

Phenomenology 2022 Symposium: From Virtual to Real



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Variability in Quasar Light Curves: using quasars as standard candles

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A relation between the variational slope, s_F , and the mean absolute magnitude, $\langle M \rangle$, in the light curves of 58 spectroscopically confirmed quasars is measured with a dispersion of 0.15dex. Assuming it holds for quasars in general, not only does this relation add to our working knowledge of quasar variability but it also shows great promise at accurately measuring luminosity distance to a quasar in a model independent way. An accurate, model independent measure of the luminosity distance would allow quasars to be added to the cosmic distance ladder, easily extending the ladder out far beyond the redshifts accessible to type Ia supernovae where cosmological parameters can be better constrained.

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