



Figure 4.1 Central entropy vs. $H\alpha$ luminosity. Orange circles represent $H\alpha$ detections, black circles are non-detection upper limits, and blue squares with inset red stars or orange circles are peculiar clusters that do not adhere to the observed trend (see text). A2151 is plotted using the 2σ upper-limit of the best-fit K_0 and is denoted by a green triangle. The vertical dashed line marks $K_0 = 30 \text{ keV cm}^2$. Note the presence of a sharp $H\alpha$ detection dichotomy beginning at $K_0 \lesssim 30 \text{ keV cm}^2$.