sources

Light Curve Filtering



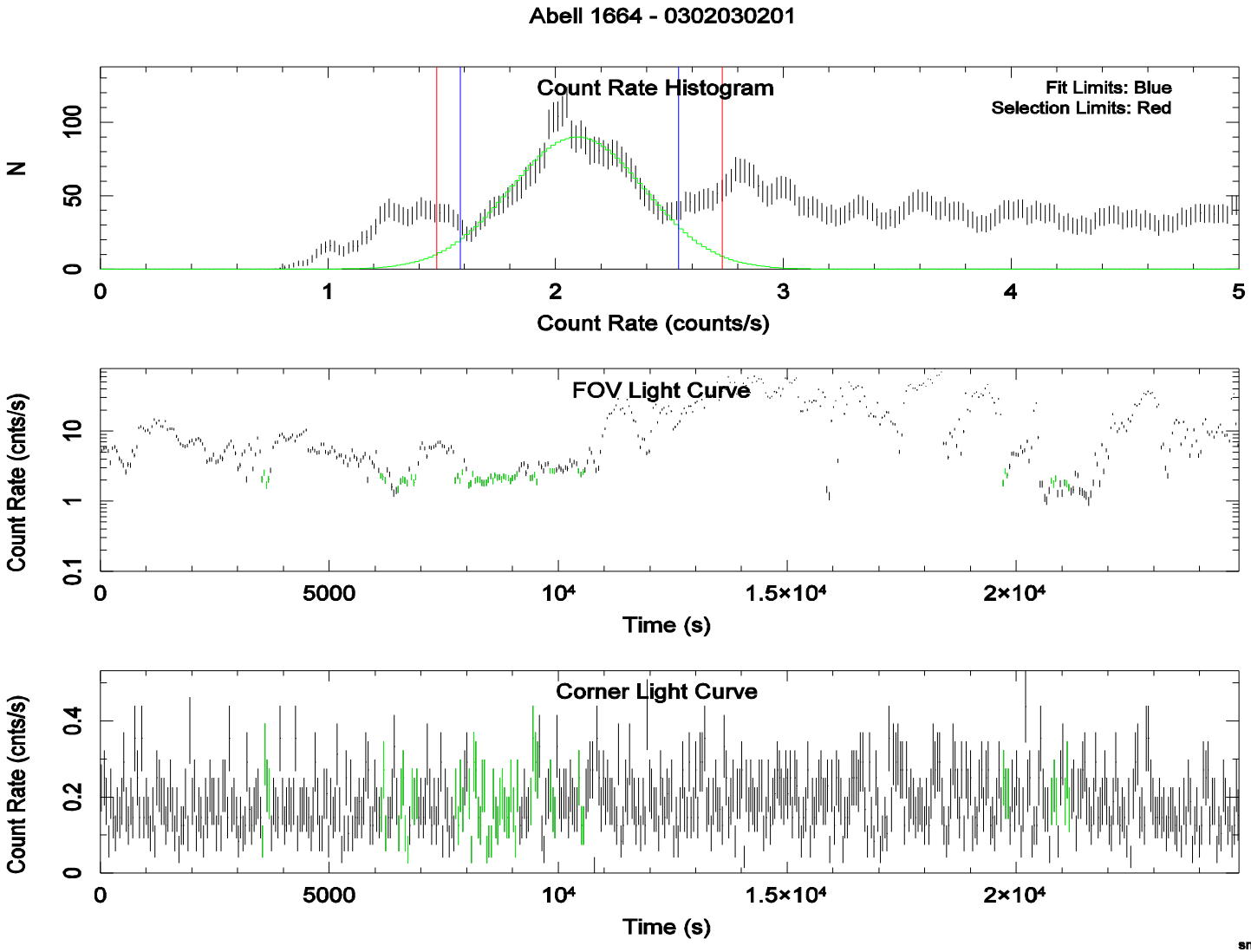
snowden 5-Oct-2006 10:43

And Then The Others



