

Abstract Submitted
for the TSS17 Meeting of
The American Physical Society

Rotation Light Curves and Taxonomy of 15th to 19th Magnitude Asteroids¹ LANDRIE GRANTHUM, SPS undergraduate student Tarleton State University, MIKE HIBBS, Tarleton State University — Knowledge of the composition, shape and rotation rate of an asteroid is extremely important in; evaluation the impact damage potential; development of impact avoidance strategies; and evaluating the feasibility and economic potential of mining. However, little data exists for the vast majority of known asteroids other than their orbital parameters. Observations made by Tarleton's 0.81-meter telescope has produced several light curves and color indices of asteroids from 15th to 19th magnitude. This work represents the unique niche of Tarleton's 0.8m telescope to collect statistically meaningful data as faint as 19th magnitude. Large professional survey telescopes do not have the time to do follow-up observations while smaller professional/amateur telescopes are too small to achieve a high enough signal to noise ratio to determine rotation periods and composition of the fainter and smaller asteroids. This poster, summarizes and presents some of Tarleton's observations and data analysis.

¹Tarleton Center for Astronomy Education and Research

Mike Hibbs
Tarleton State University

Date submitted: 22 Feb 2017

Electronic form version 1.4