

From table 4-1, considering only those BALQSOs with both imaging data and radio detections, we see that there are 6 radio-moderate BALQSOs, 3 of which showed variability, and 7 radio-quiet objects, 1 of which showed variability. Considering the small number of objects and that one of the variable radio-moderate BALQSOs is H 1413+1143, which is a gravitational lensed QSO and may be a special case, this result is consistent with the fraction of BALQSOs with detected variability in the entire sample ($\sim 33\%$). We also note that the one radio-loud object in table 4-1, PKS 1157+0128, did show variability.

8.4 : Comparison with other studies

There have been many efforts to study the optical variability of QSOs. Here, we attempt to summarize the results from 4 of the more recent studies:

Group 1: The University of Florida Rosemary Hill Observatory 0.76 m telescope has been used for approximately the last 20 years to study the long term variability in a selection of about 106 QSOs (88 radio selected, 18 optically selected) using the digitized photographic plates and comparison stars (*cf.* Smith *et al.* 1991, Pica *et al.* 1988, and Pica and Smith 1983). The observation timespans (ΔT) range from 5 to 18 years with sampling at typically 2 or 3 times a year and errors of ~ 0.1 mag. The QSO redshifts range up to 3.5 (~ 5 with $z_e \gtrsim 2.1$) with $B \lesssim 19$. Approximately 50% of the QSOs have detected variability with maximum deviations (ΔM) of ~ 1 to 2 magnitudes and a variation timescale (Δv) of ~ 3 to 6 years (QSO rest frame). They claim a decrease in variability with increasing z_e and note that the probability of detecting variability, $P(\Delta T)$, increases with ΔT up to about 7 years (Earth frame) and then remains constant.

Group 2: Keel and Allan (1991) report on a 3.5 year study of ~ 100 Palomar-Green QSOs with a photoelectric photometer on the KPNO 1.3 meter and La Palma 1 meter telescopes with errors of ~ 0.02 mag. The redshifts range up to ~ 2 with $B \lesssim 16$. About 65% of the QSOs showed variability with $\Delta M \sim 0.16$ to 1.3 mag.

Group 3: Cristiani *et al.* (1990) have studied 90 optically selected QSOs in SA (Selected Area) 94 with the UK and ESO La Silla Schmidt telescopes for about 7 years over