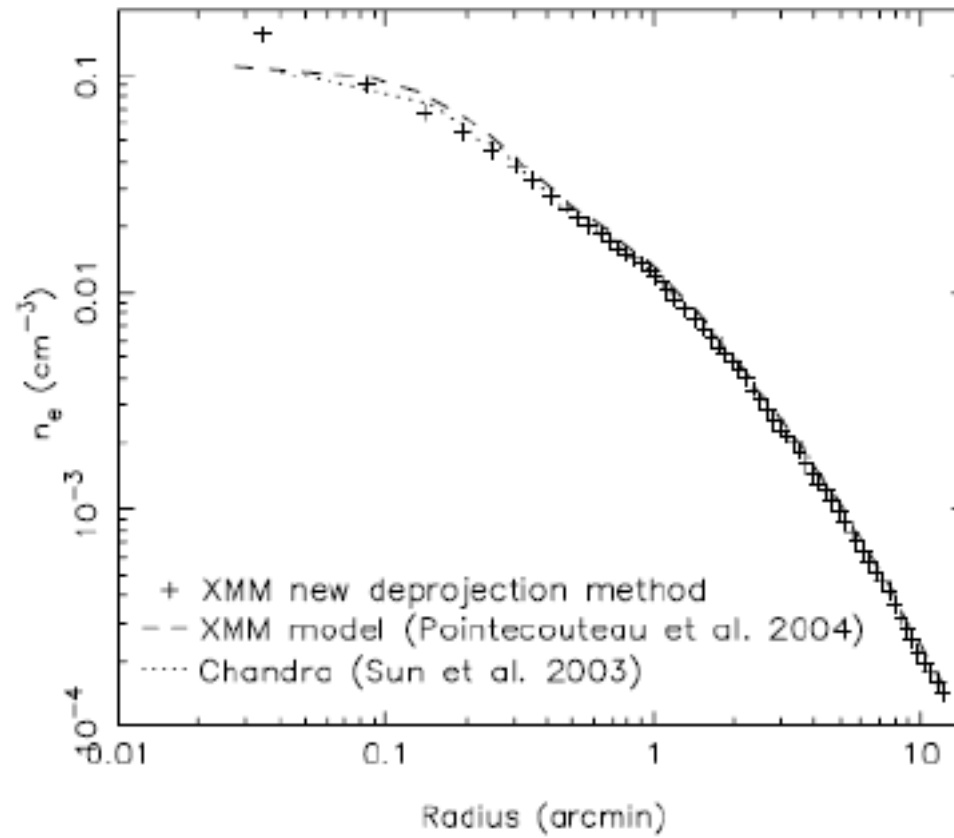


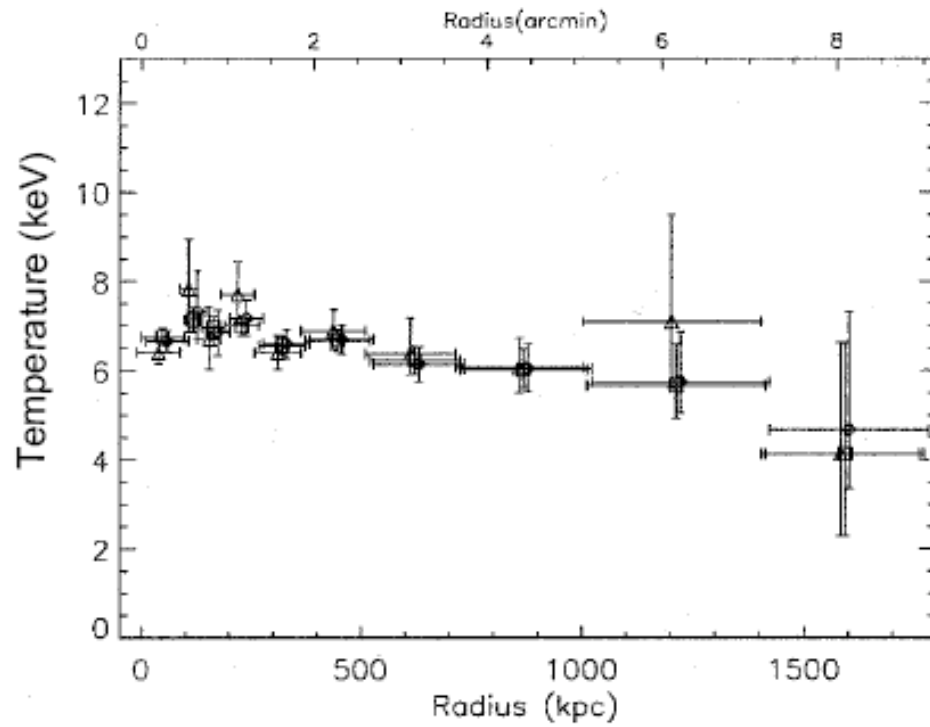
A 413 gas density profile

5: physical properties



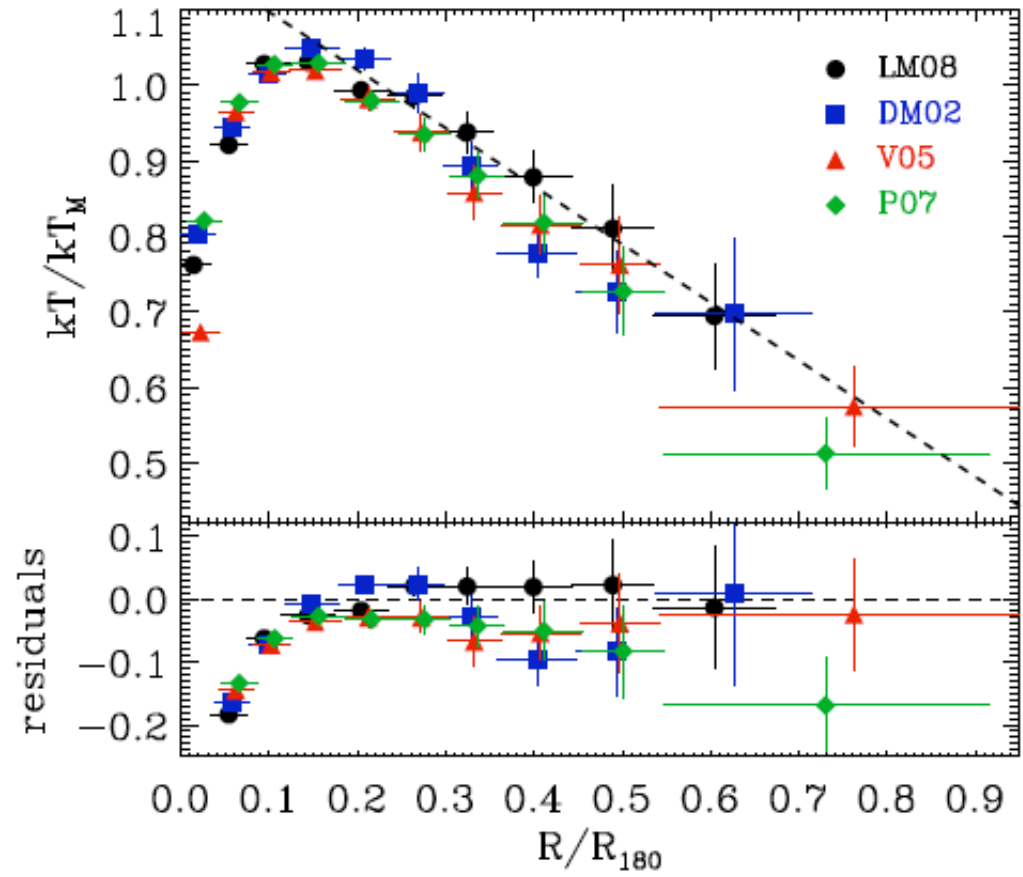
