variability with redshift and that any apparent increase in variability with redshift may be simply caused by the rest wavelength shifting blueward for a fixed bandpass in the observed frame. They have claimed that they need no time dilation correction and that the increase in variability at high redshift (in their data) is strictly due to a shift in the rest wavelength and a changing α, with an estimated value of $\Delta\alpha \sim 0.1$. Note that this assumes that the increased variability at higher redshifts is due to an increase in the *amplitude* of variations and that the apparent increase in the *frequency* of variability would be due to the detection limit of the study.

Giallongo *et al.* (1991) estimate the dependence of this effect on wavelength by assuming that α changes while leaving the flux relatively constant at a fixed rest frame wavelength (λ^*). Based on the data in Edelson *et al.* (1990) they estimate $\lambda^* \sim$7000Å. This idea of a relatively constant near-infrared flux is consistent with multiwavelength variability studies which have shown that the amplitude of variability decreases with increasing wavelength, with variability rarely seen by 2.2μm (see Bregman 1991 and references therein).

This is also consistent with current models of AGN continuum (Bregman 1991). In these models, the UV spectrum (1000–5000Å rest) comes from a thin accretion disk emitting thermal blackbody radiation corresponding to a temperature of 10^{5-6} degrees. The region from 5000Å to 1μm comes from free-free emission powered by the inner accretion disk. The region from 1-200μm comes from dust reemission of radiation from the accretion disk. And the EUV soft X-ray emission, responsible for the ionization of ions like C^{+3} and N^{+4}, comes from Compton scattering in an (electron abundant) atmosphere above the accretion disk. So for the variability we observe, we presume that the dust reemission stays relatively constant while the thermal blackbody radiation varies.

It is possible to express the amplitude of the variations in terms of wavelength: $\Delta\mathrm{mag} = -2.5\Delta\alpha \log(\lambda^*/\lambda)$ for $\lambda < \lambda^*$. In terms of z_e and the observed wavelength (λ_o) we have: $\Delta\mathrm{mag} = -2.5\Delta\alpha \log[(1+z_e)\lambda^*/\lambda_o]$. If we compare our data with that from Trevese and Kron 1991 (group 4) we can ask whether the difference in observed bandpass can