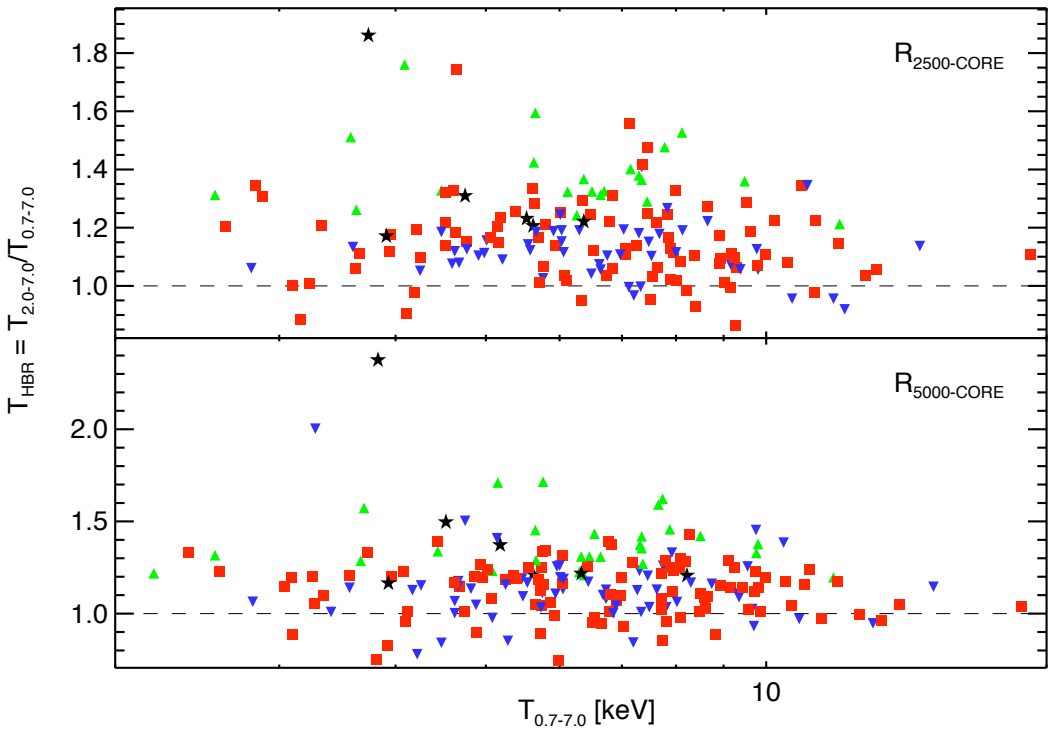

Figure 2.8 T_{HBR} plotted against $T_{0.7-7.0}$ for the $R_{2500-\mathrm{CORE}}$ and $R_{5000-\mathrm{CORE}}$ apertures. Note that the vertical scales for both panels are not the same. The top and bottom panels contain 192 and 166 clusters, respectively. Only two clusters – Abell 697 and MACS J2049.9-3217 – do not have a $T_{HBR} > 1.1$ in one aperture and not the other. In both cases however, it was a result of narrowly missing the cut. The dashed lines are the lines of equivalence. Symbols and color coding are based on two criteria: (1) the presence of a CC and (2) the value of T_{HBR}. Black stars (6 in the top panel; 7 in the bottom) are clusters with a CC and T_{HBR} significantly greater than 1.1. Green upright-triangles (21 in the top; 27 in the bottom) are NCC clusters with T_{HBR} significantly greater than 1.1. Blue down-facing triangles (49 top; 60 bottom) are CC clusters and red squares (90 top; 98 bottom) are NCC clusters. We have found most, if not all, of the clusters with $T_{HBR} \gtrsim 1.1$ are merger systems. Note that the cut at $T_{HBR} > 1.1$ is arbitrary and there are more merger systems in our sample then just those highlighted in this figure. However it is rather suggestive that clusters with the highest values of T_{HBR} appear to be merging systems.