

Chapter 4 : Catalog of Broad Absorption-Line QSOs

For later reference, I present in table 4–1 a list of BALQSOs. The criteria for inclusion of a QSO as a BALQSO are somewhat arbitrary, but generally require that absorption lines occur blueward of the resonance emission lines at implied outflow velocities of greater than about $3,000 \text{ km s}^{-1}$, and that the number and/or breadth of the lines imply that the gas is intrinsic to the QSO rather than cosmologically distant. Cases of disputable inclusion in the BALQSO category are indicated with a “MBAL” keyword in the last column to indicate that it is a marginal BALQSO, in that the high outflow absorption is somewhat weaker than a *typical* BALQSO. Most of the keywords refer to the character of the BAL; “detached trough” usually means the BAL appears to begin at an outflow velocity of more than a few thousand km s^{-1} .

Column 1 gives the equatorial coordinates in right ascension (RA) in hours, minutes, and seconds and in declination (DEC) in degrees, minutes, and seconds for the epoch 1950.0 (B1950) coordinate frame. QSOs are often referred to by their coordinate name, for example, UM 139 ($\alpha = 01 \text{ } 45 \text{ } 41.4$, $\delta = +04 \text{ } 16 \text{ } 25$), would be either 0145+0416, 0145.6+0416 (with the decimal fraction of minutes of RA truncated to one significant digit), or 0145+042 (with the decimal fraction of degrees of DEC truncated).

Column 2 gives the name of the QSO, or identification survey, or the first author of the identification reference; UM \equiv University of Michigan, CSO \equiv Case (Western Reserve University) Stellar Object, LBQS \equiv Large Bright Quasar Survey, H \equiv Hazard, etc. See Hewitt and Burbidge (1993) for identification references.

Columns 3 and 4 gives V band ($\sim 5550\text{\AA}$) magnitudes and the emission-line redshift. These values are from our own measurements where spectral and imaging data are available, otherwise they are taken from the literature.

Columns 5 and 6 entitled “Sp” and “Im” indicate the number of epochs of spectroscopic and broadband imaging data. The selection of objects for observation was based on a combination of factors including declination, magnitude, redshift, and the strength