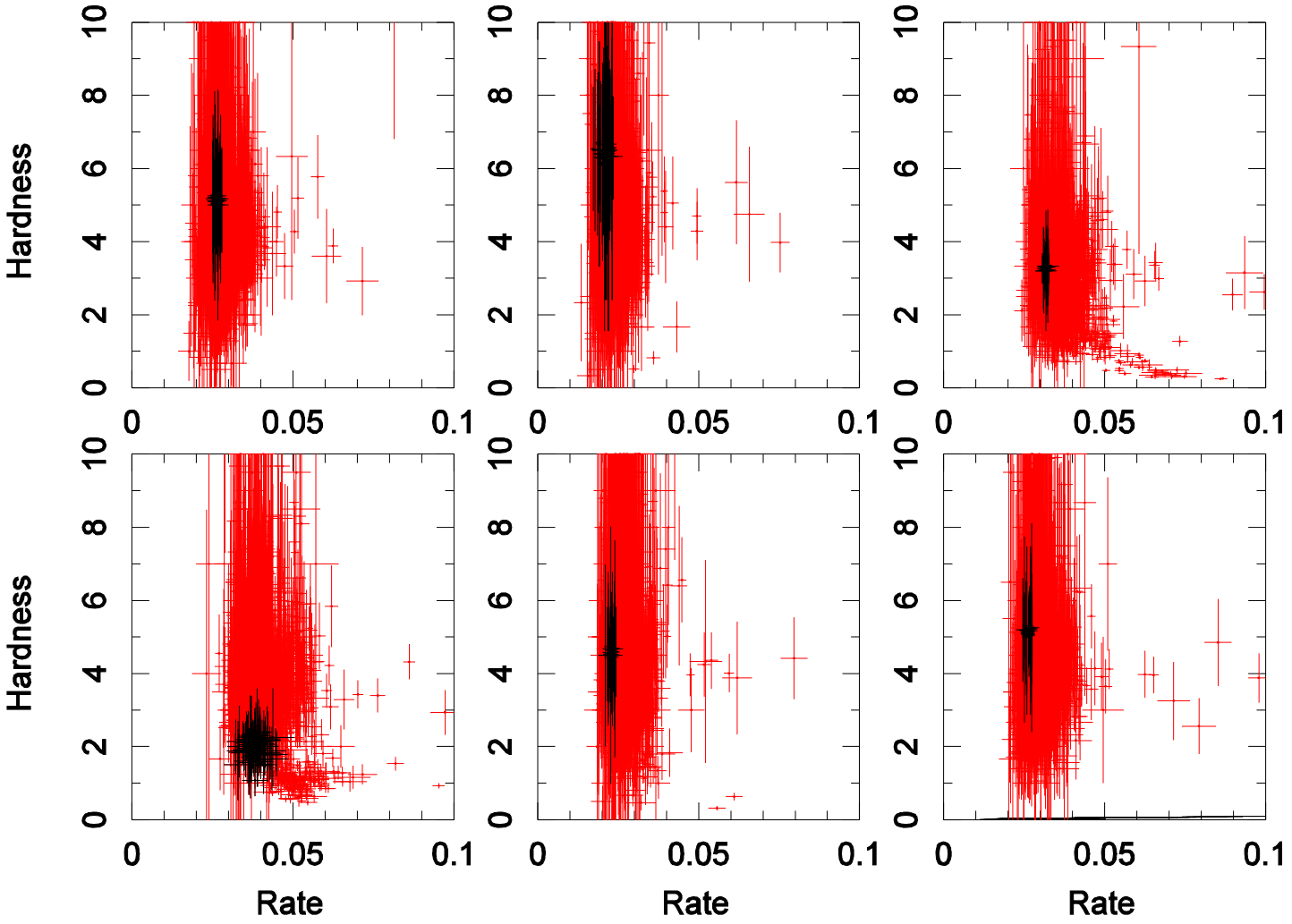
snowden 19-Oct-2006 09:43

And Then The Others



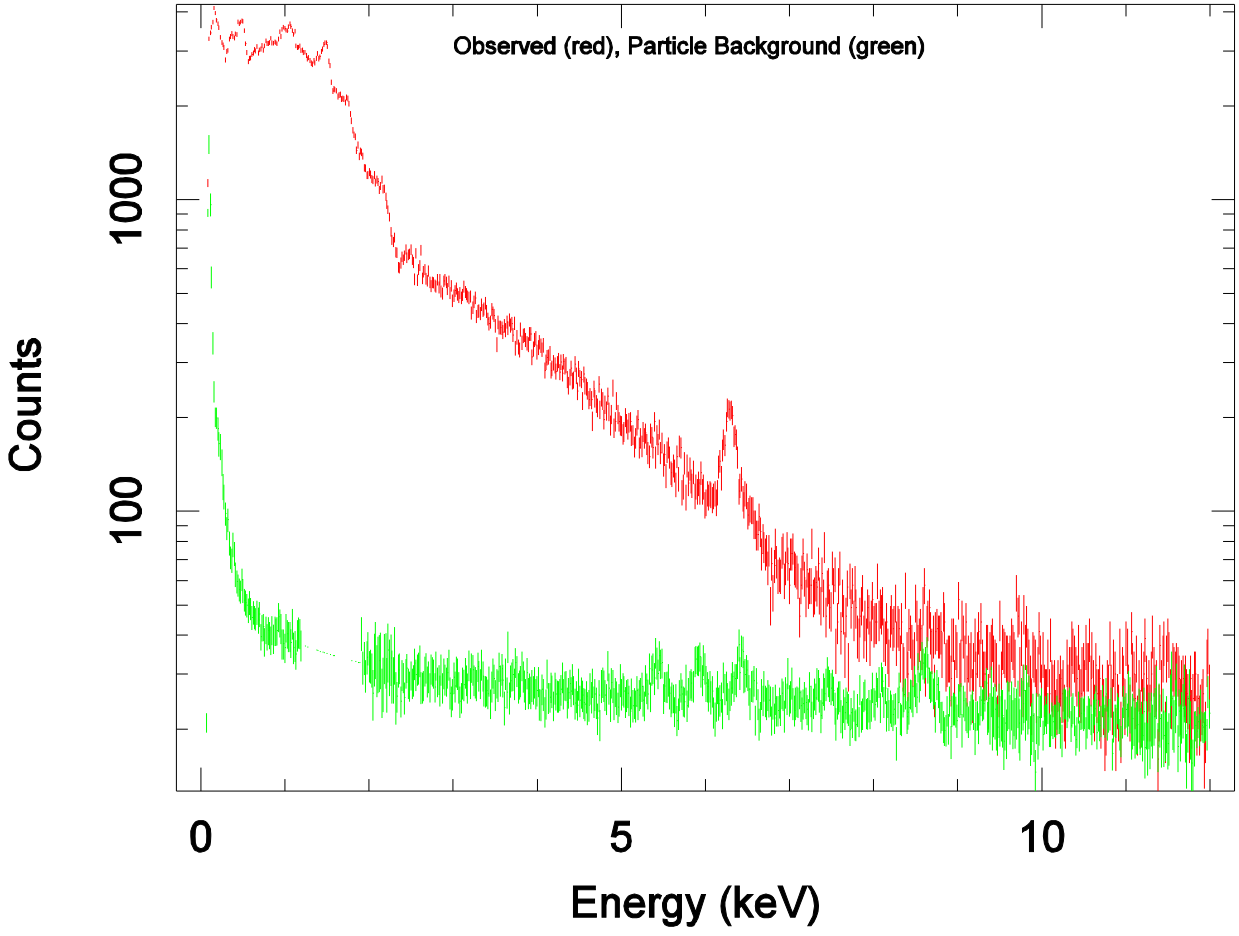
