**THE MISSION ACCESSIBLE NEAR-EARTH OBJECT SURVEY (MANOS).** N. A. Moskovitz, B. Burt, R. P. Binzel, E. Christensen, F. DeMeo, T. Endicott, M. Hinkle, M. Mommer, M. Person, D. Polishook, H. Siu, A. Thirouin, C. A. Thomas, D. Trilling, M. Willman, Lowell Observatory, 1400 W. Mars Hill Road, Flagstaff, AZ 86001, nmosko@lowell.edu, MIT, UMass Boston, NAU, NASA/GSFC, UH IFA.

**Introduction:** The Mission Accessible Near-Earth Object Survey (MANOS) began in August 2013 as a multi-year physical characterization survey that was awarded survey status by NOAO. MANOS will target several hundred mission-accessible NEOs across visible and near-infrared wavelengths, ultimately providing a comprehensive catalog of physical properties (astrometry, light curves, spectra). Particular focus is paid to sub-km NEOs, for which little data currently exists. These small bodies are essential to understanding the link between meteorites and asteroids, pose the most immediate impact hazard to the Earth, and are highly relevant to a variety of planetary mission scenarios. Telescopically accessing these targets is enabled through a combination of classical, queue, and target-of-opportunity observations carried out at 1- to 8-meter class facilities in both the northern and southern hemispheres. The MANOS observing strategy is specifically designed to rapidly characterize newly discovered NEOs before they fade beyond observational limits.

**Target Selection:** Targets for MANOS are selected based on three primary criteria: mission accessibility (i.e. Δv < 7 km/s), size (H > 20), and observability. Our telescope assets allow us to obtain rotational light curves for objects down to V~22, visible spectra down to V~21, and near-IR spectra down to V~19. MANOS primarily focuses on targets that are recently discovered. We employ a regular cadence of remote and queue observations to enable follow-up characterization within days or weeks after a target of interest is discovered. We currently have the capability to characterize roughly 10% of all new NEO discoveries. To date we have observed nearly 150 NEOs and are significantly contributing to the accumulated knowledge of physical properties for sub-km NEOs (Figure 1).

**Survey Status:** An overview of early science results from MANOS include: (1) an estimate of the taxonomic distribution of spectral types for NEOs smaller than ~100 meters, (2) the distribution of rotational properties for approximately 100 previously unstudied objects, and (3) models for the dynamical evolution of the overall NEO population over the past 0.5 Myr. In addition we are actively developing a new set of online tools at asteroid.lowell.edu that will enable near realtime public dissemination of our data products while providing a portal to facilitate coordination efforts within the small body observer community. We will present highlights from MANOS with an emphasis on the importance of rapid-response ground-based characterization of mission accessible NEOs.

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![Figure 1: Absolute magnitude distributions of all previously characterized NEOs (i.e. visible spectra, near-IR spectra, albedos, and/or rotational light curves) and the set of 142 NEOs observed during the first year of MANOS operations. In this time MANOS has become the predominant source of physical data collected for NEOs smaller than approximately 100 meters.](image-url)