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Institution: Rensselaer Polytechnic Institute (RPI)

Title: A comprehensive study of Kepler phase curves and

Type: secondary eclipses

Session: Poster

Abstract: Characterizing Transiting Planets

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We present the initial results of a comprehensive study of 492 Kepler Objects of Interest (KOI) with $R_p > 4$ R_e , P < 10d, and $V_{mag} < 16$ using all 15 quarters of lightcurve data in the latest Kepler data release. Our analysis quantifies system-level effects from ellipsoidal, Doppler beaming and phase-curve variations, and also characterizes the secondary eclipses. This presentation focuses on 22 confirmed planets from this sample: We were able to confirm and improve the temperatures and albedos for Kepler-1b, 2b, 4b, 5b, 6b, 7b, 8b, 12b, 13b, 17b, and 41b, and present new results for Kepler-3b, 14b, 15b, 18c, 40b, 43b, 44b, 45b, 71b, 74b, and 75b. In addition, we used the same methods to analyze the rocky

planets Kepler-10b, 78b, and KOI 1843.03.