Temperature profile Abell 1413

5: physical properties



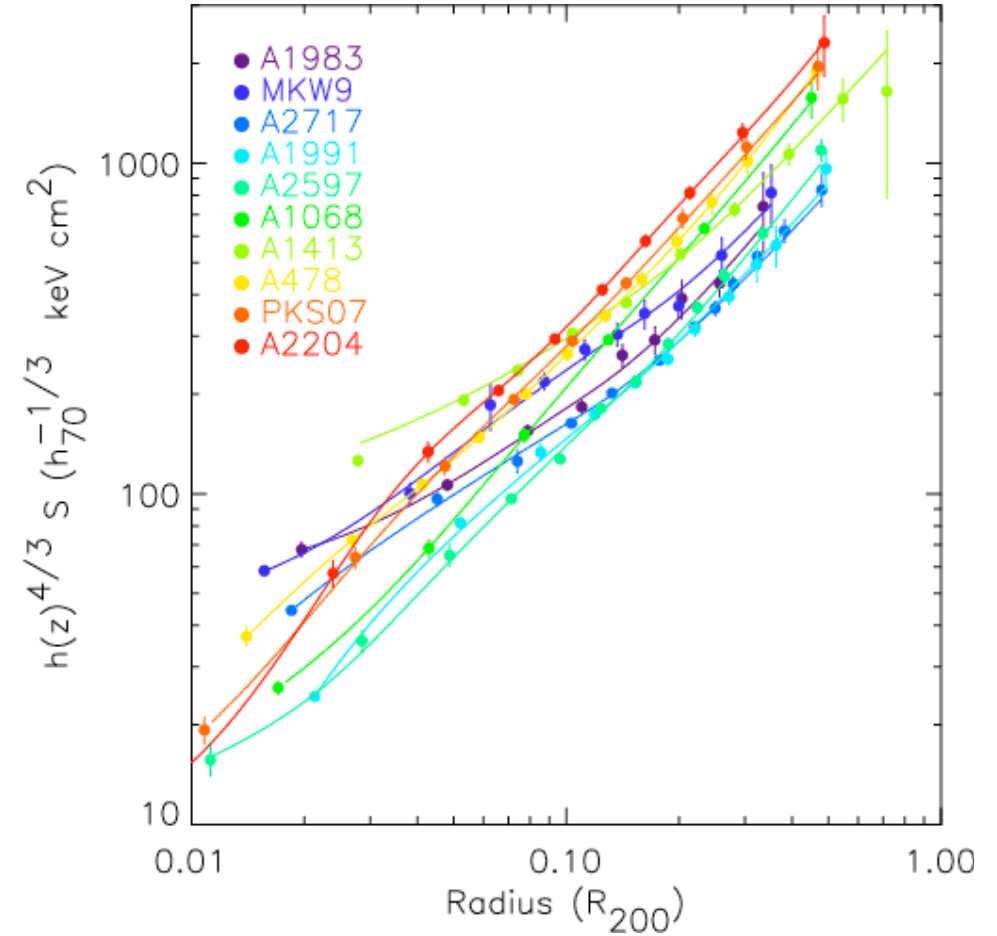
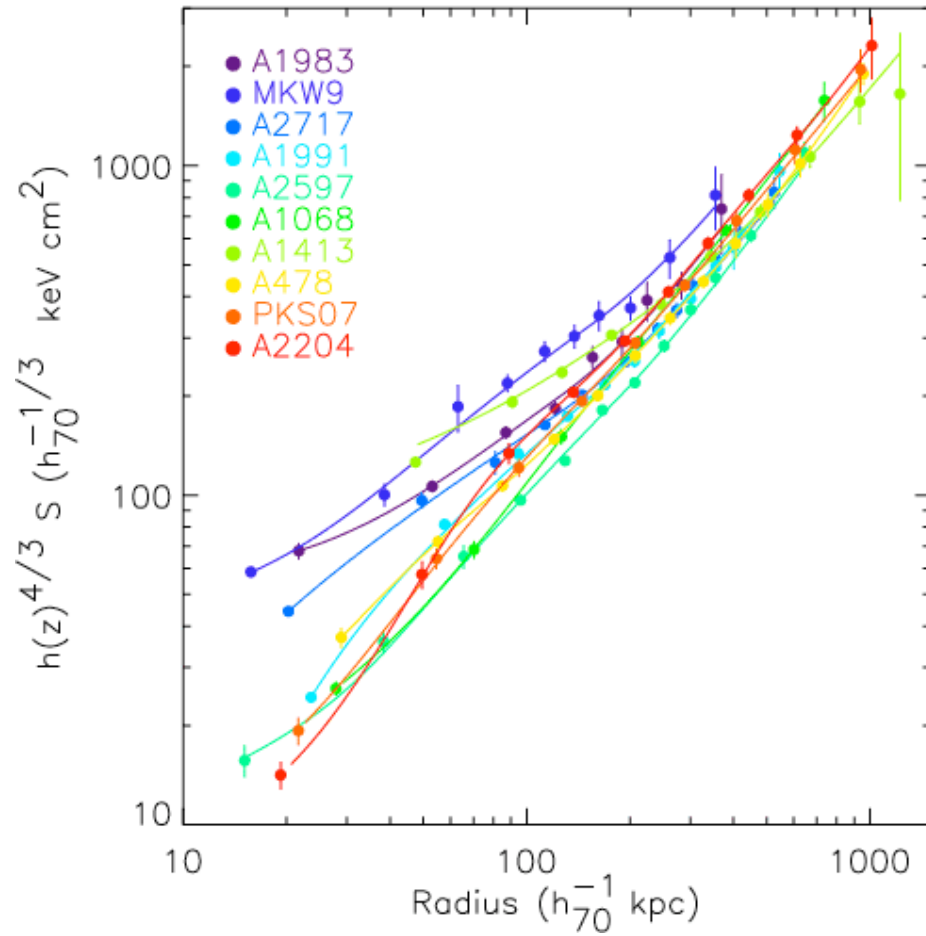
5: physical properties