snowden 18-Oct-2006 12:39

Select Acceptable Analogs



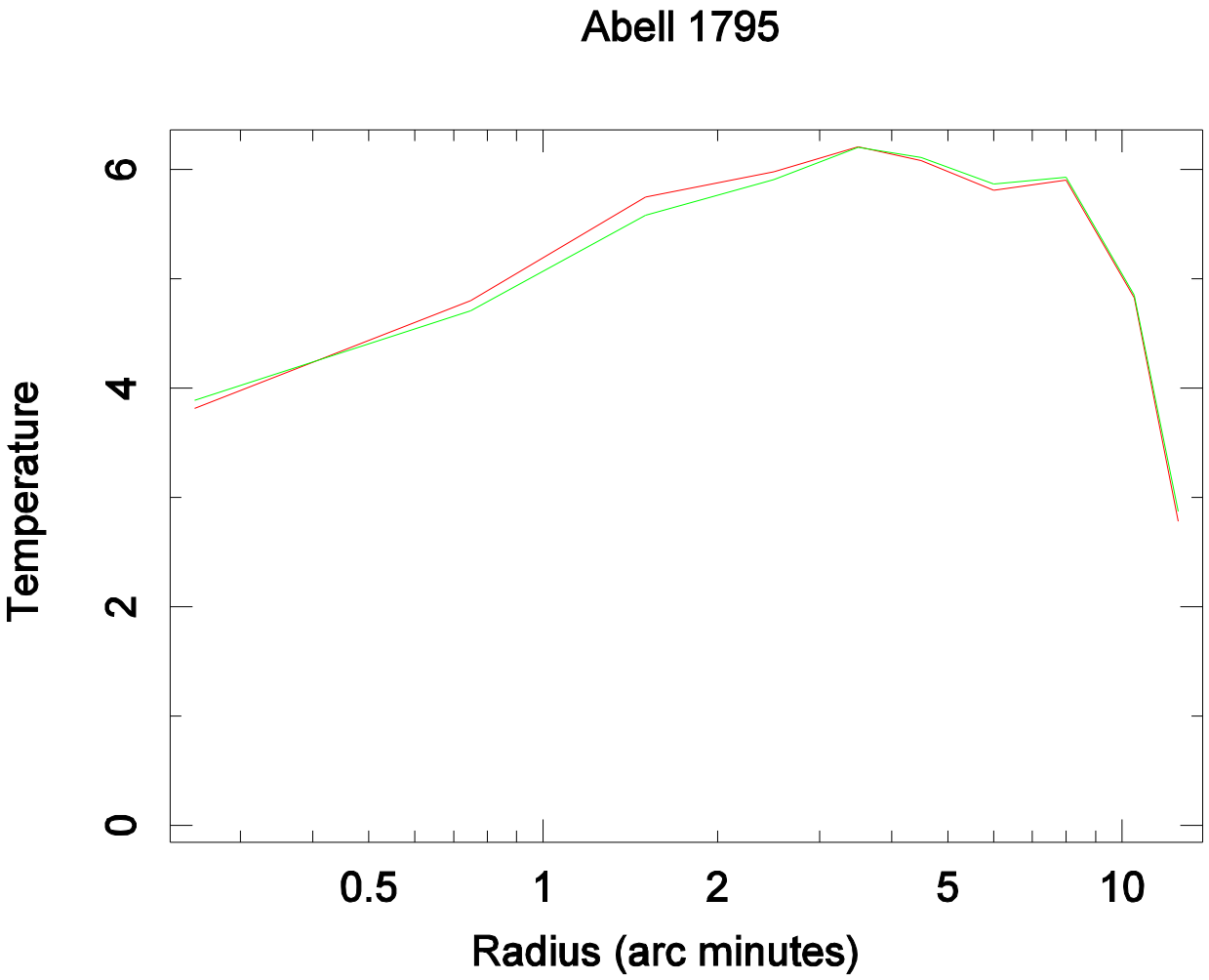
snowden 19-Oct-2006 12:48

Create Background Spectrum

