

At the current time, there is beginning to be extensive study of multi-wavelength continuum variability in AGNs (see, for example, Miller and Wiita 1991). It is evident that the continuum must be come from several different sources (Bregman 1991). However, it is not clear exactly what these components are, how much overlap there is in wavelength space, or how the variability of the different components is correlated. Multi-wavelength monitoring of the QSO 3C 279, showed that the X-ray flux apparently changed in synchronous with the optical and IR flux (Makino *et al.* 1991), however this is an OVV object and the visible continuum may have much different characteristics than non-OVV QSOs. Emission-line variability in Seyfert galaxies closely follows the observed continuum, indicating that the ionizing flux changes with the optical continuum (Krolik *et al.* 1991). BEL variability in higher redshift QSOs has been rather limited, and has so far shown ambiguous results (Maoz *et al.* 1993). Some changes appear to be correlated with the continuum, others do not. The results from Maoz *et al.* 1993 are consistent with the data from this project.\*

It is not inconsistent to believe that the ionizing continuum in moderate and high-redshift QSOs has multiple components, which vary at different rates and correlate in different ways to the observed continuum. BAL time variability has the advantage over BEL time variability studies in that changes due to the photoionizing continuum probably occur simultaneously with the BAL changes. Detailed studies of BALQSO variability in the future may be able to constrain and/or determine the nature and complexity of the continuum source in QSOs.

#### 14.2 : Limits on the BALR-Continuum Distance

From the equation for  $U$  presented in chapter 3, we see that although we can estimate  $U$  and  $L_\nu$ , the values for the electron density,  $n_e$ , and the distance of the BALR from the

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\* For brevity of this thesis, we have not to discuss this extensively. However, the results may be apparent to those who study figure 13-1, and the other data presented in this thesis.