

Gravitational time delays and the measurement of H_0

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Strong gravitational lenses with measured time delays between the multiple images can be used to determine the Hubble constant that sets the expansion rate of the Universe. Measuring the Hubble constant is crucial for inferring properties of dark energy, spatial curvature of the Universe and neutrino physics. I will describe techniques for measuring the Hubble constant from lensing with a realistic account of systematic uncertainties. A program initiated to measure the Hubble constant to $<3.5\%$ in precision from strong lenses is in progress. I will show the bright prospects of gravitational lens time delays as an independent and competitive cosmological probe.

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