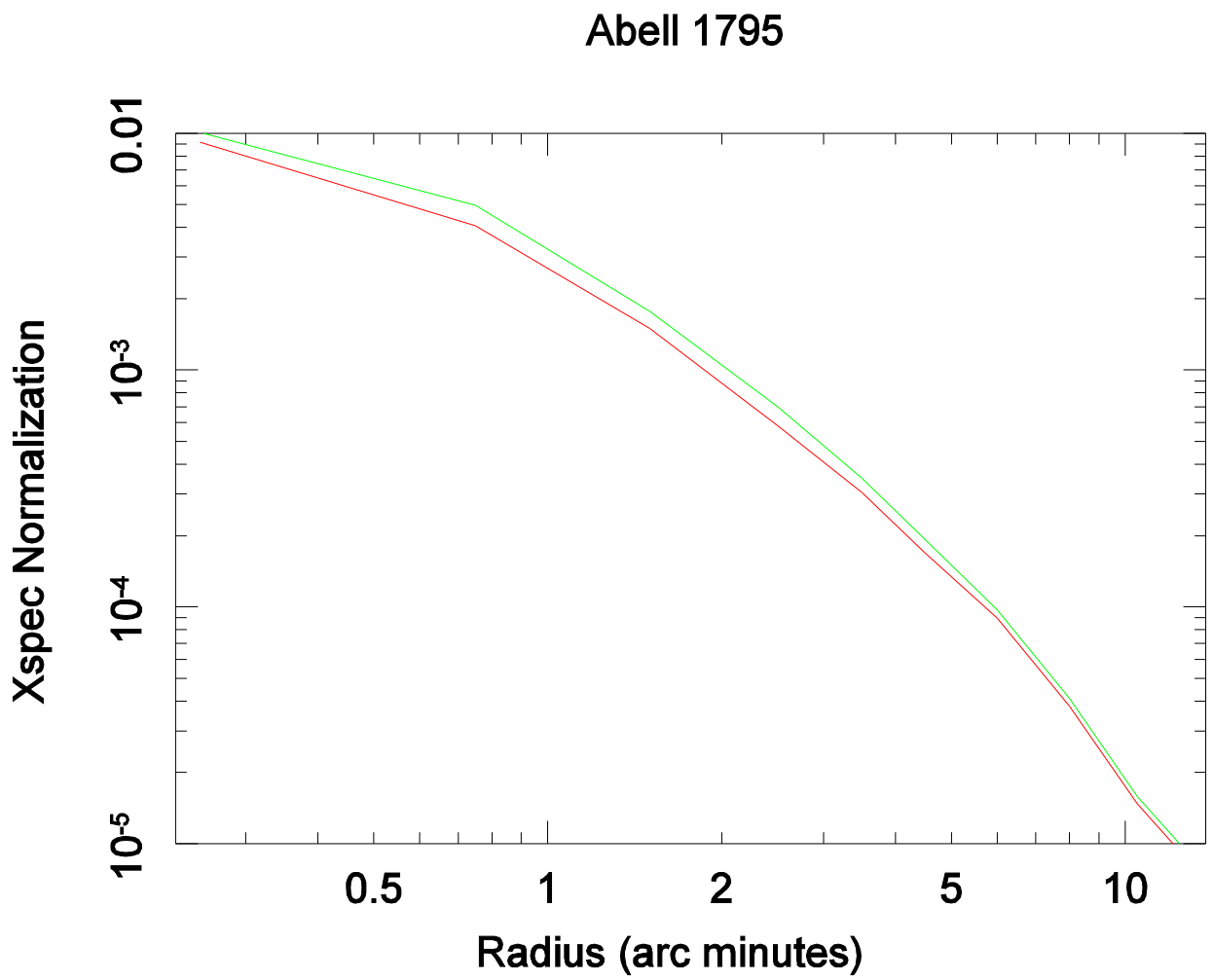


snowden 19-Oct-2006 12:47

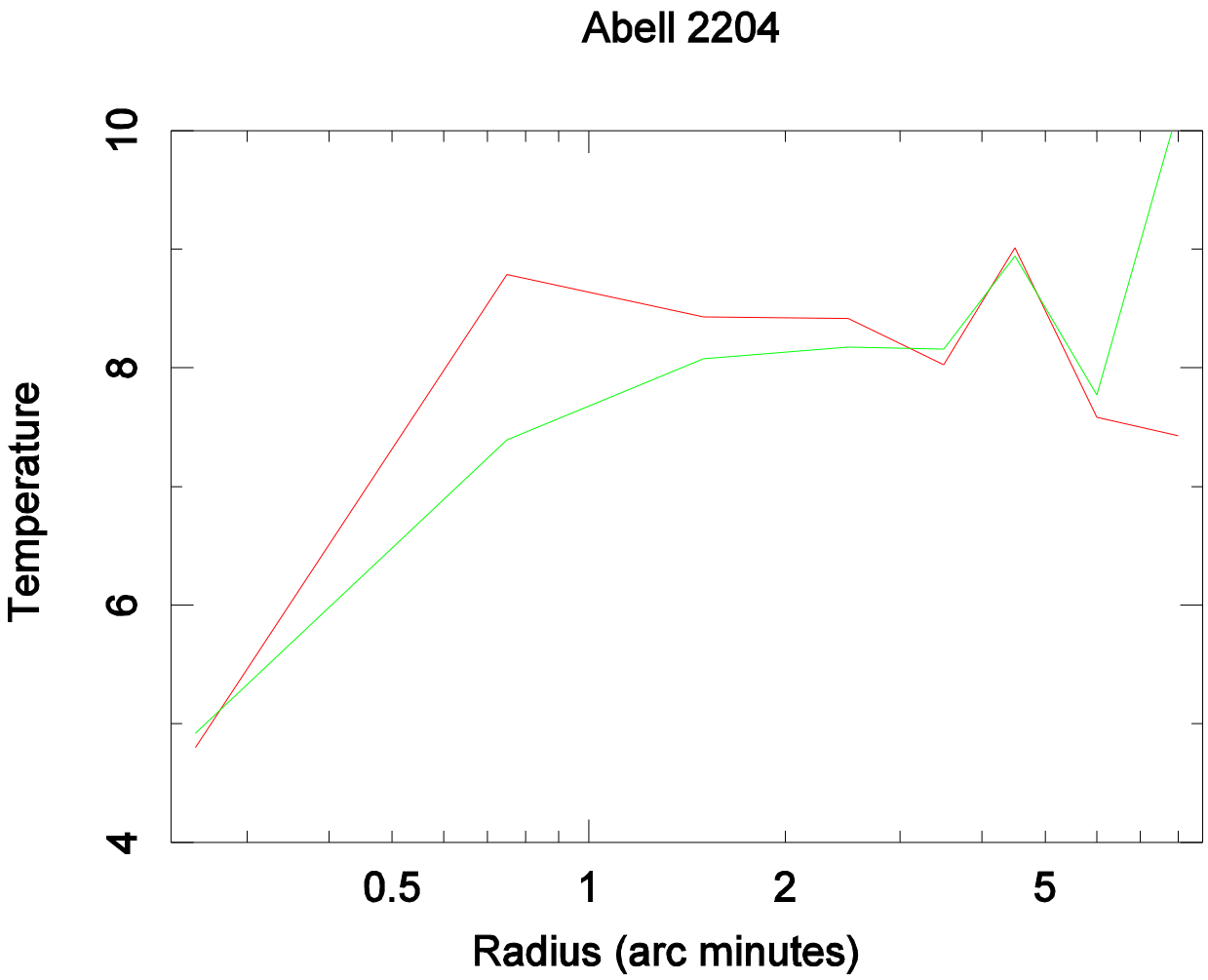
Why Cross ARFs?



