

LONG-TERM VARIABILITY OF QUASI-STELLAR OBJECTS, AND THEIR DISTRIBUTION  
IN THE HUBBLE DIAGRAM

John E. Beckman and Mark R. Kidger,  
Department of Physics, Queen Mary College,  
Mile End Road,  
London E1 4NS.  
England.

Summary

A stochastic model for the energy source of QSO's is used to fit the light curves of 43 objects taken from long-period photometry (minimum duration of observations, 8 years per object). The model fits are encouraging enough to allow us to derive absolute luminosities for individual QSO's and to re-plot the Hubble Diagram with the values thus computed. We find a significantly improved fit to the expected unit slope in the plot of  $\log z$  against  $1/5(m_B - M_B)$ , and a best fit value of  $q_0 = 0.1 (\pm 0.4)$ .