Combined cluster T profiles



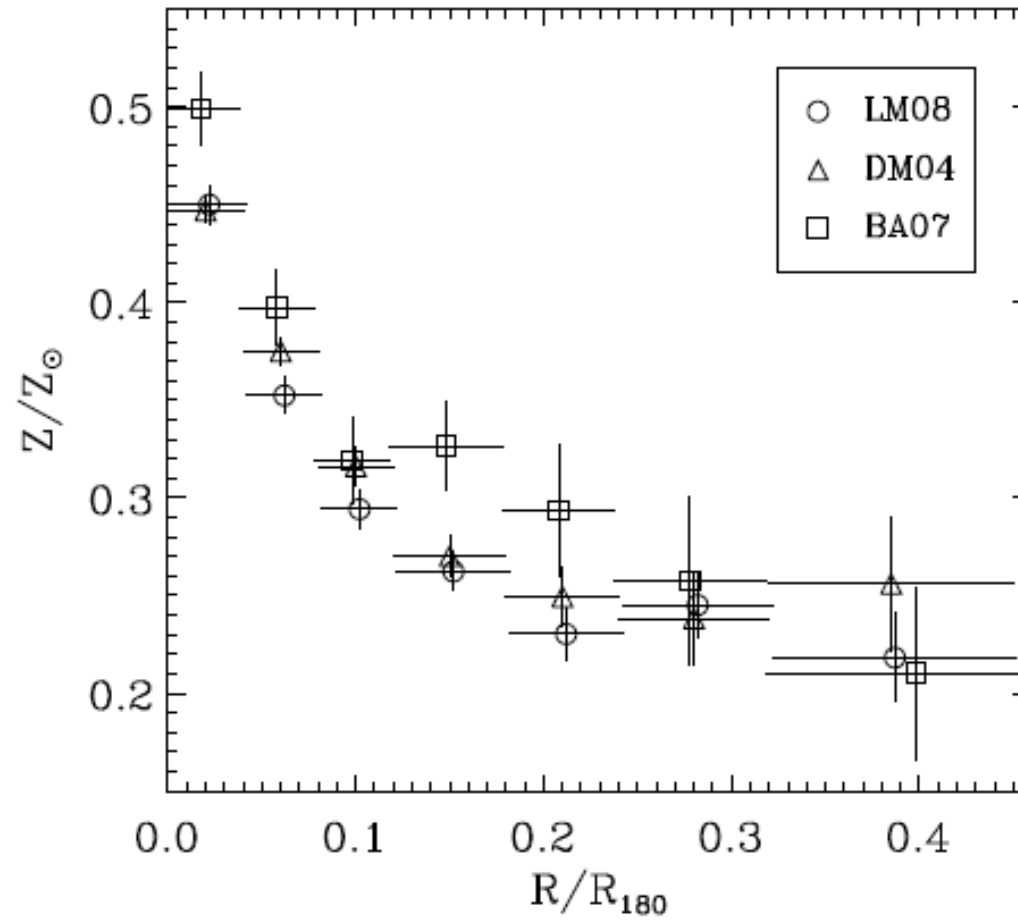
Entropy profiles

5: physical properties



Cluster mean metallicity profiles

5: physical properties



5: physical properties

Perseus Cluster core

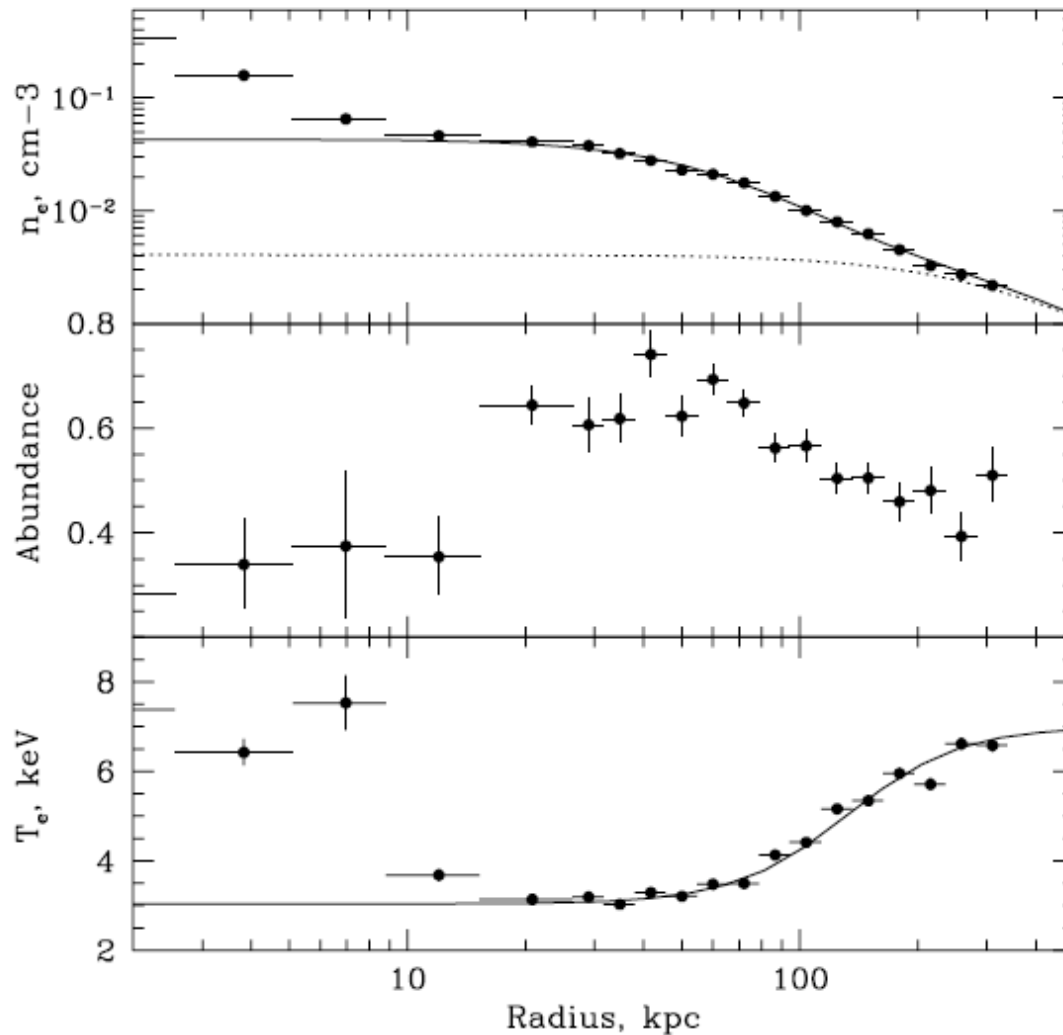


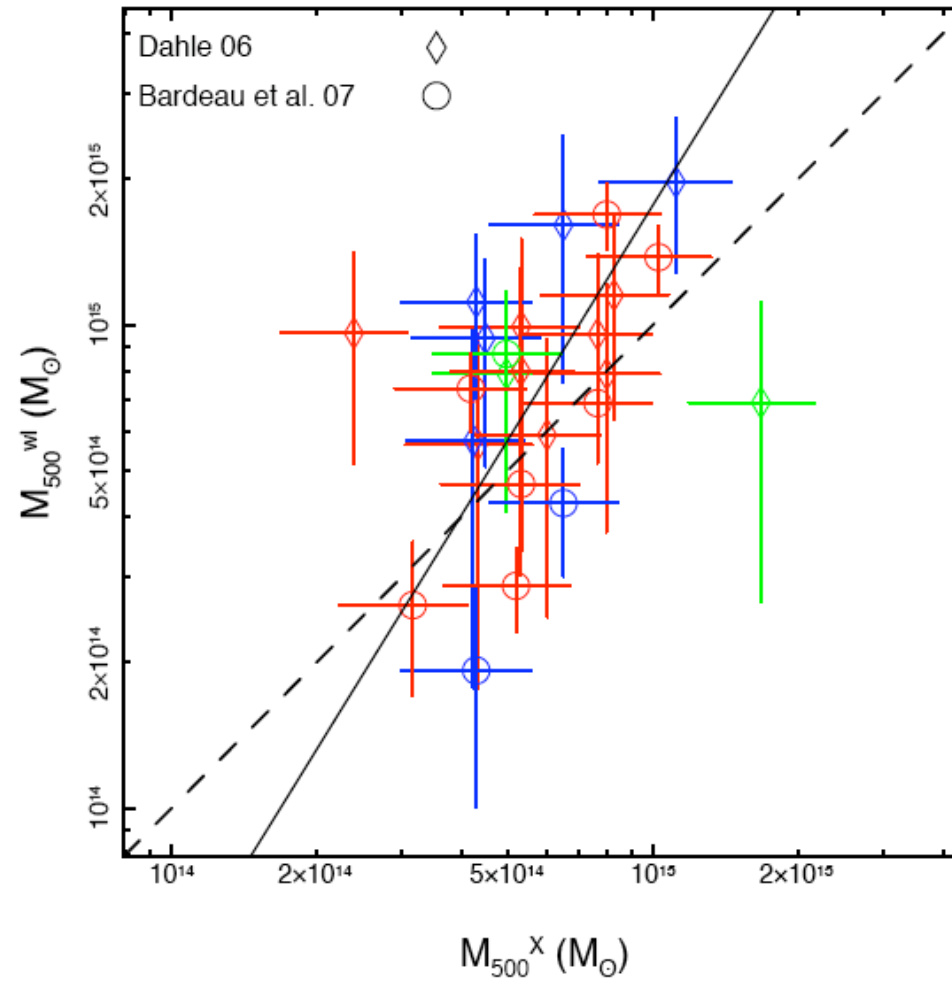
FIG. 8.—Radial profiles of deprojected parameters. The parameters were obtained using a single-temperature APEC model with fixed low-energy absorption fitted to deprojected spectra for a set of spherical shells centered at NGC 1275. The data points in the innermost region (~ 10 kpc) are affected by the presence of the bright compact source—the nucleus of NGC 1275. Analytical approximations for the density and temperature are shown as solid lines (see text).

