

Sizes of small main-belt binaries 17246 and 22899 from Spitzer IRAC thermal emission measurements

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We observed the thermal infrared emission from Main Belt asteroid binaries 17246 and 22899 with Spitzer IRAC. We attempted to support these thermal observations with near-simultaneous ground-based photometry of the reflected sunlight to estimate the sizes of the primaries. The ground-based support observations for 17246 have an 8 day lag and a distinct viewing geometry, but include absolute photometry and sufficient repetition to constrain the lightcurve amplitude; the near-simultaneous support opportunity for 22899 was weathered out. The Spitzer measurements of 17246 have S/N 50 at 8 μm , and 10–20 in the other IRAC bands; the thermal measurements of 22899 are of lower quality due to less-favorable geometry during the scheduled visibility window. The size estimates from this project will be integrated with Hubble observations of the binary systems' periods to constrain the primaries' densities.