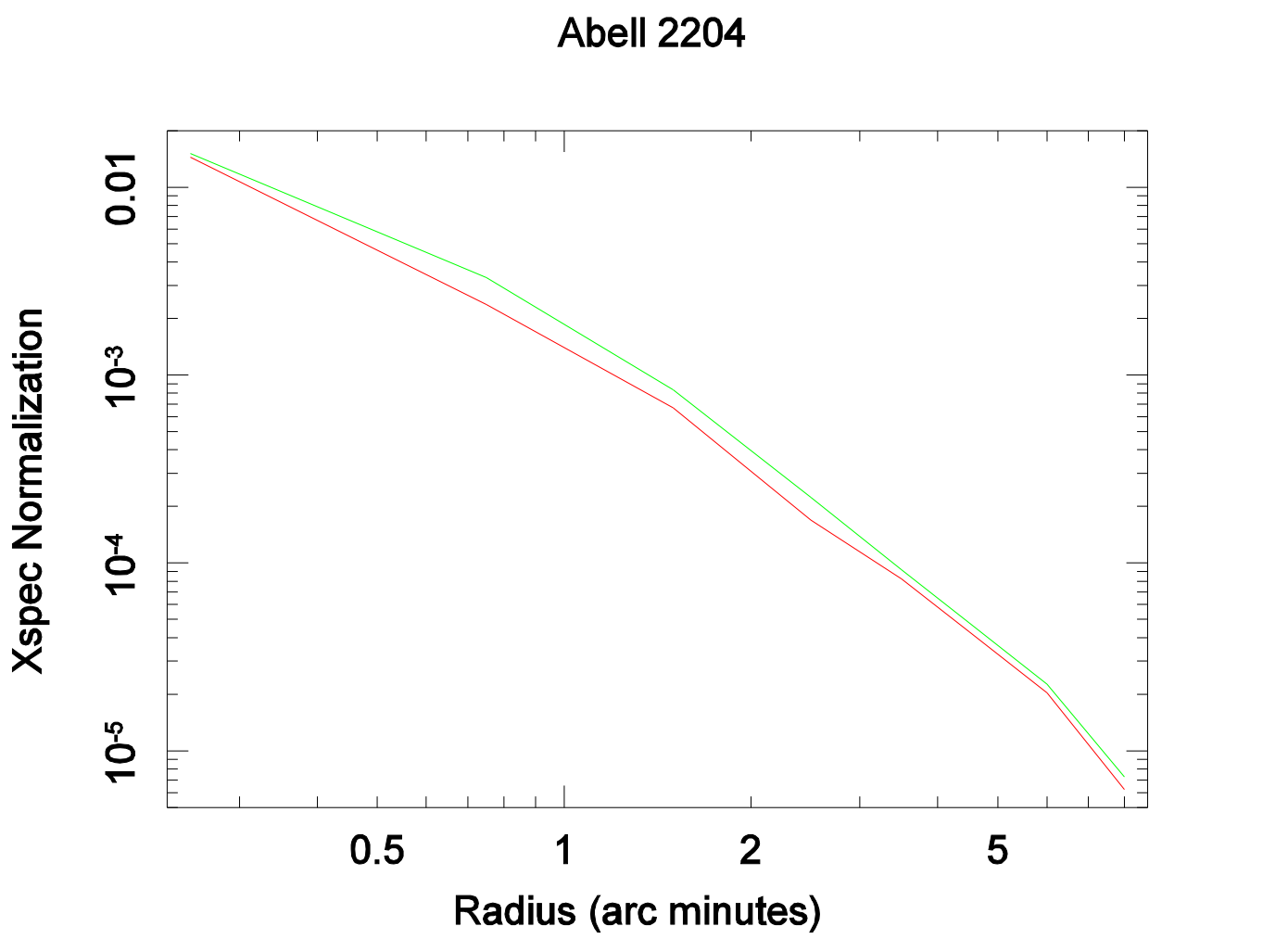
snowden 19-Oct-2006 12:09



snowden 19-Oct-2006 12:07



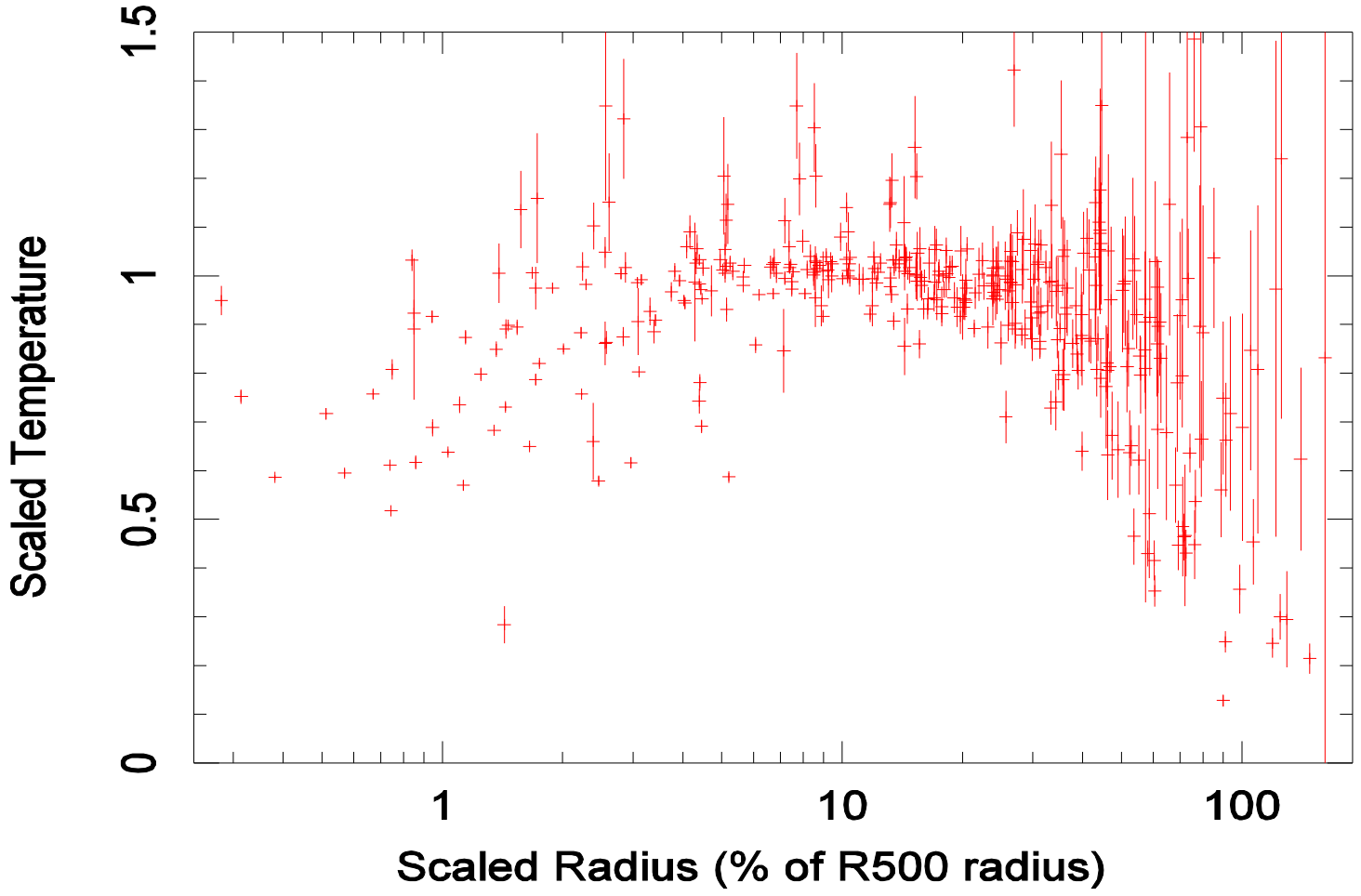
snowden 19-Oct-2006 12:03


Abell 2204
Xspec Normalization
0.01
10-3
10-4
10-5
0.5
1
2
5
Radius (arc minutes)
snowden 19-Oct-2006 12:06