Churazov et al. (2003)

Mass profile from X-rays and weak lensing

5: physical properties

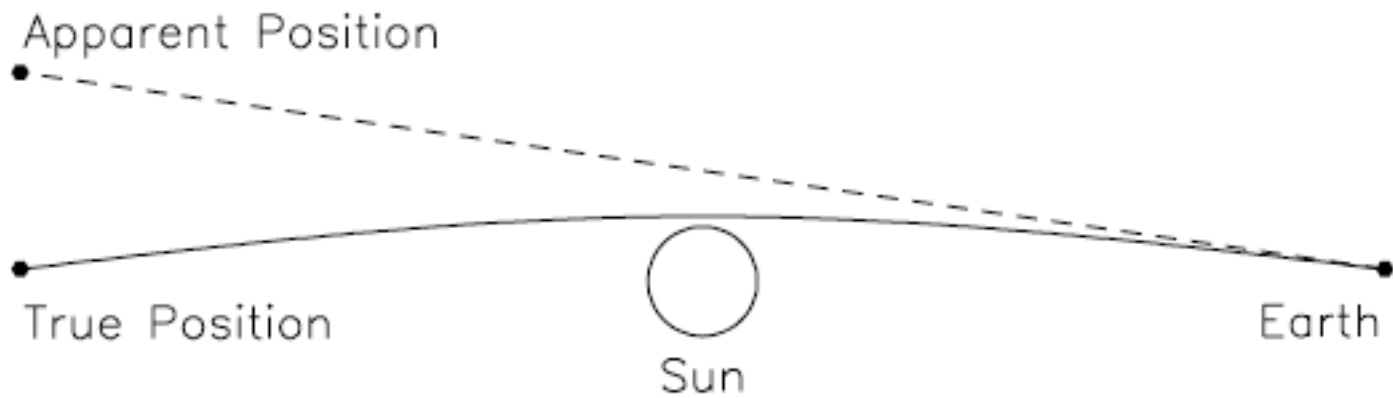
Zhang et al.: LoCuSS: comparison of observed X-ray and



Zhang et al. (2008)

