[S.K. Leggett et al] S.K. Leggett,¹,4 T.G. Hawarden,¹,2 M.J. Currie,¹,3 A.J. Adamson,¹ T.C. Carroll,¹ T.H. Kerr,¹ O.P. Kuhn,¹ M.S. Seigar,¹ W.P. Varricatt,¹ T. Wold¹

abstract

We present $L'$ and $M'$ photometry, obtained at UKIRT using the Mauna Kea Observatories Near–IR (MKO–NIR) filter set, for 46 and 31 standard stars, respectively. The $L'$ standards include 25 from the UKIRT in–house “Bright Standards” with magnitudes deriving from Elias et al. (1982) and observations at the IRTF in the early 1980s, and 21 fainter stars. The $M'$ magnitudes derive from the results of Sinton & Tittemore (1984). We estimate the average external error to be 0.015 for the bright $L'$ standards and 0.025 for the fainter $L'$ standards, and 0.026 for the $M'$ standards. The new results provide a network of homogeneously observed standards, and establish reference stars for the MKO system, in these bands. They also extend the available standards to magnitudes which should be faint enough to be accessible for observations with modern detectors on large and very large telescopes.