Analysis

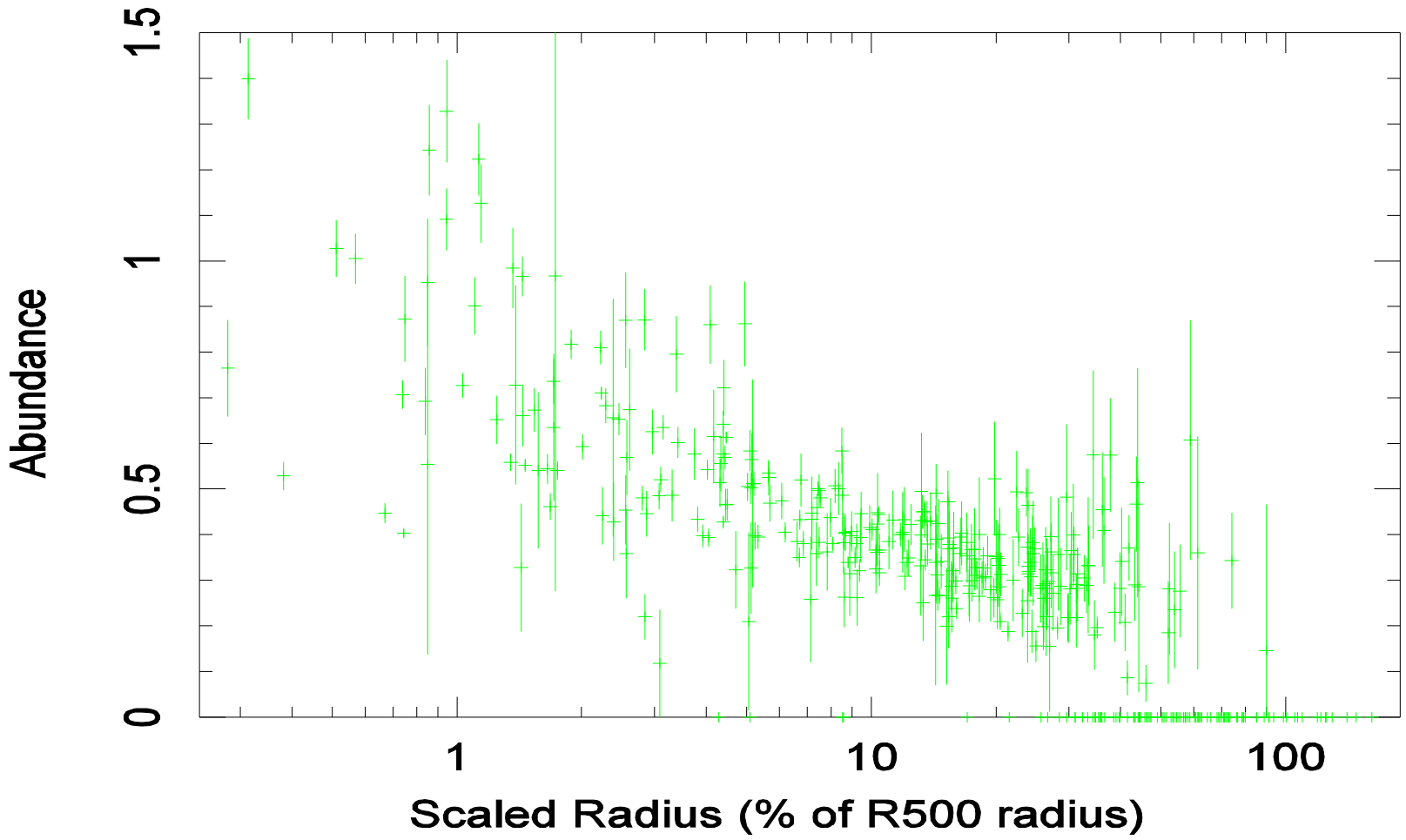
- Just beginning
- Scale to R500 radius, basically the virial radius
  - $R_{500} = 2.6\ (1 + z)^{-1.5}\ (T/10)^{0.5}$
- Temperature profiles vary considerably
  - Not as peaked as Chandra implies
- Abundances generally fall off from 1.0 to 0.3
- Fluxes fall off similiarly

