Observed Luminosity-Temperature relation
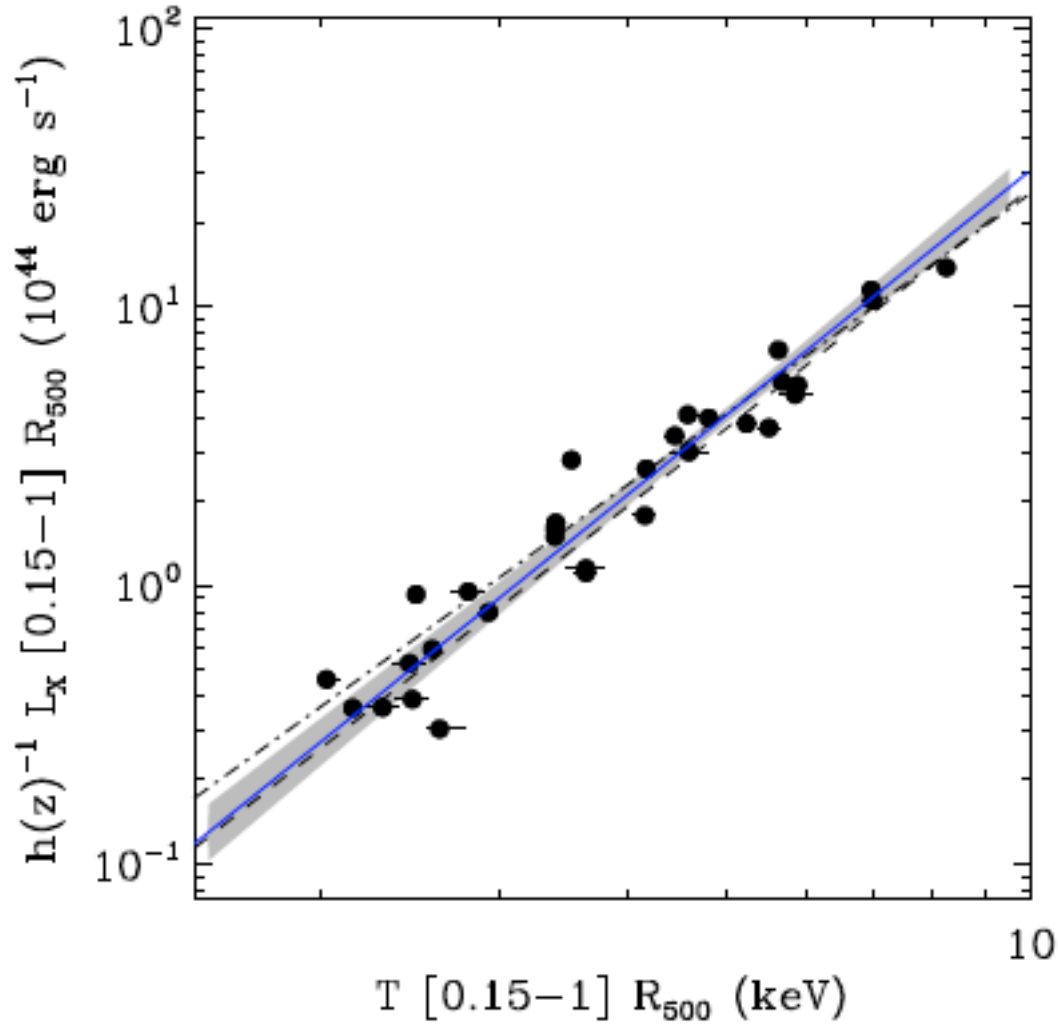
Observed
logarithmic
slope ≈2.9

(self-similar slope = 2)

Pratt et al. (2009)

1

Observed Entropy-Temperature relation

Fig. 2. The S-T relation measured from a sample of 10 clusters covering a temperature range from 2 to 9 keV. The S-T relation is shown for different fractions of R_{200}. Measurements are plotted with error bars. At each radius, the best-fitting power-law relation, derived taking account the errors in entropy and temperature, is overplotted. Solid line: BCES regression method; dashed line: WLS method; slopes and intercepts are given in Table 2.
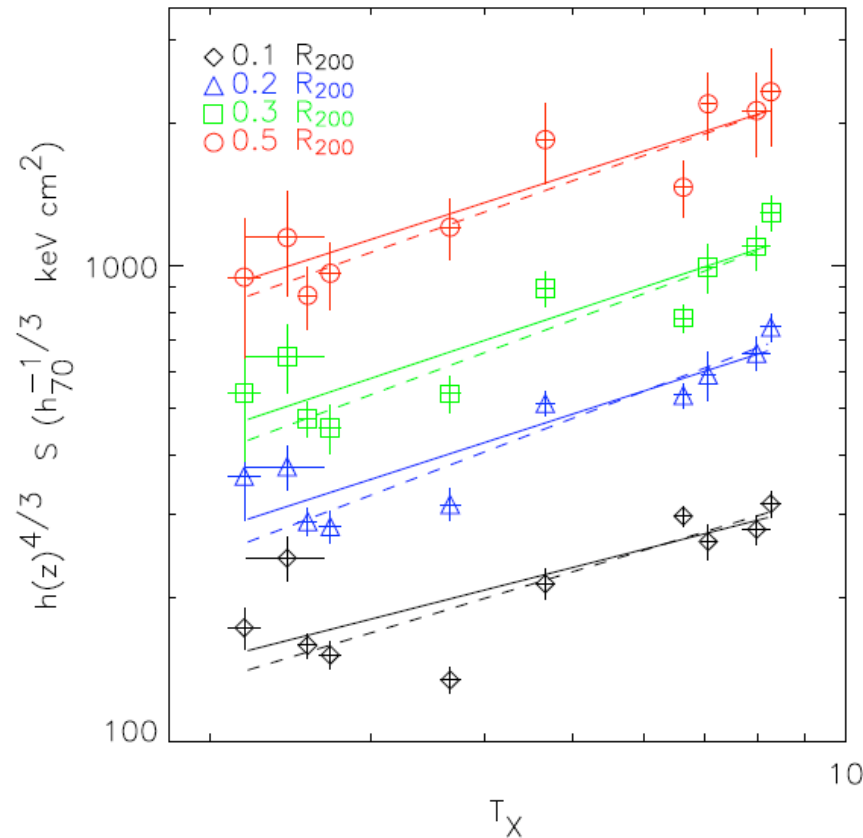
Observed logarithmic slope ≈ 0.6

