

The Thousand Asteroid Light Curve Survey - Preliminary Results

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Current surveys of Main Belt asteroid rotation tend to be biased towards the largest, brightest, and closest targets. The Thousand Asteroid Light Curve Survey (TALCS) has been designed to find the rotation periods of nearly 1000 Main Belt asteroids in a magnitude-limited survey of 12 square degrees of the ecliptic. Our survey is complete through the Main Belt down to diameters of 1 km, and our observing cadence over the two-week baseline ensures sensitivity to both slow (Period \sim 1 day) and fast (Period $<$ 2 hours) rotators. Color information of the targets allows us to make coarse spectral type designations and thus estimate albedo to determine the size of the objects.

In this talk we present preliminary results from the orbital and light-curve analysis of our targets, and discuss their implications for our understanding of the distribution of asteroid rotation periods. We also present the future direction of this project, as well as new supporting projects and instruments.