Gravitational lensing

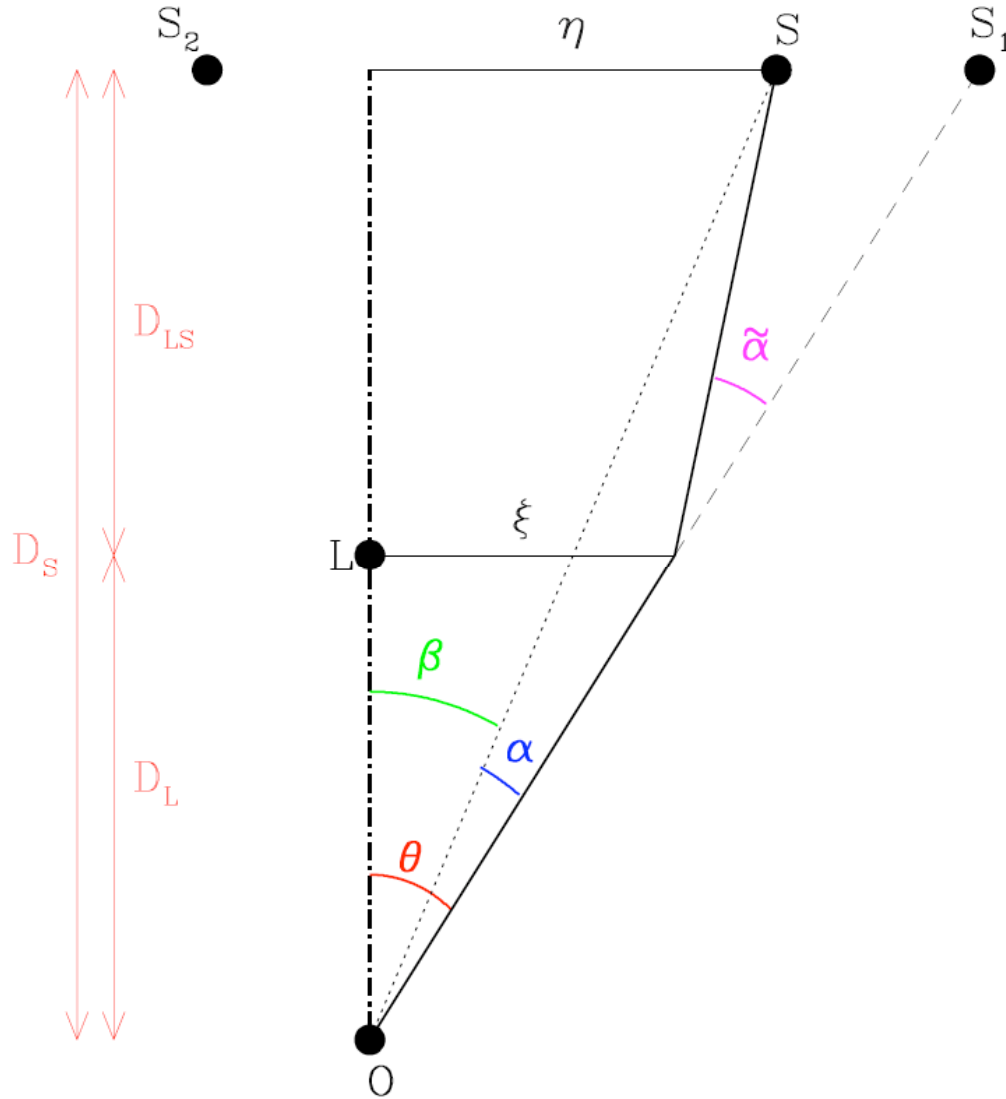
6: gravitat.
lensing



Narayan & Bartelmann 1997

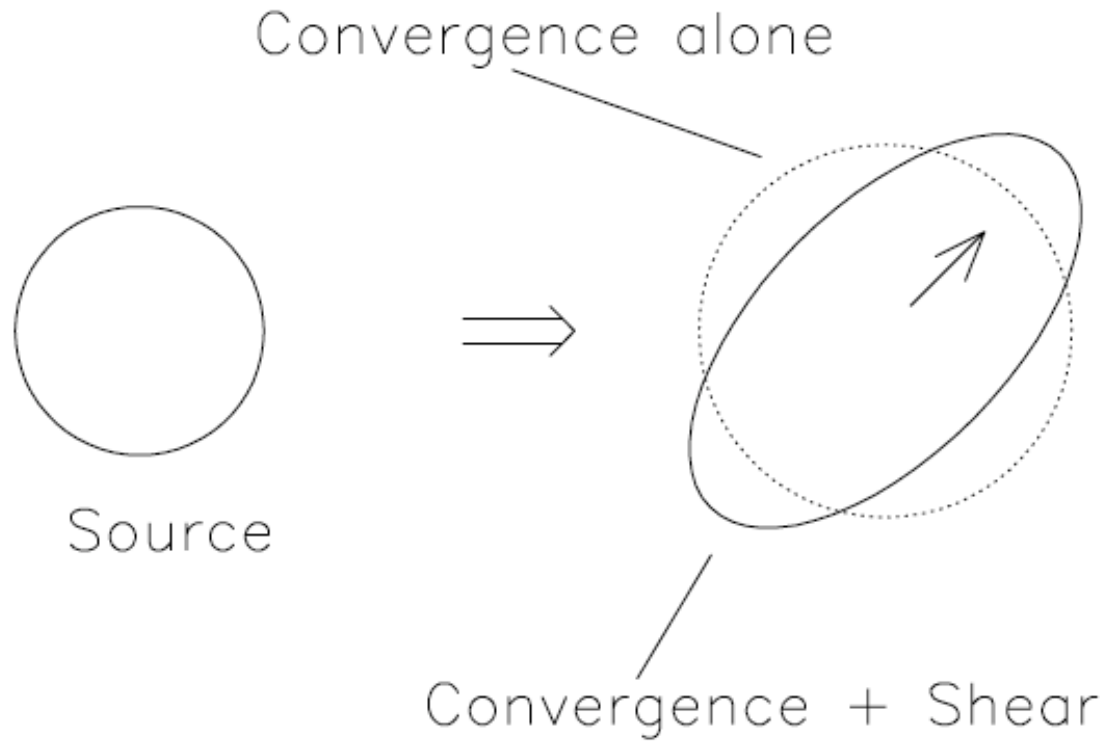
Lens geometry: point mass

6: gravitat.
lensing



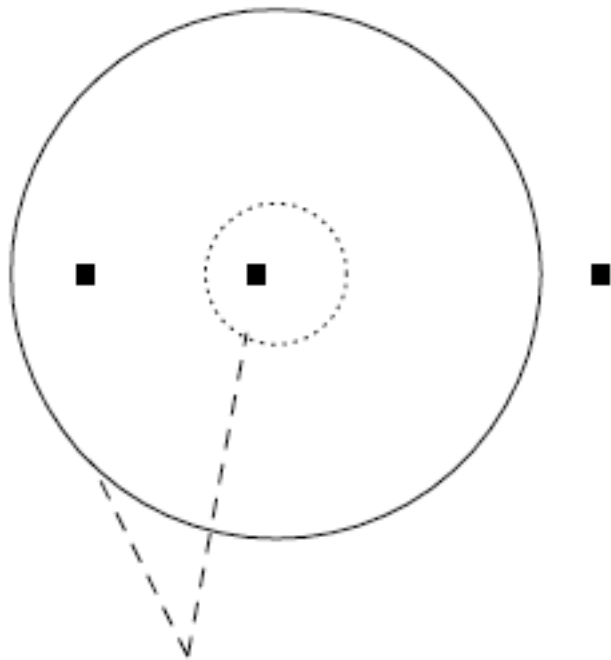
Wambsganss 1998

Convergence and shear

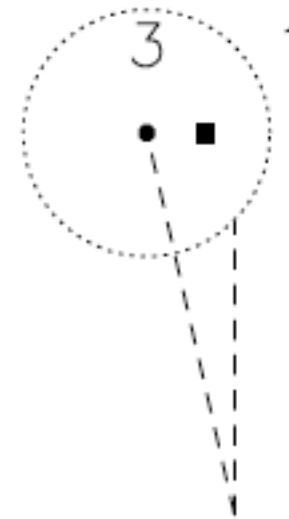


Caustics and critical lines

6: gravitat.
lensing



Critical Lines



Caustics

Narayan & Bartelmann 1997

Strong lensing in clusters

6: gravitat.
lensing



Gravitational Lens
Galaxy Cluster 0024+1654

HST · WFPC2

PRC96-10 · ST ScI OPO · April 24, 1996
W.N. Colley (Princeton University), E. Turner (Princeton University),
J.A. Tyson (AT&T Bell Labs) and NASA

