clearly visible, and unless the ionization parameter is very high ($\log(U) \gtrsim -0.5$) it should provide an upper limit on the ionization parameter.

If strong enough to be visible, Al III is of comparable priority with O VI, since it is almost always weak enough to provide a measurable optical depth. Also, Al III can provide a good lower limit to the ionization parameter. Unfortunately, dips and rises in the apparent continuum due to diffuse Fe II emission in this wavelength region may make determining the continuum level very difficult. If a BAL is too weak, it is nearly impossible to determine an accurate residual intensity.

For low redshift BALQSOs ($z_e \lesssim 1$), Mg II is usually the only BAL visible from the ground, and any low redshift BALQSO discovered from the ground will inevitably have a strong Mg II BAL. However, in general it is not present (or extremely weak) in most BALQSOs (presumably due to very high ionization levels), and so it is not a high priority in the higher redshift BALQSOs. Also, for QSOs where C IV can be seen from the ground, Mg II is redshifted past 7000Å, and is sometimes mixed in with the water vapor lines of the Earth's atmosphere.

9.4 : Selection of Objects

The selection of objects during a spectroscopic observing run was designed to have the best chance of detecting variability in a broad absorption line. If no other previous information on variability was available (*i.e.* no past BAL variability and no recent broadband variability), the selection criteria are based on magnitude, redshift, and the character of the absorption. Higher redshift BALQSOs are favored since the sensitivity of the detector increases up to about 6000Å, so the higher redshift QSOs mean higher S/N data of the C IV BAL (up to $z_e \sim 3.5$). Although we may lose the Al III at higher redshift, we gain BALs (N V, O VI, etc.) in the far UV.

The structure and depth of the BAL also makes a difference in the detectability of variation. Assuming that photoionization changes are driving the variability, deep BAL troughs with larger optical depths are less likely to show variations since a larger change