Temperature Radial Profiles



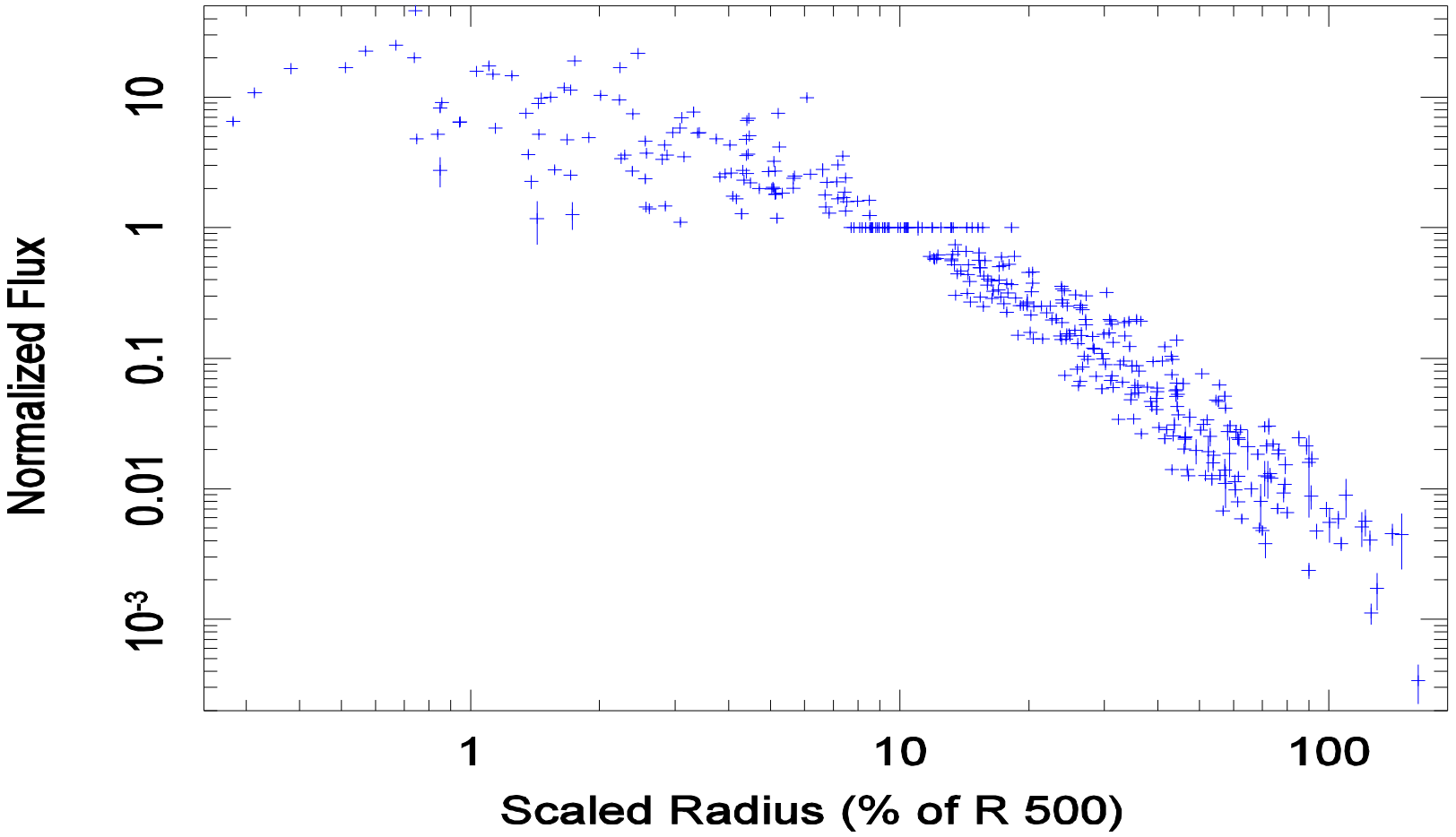
snowden 21-Oct-2006 18:58

Abundances



snowden 21-Oct-2006 19:01

Flux

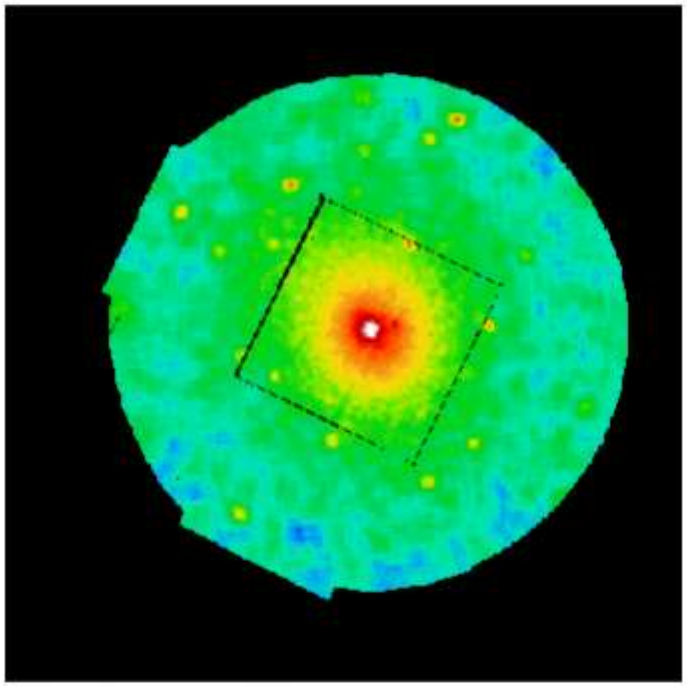


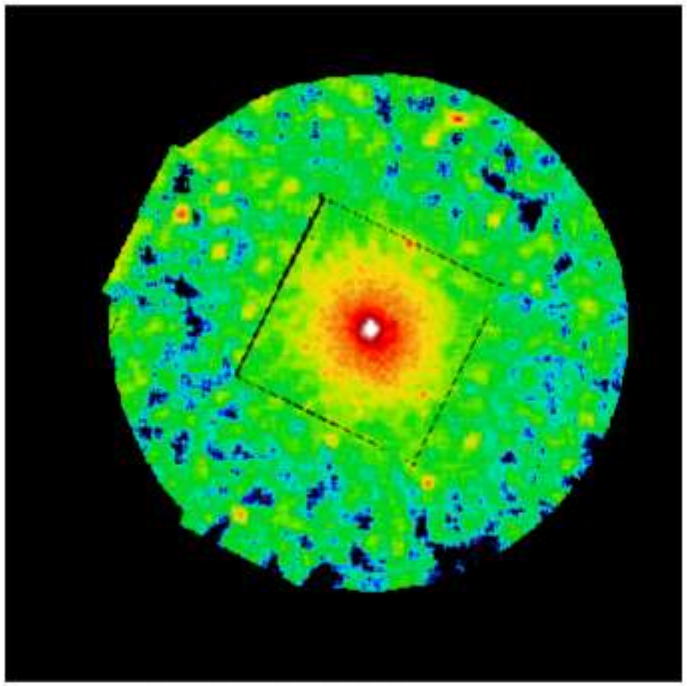
snowden 20-Oct-2006 14:32

Pretty Pictures

Abell 2626

Log Scaling





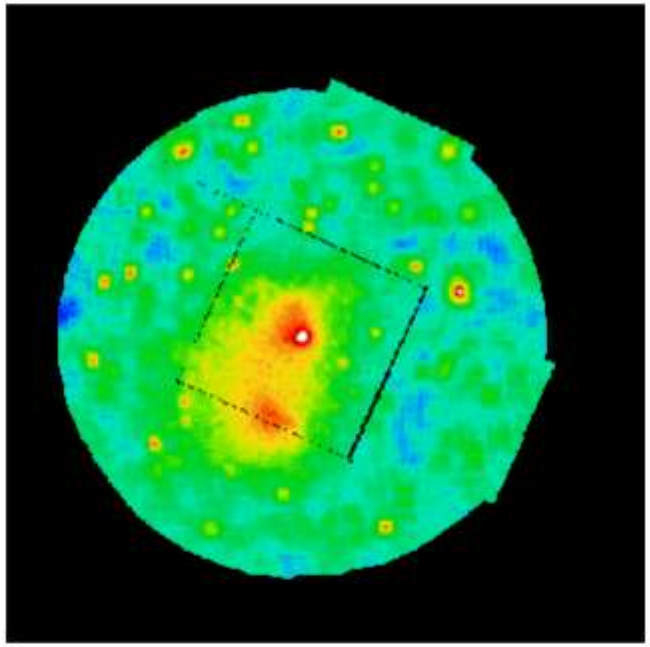
0.35 - 1.25 keV

2.0 - 8.0 keV

