

# SIMULTANEOUS OBSERVATIONS OF SEYFERT 1 GALAXIES WITH IUE, ROSAT AND GINGA.

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**Abstract.** Simultaneous observations of 8 Seyfert 1 type AGN (Fairall-9, Mrk 590, NGC 4051, 3C 273, NGC 5548, Mrk 841, Q 1821+643 and 3C 390.3) obtained with *ROSAT* and *IUE* (RIASS program), and for 5 sources (Fairall-9, NGC 4051, 3C 273, Mrk 841 and Q 1821+643) with *Ginga*, have been analysed with the aim of describing the UV to soft X-ray spectral component in these sources.

## 1 Soft X-ray Excesses

The *ROSAT* spectra were fitted with models constructed by adding a hard X-ray power law (when possible, the *Ginga* observations) and a soft X-ray excess component (power law, modified black body thin disk, thermal bremsstrahlung or black body). We find that: 1) for a given source, the resulting integrated soft X-ray excess fluxes obtained with different models are very similar, with deviations smaller than 20%; 2) a soft X-ray excess is detected in all sources except 3C 390.3; 3) the presence and the strength of a soft X-ray excess does not depend on the luminosity of the object.

## 2 Ultraviolet to Soft X-ray Bump

We compared the simultaneous soft X-ray and UV fluxes and found that *the fluxes of the soft X-ray excesses integrated in the rest frame of the source are correlated to the UV fluxes*. We described the spectral shape of the bump by simultaneously fitting the UV and soft X-ray spectra. Our parametrizations are able to reproduce the observed fluxes. The maximum of the UV to soft X-ray bump component depends on the description, but not on the object. When described by a thermal cut-off the maximum temperature is  $T_{max} \sim 5 \cdot 10^5$  K. This "universal" maximum temperature can be compared to different emission processes, but its constancy among objects varying in luminosity by a factor of  $10^4$  cannot be understood easily by current accretion disk, comptonization or reprocessing models.

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