NEO Lightcurves from the Mission Accessible Near-Earth Object Survey (MANOS)

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Lightcurve photometry has been collected for several hundred NEOs as part of the NASA-funded Mission Accessible Near-Earth Object Survey (MANOS). MANOS employs a variety of 4-8m class telescopes to characterize newly discovered, low delta-v ($<$7 km/s), sub-km NEOs. The MANOS lightcurve sample provides interesting insights into the diversity of lightcurve properties, which can inform our understanding of physical properties such as internal cohesion and morphology. Our results suggest a wide range of NEO rotation states including the fastest rotators detected to date with periods less than 20 seconds. I will present on the distribution of rotational properties amongst the MANOS sample and use these results to derive the underlying distribution of shapes in the sub-km NEO population. This sample of objects provides an interesting comparison to the satellite of Didymos, which falls within a similar size regime.