Weak lensing: shear maps (Umetsu et al. 2008)

6: gravitat.
lensing

5

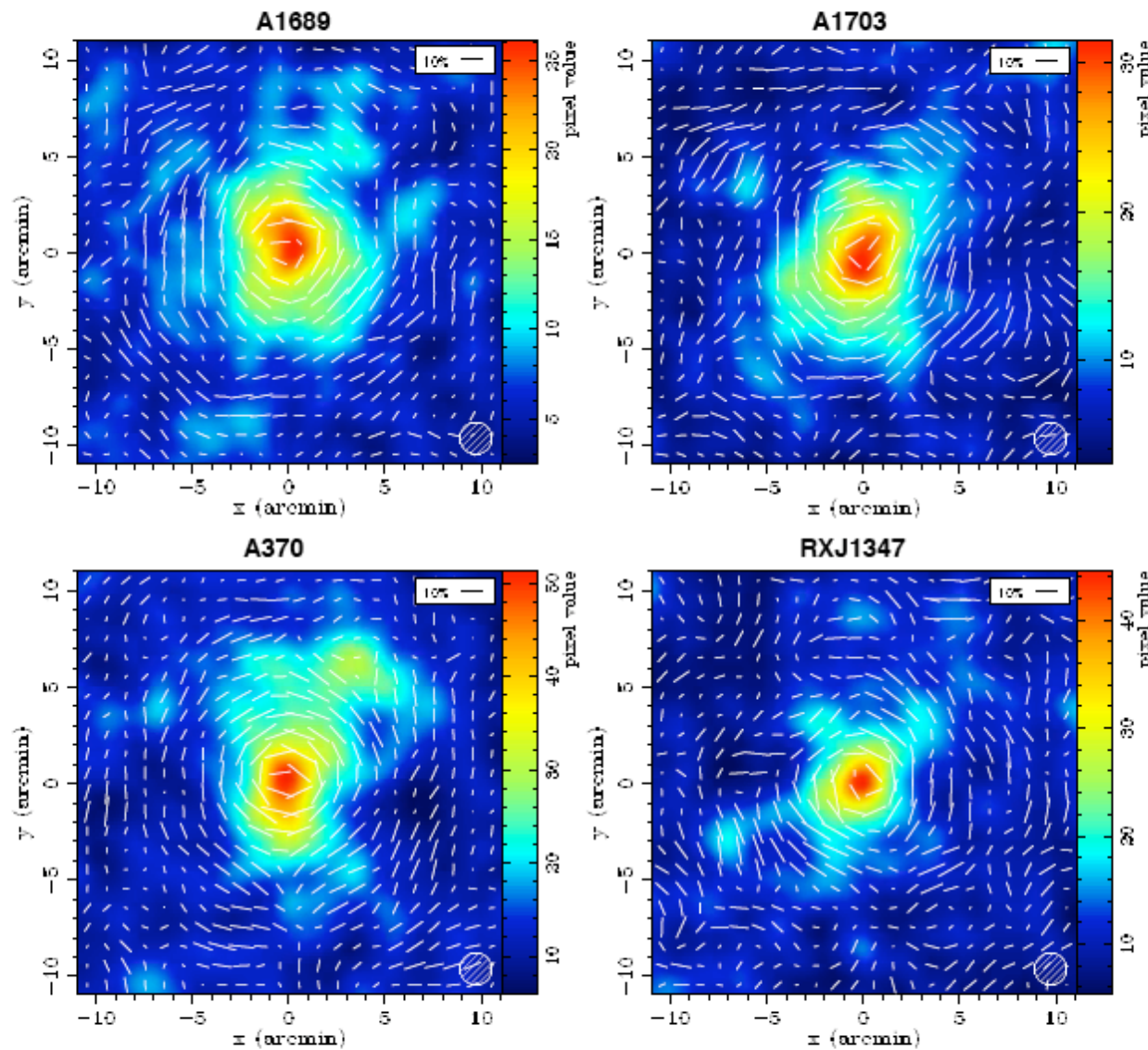
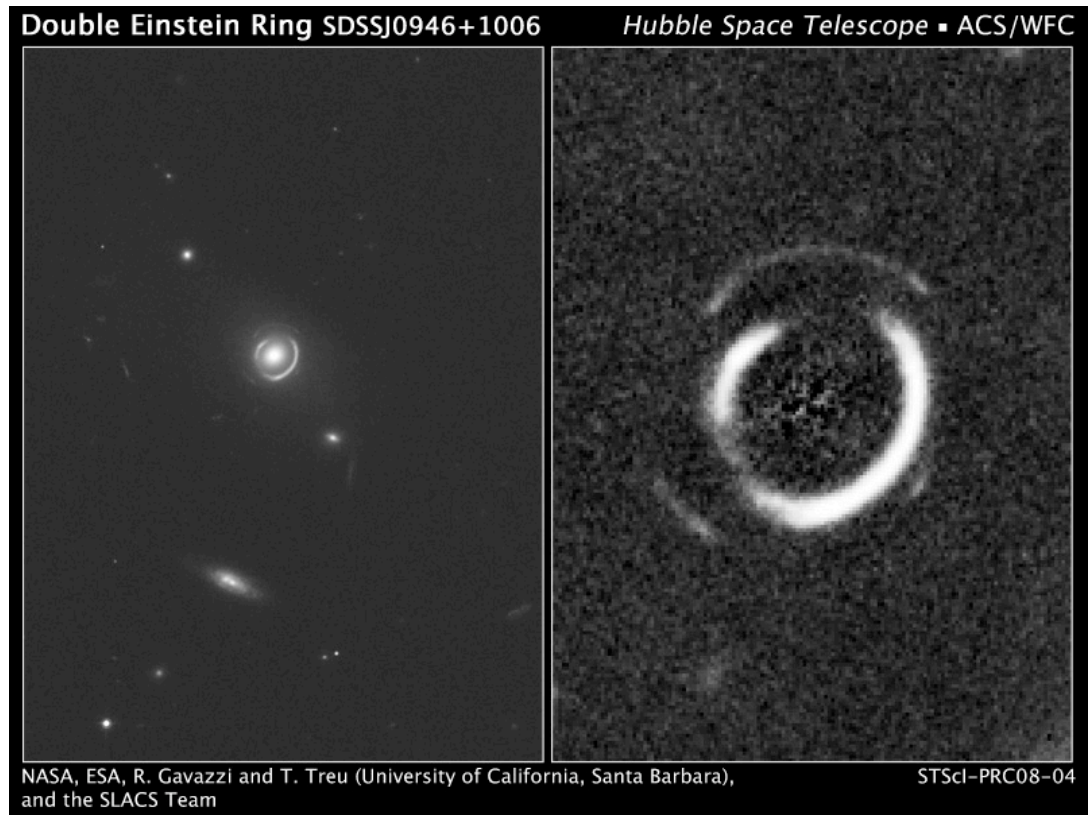