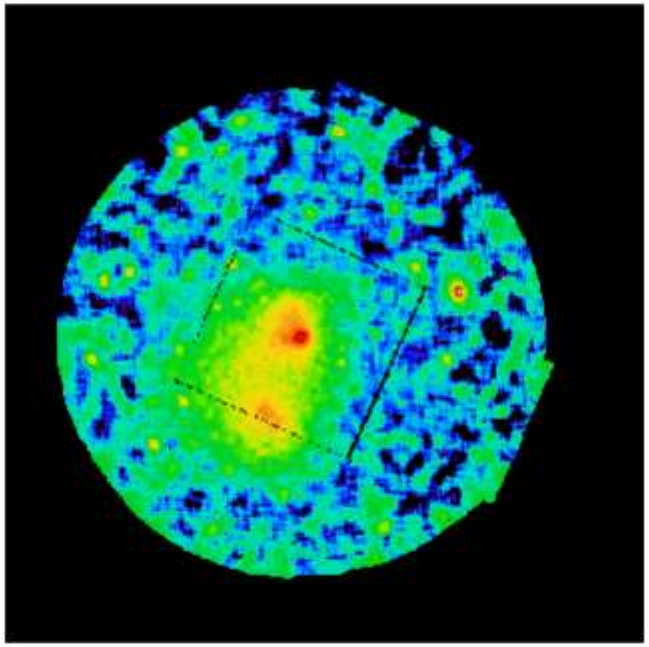
Pretty Pictures – Not Used

Abell 115N

Log Scaling



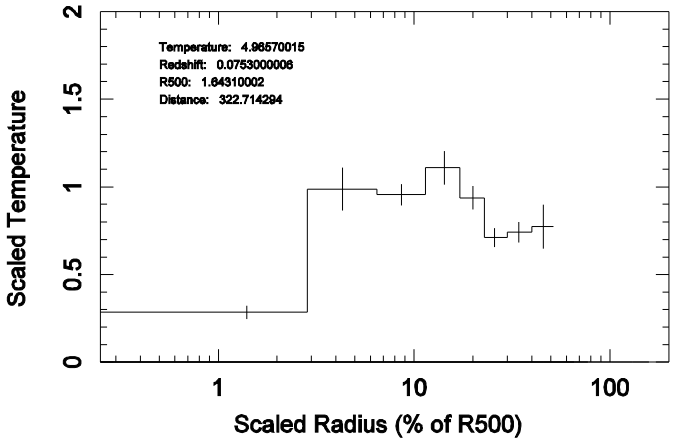
0.35 - 1.25 keV



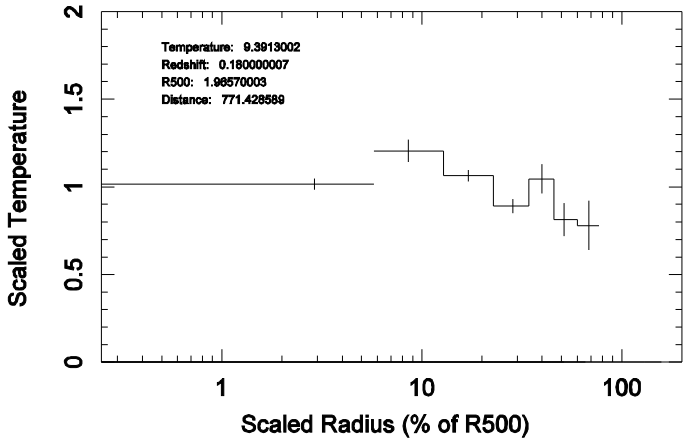
2.0 - 8.0 keV

Individual Cluster Temperature Radial Profiles

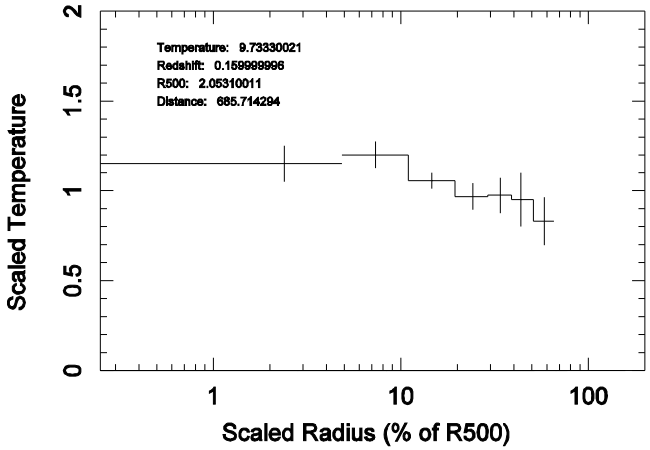
A1589



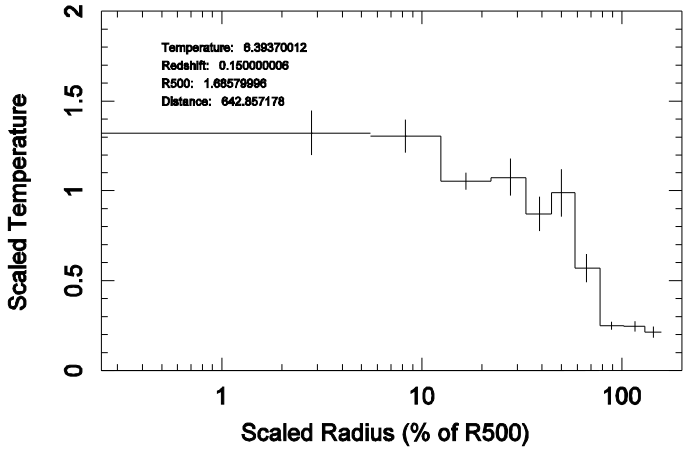
A1689



A1914



A2218



snowden 19-Oct-2006 13:21