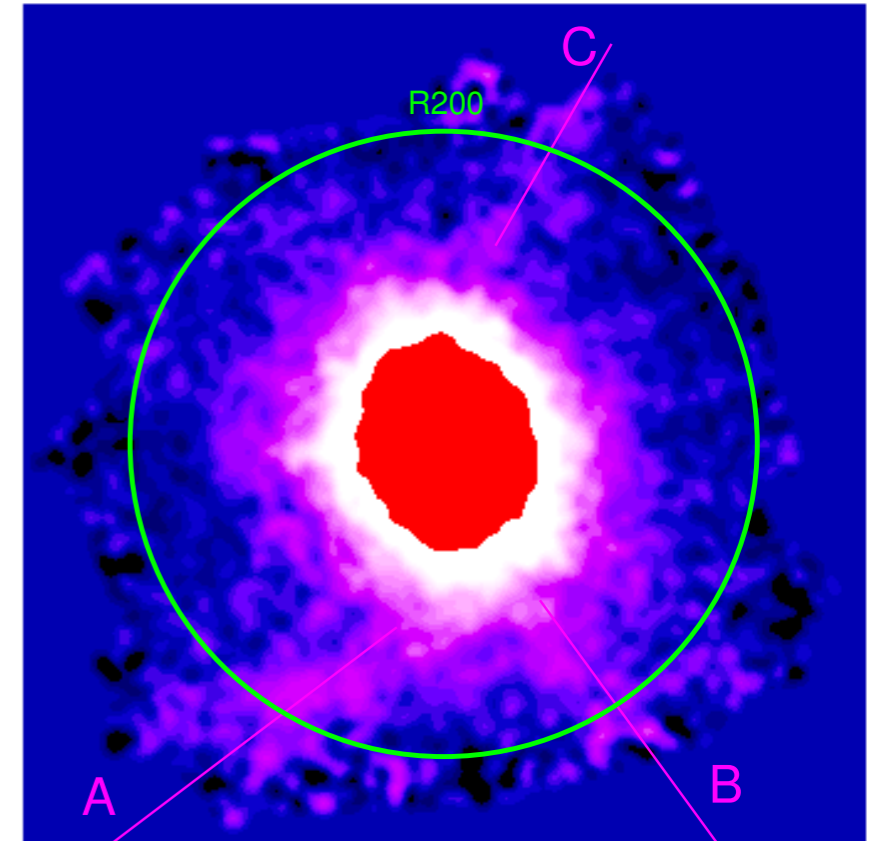
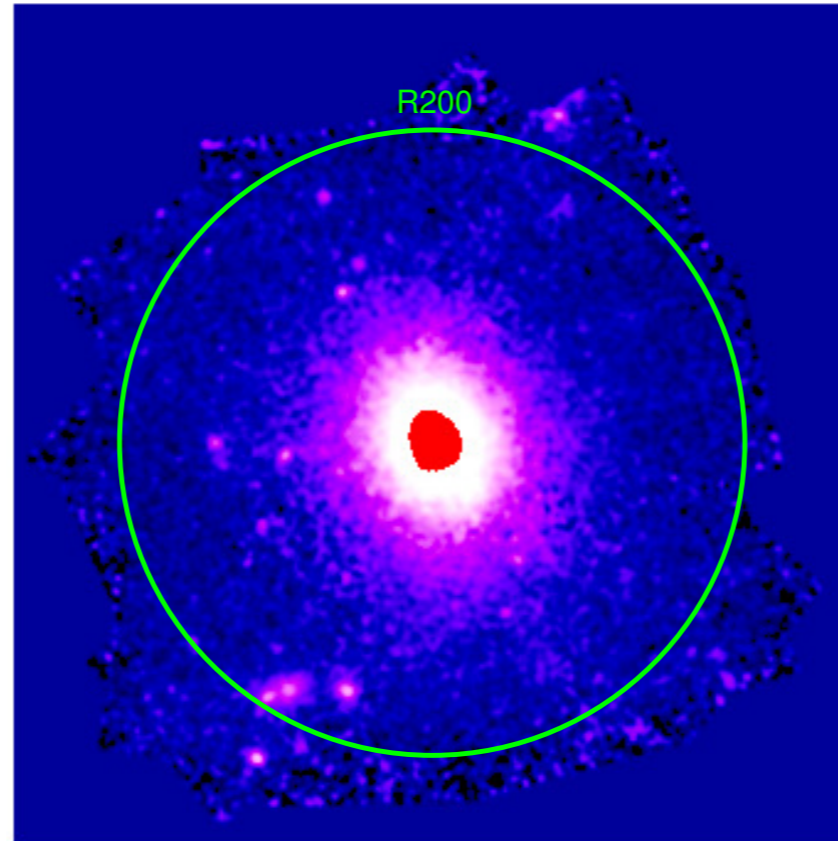