(self-similar slope =1)

Pratt et al. (2006)   2

Evidence against classical cooling flows

L108   J. R. Peterson et al.: X-ray imaging-spectroscopy of Abell 1835
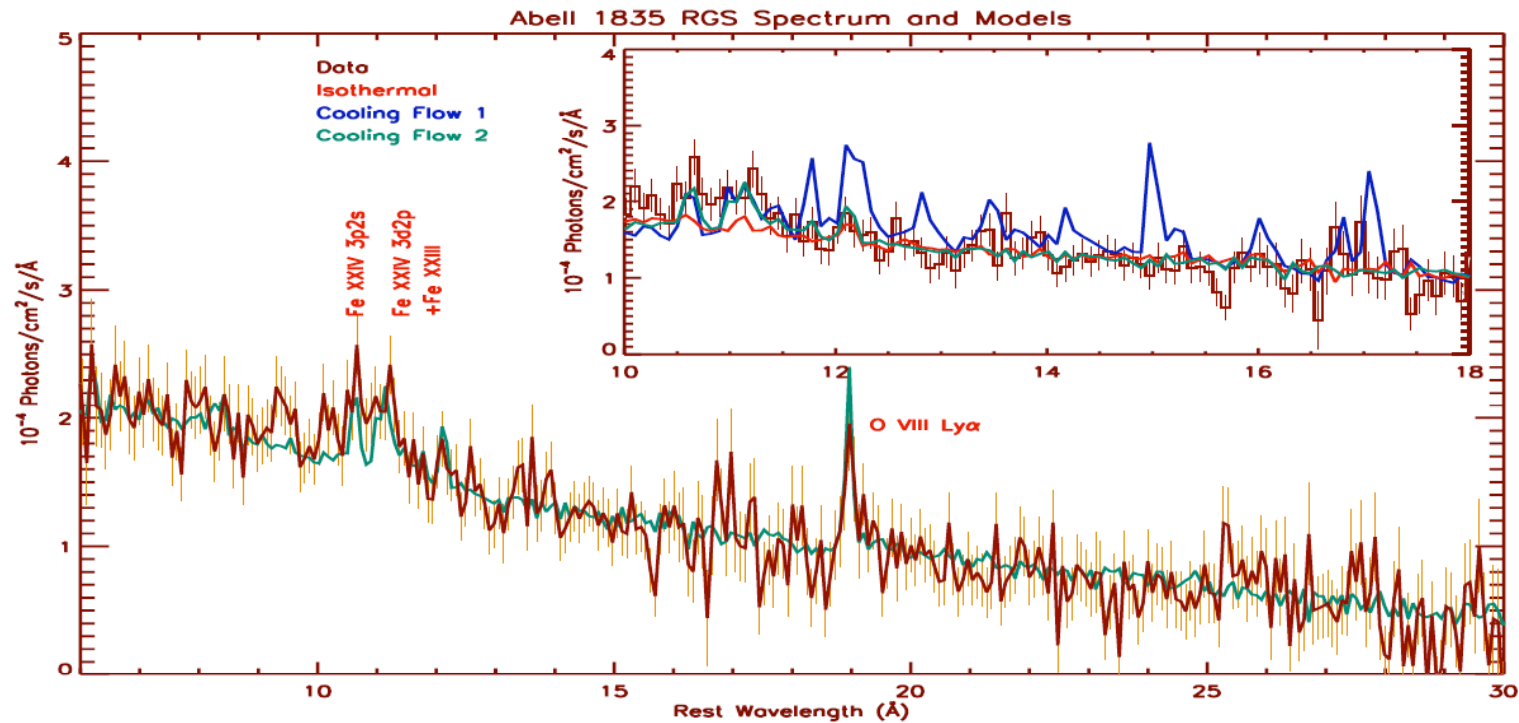
Fig. 4. RGS spectrum of Abell 1835 and three models folded through the instrument Monte Carlo. The same corrections and data selection cuts have been applied to the data and the simulated photons. The red model is an isothermal 8.2 keV model. The blue model has an hot ambient 8.2 keV component and an isobaric cooling flow component. The green model is the same as the blue model but does not have emission below 2.7 keV. The details of each model are described in the text. The spectrum is corrected for redshift, exposure, and effective area

Peterson et al. (2001)   3