ASCA OBSERVATIONS OF THE QUASAR CONCENTRATION 1338+27

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1. Quasar Concentration 1338+27

There are several regions where a group of quasars are significantly clustered in the physical space. In the "CFHT grens survey" conducted by Crampton et al. (Crampton et al. 1989 and references therein), the 23 quasars between z=1.036 and 1.185 were found to be clustered over $\sim 2^\circ \times 2^\circ$ in the region denoted as 1338+27 At the mean redshift $z_{ave} = 1.113$, the angular extent 6000 arcsec (CHH89) of this cluster corresponds to 60 h^{-1}Mpc($q_0 = 0.5$) and the dispergion of the redshift $\Delta z = 0.044$ to 45 h^{-1}Mpc.

2. ASCA Observations

We observed two regions in the quasar-concentration 1338+27 where surface density of quasars are high. Our main purpose is to search for type-2 obscured quasars in the field. If the clustering of the quasar has physical reasons and not just a statistical fluctuation of the observation, we may

K. Koyama et al. (eds.), The Hot Universe, 438-439.

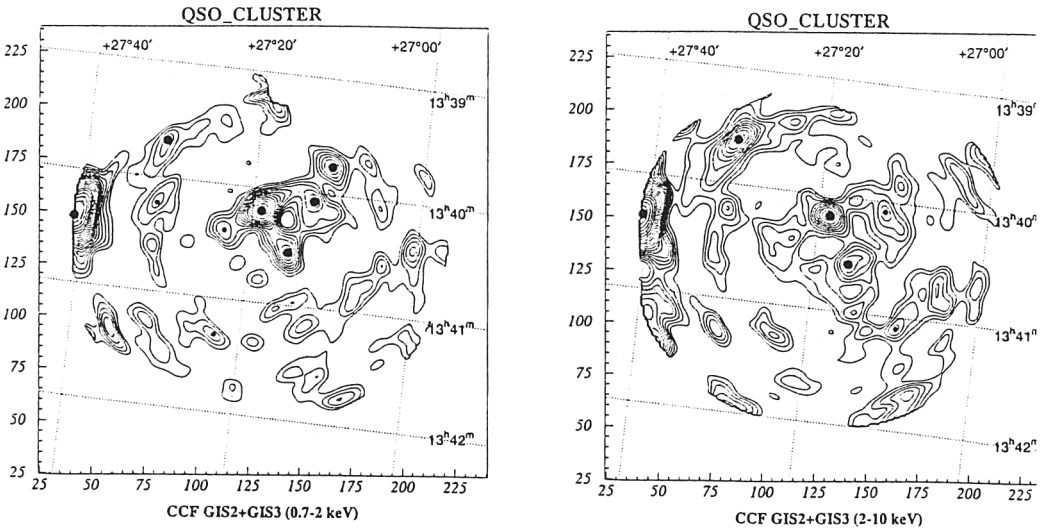

Figure 1. GIS images of the 1338+27 Southern Peak below and above 2 keV. Large filled circles indicate 5σ sources and small ones 4σ

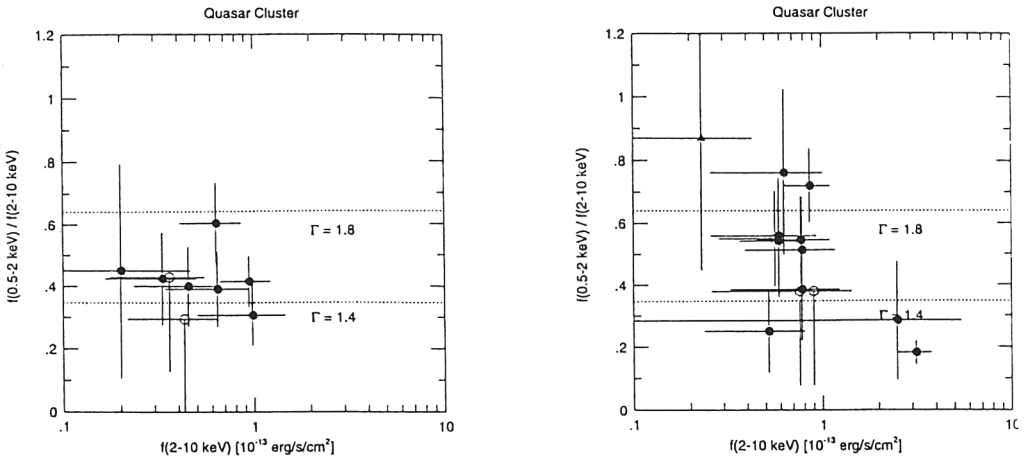

Figure 2. Distribution of flux ratio f(2-10 keV)/f(0.5-2 keV) for SIS and GIS

expect that type-2 quasars are also frequent in the region of the quasar concentration. Figure 1 shows the GIS images of the southern peak, nearly certered at the quasar xxx, and Figure 2 shows the distiribution of hardness (hard-to-soft flux ratio) of the detected sources. It is quite interesting that there are many sources whose have much harder X-ray spectra than those of ordinary quasars.

https://doi.org/10.1017/S0074180900115918 Published online by Cambridge University Press