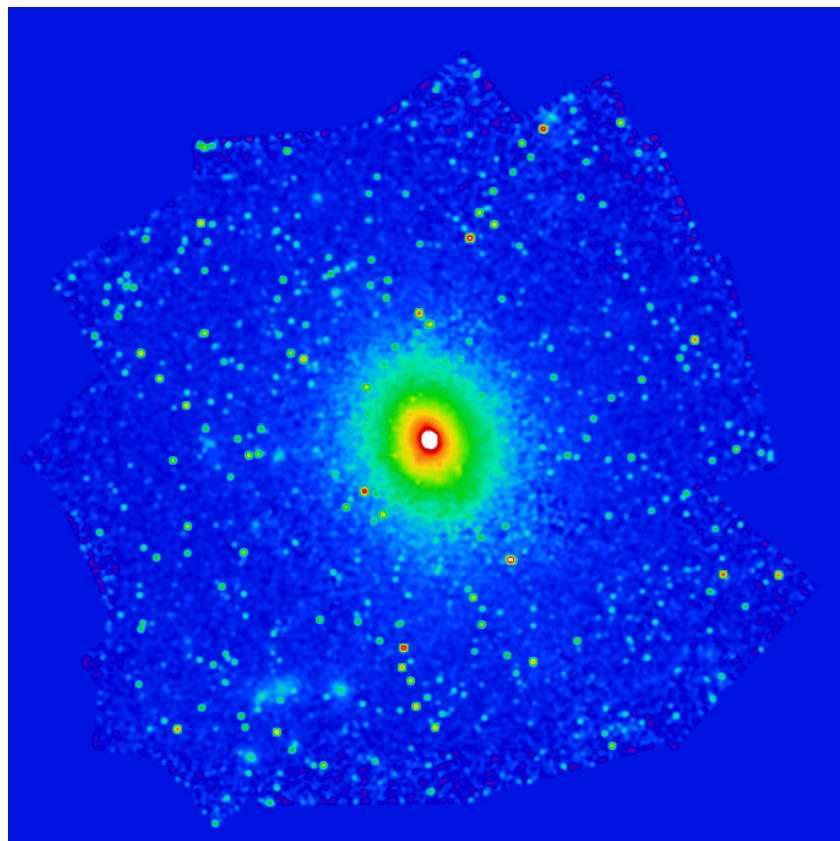