FIG. 1.— Maps of the surface number-density distribution of color-selected cluster member galaxies, with the gravitational shear of background galaxies overlaid; 10% ellipticity is indicated top right, and the resolution of the distortion map is shown bottom right. In each case a single concentration of galaxies is visible, around which a coherent tangential pattern is centered, with little significant substructure.

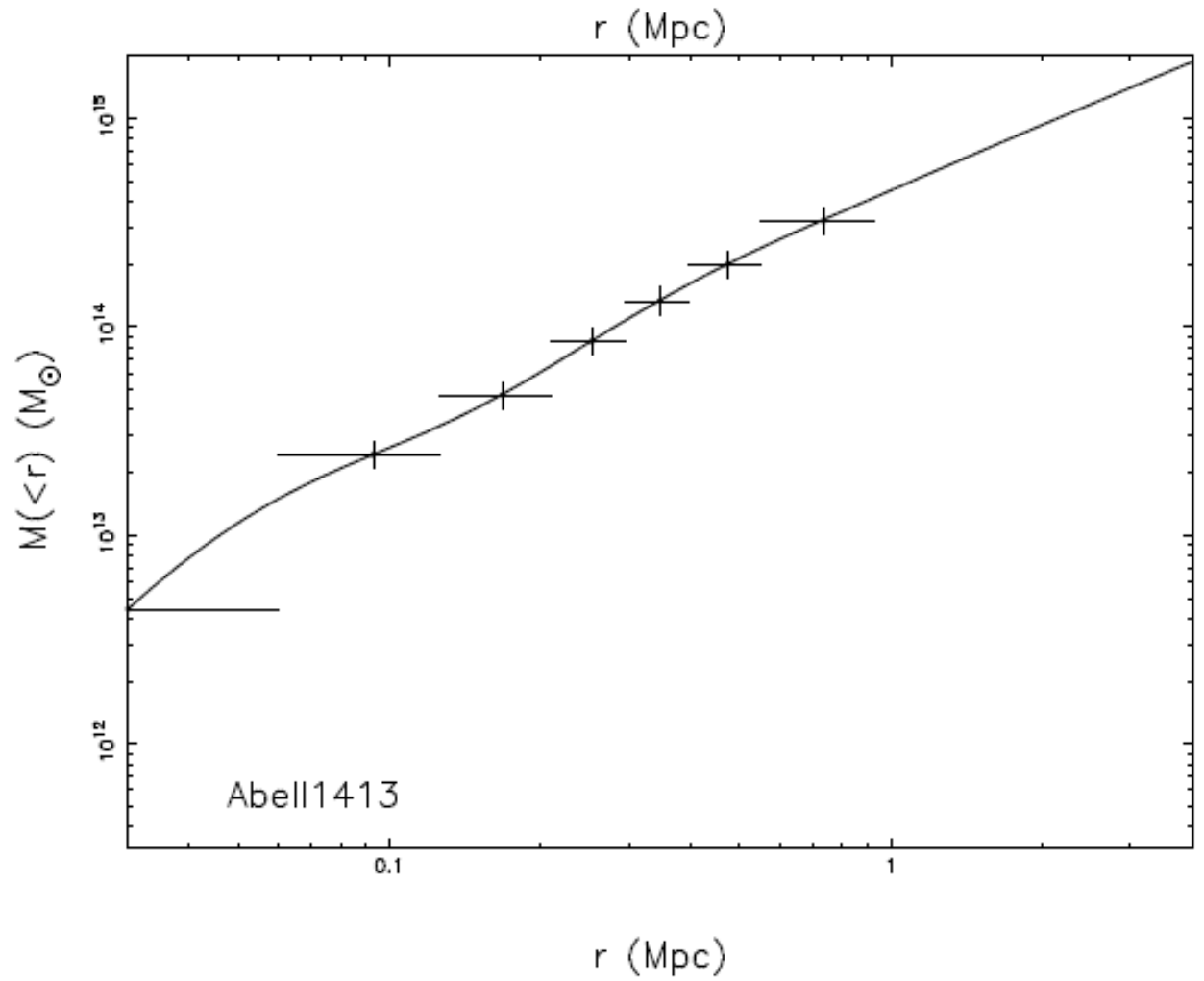
Double Einstein ring

6: gravitat.
lensing



Mass profile from X-rays

7: formation and evolution



Zhang et al. (2008)