

**Figure 14–2**

This figure shows a graphical display of possible values of  $\log(n_e)$  and  $r$ , for two values of  $U$ . The values are calculated for a  $V=17.7$ ,  $z_e=2.12$  QSO (*e.g.* UM 232), which is typical of the objects studied. A value of  $H_0=50$  and  $q_0=0.5$  are used to estimate  $L_\nu$ .

Two lower limits are shown on  $n_e$ . The  $10^4$  limit is from the response of the BALs within a period of 3 months (QSO frame) in some BALQSOs. If the electron density were lower than this we would expect to see delays due to the finite time for recombinations (see §3.6). The  $10^6$  limit is from the lack of [O III] emission in at least two BALQSOs (see §2.4 and references therein).

The lower limit on distance is from the lack of acceleration in the absorption lines in 1303+3048 (Foltz *et al.* 1987). This limit was very model-dependent, however, a similar limit can be made by simple, rather conservative arguments based on the lack of velocity variations in *any* BALQSO over the last two decades.