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Polarimetric properties of asteroids in the near-infrared

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We present first results from a polarimetric survey of asteroids in the near-infrared J and H bands (1.25 and 1.65 microns, respectively). This survey has been enabled by the newly commissioned WIRC-Pol instrument on the Palomar 5 m telescope. WIRC-Pol simultaneously senses the four linear polarization components from the target, while using a half-wave plate to beam swap between them. This setup allows us to obtain bandpass polarimetric accuracies better than 0.1% for our targets. WIRC-Pol also obtains low resolution spectra of each Stokes component, allowing us to investigate the spectropolarimetric properties of our targets as a function of phase. We show polarimetric phase curves for objects that have been sampled at multiple phases, our initial spectropolarimetric findings, and discuss the results from modeling these observations.