Imaging of faint extended objects

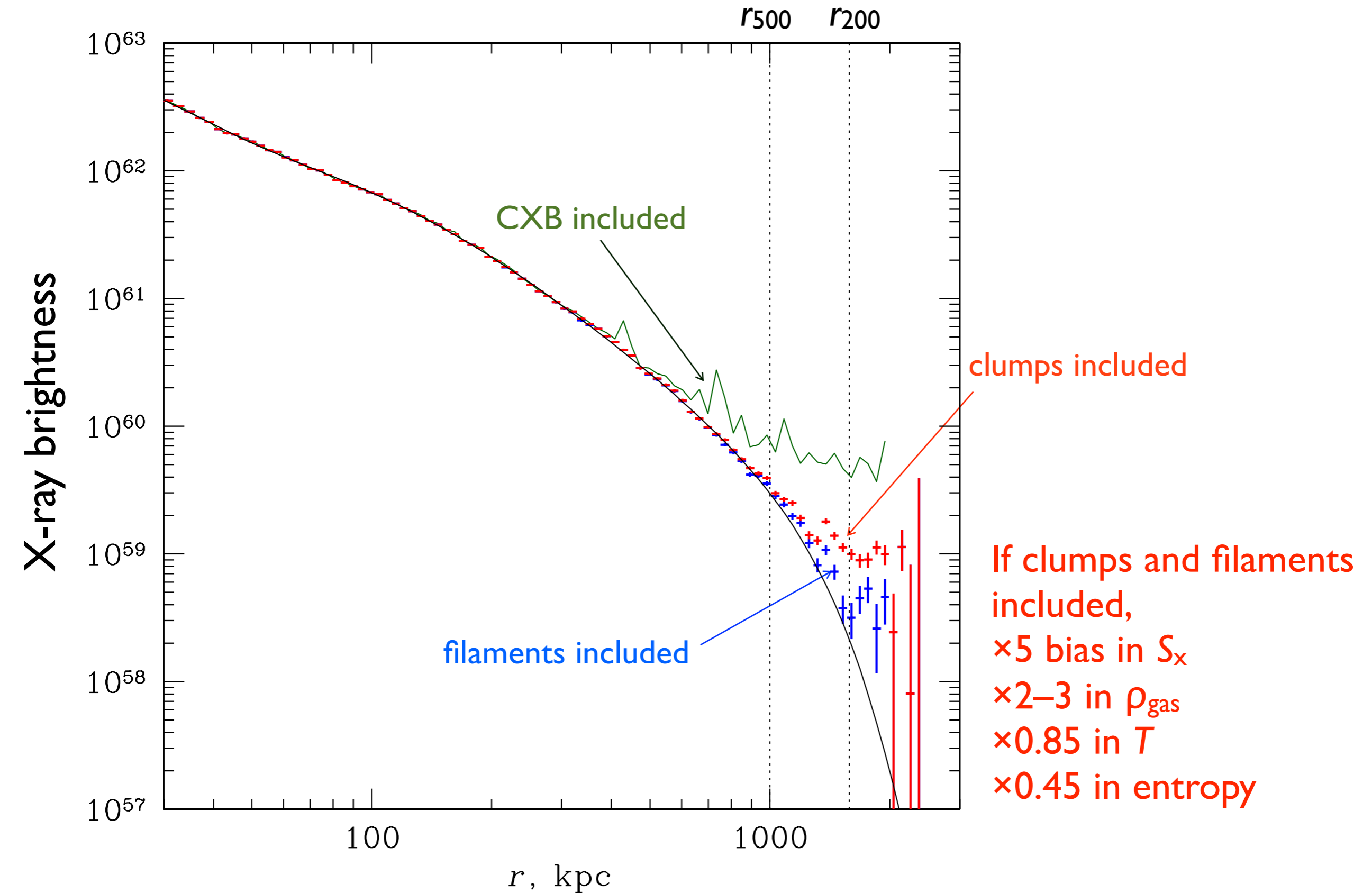
- Limiting factors: a) contrast relative to the background, and b) ability to separate out point sources
- Chandra particle background is VERY stable
- A large fraction of the CXB is resolved into sources with ~ 100 ksec class exposures.
- The bulk of background clusters and groups are detectable in ~ 100 ksec exposures
- Unfortunately, ACIS contamination has greatly reduced effective area below 1 keV.
- Chandra 1/4 keV particle background is 1/10 of XMM's [CCD event grade screening] — and this band is not affected by contamination. Much better contrasts than *XMM*.

Chandra XVP mosaic of A133



- 33 pointings, 2.4 Msec total (1 month) exposure, $\sim 1 \times 1$ deg mosaic. ~ 150 ksec exposure in each location
- a factor of 10^6 brightness contrast
- faintest detectable structures are 4% of the CXB and 0.5% of the particle-induced background

Importance of being able to remove the CXB



Possible topics

- More cluster and galaxy group outskirts
- High-density large scale structures from future LSS surveys (distant superclusters, super-great-walls, galaxy cluster progenitors during initial collapse)
- Galaxy winds, CGM
- ISM structures in the Milky Way