Letter-size: 8.5” by 11”
Margins: 0.75” left/right, 1” top/bottom
Font: At least 11 pt. Times New Roman
Text style: Justified (can use hyphenation).
Figures can be single column only
Maximum of 2 pages
Keep PDF size < 10Mb.

Single Column
Title is all caps and bold. Authors are normal style.

THE PAPER TITLE. Author1[1,2], Author2[1,2]. [1]Institution1 with full mailing mailing and first author email. [2]Institution2 (no street address, just city / (state or country).

Put Continuous section break here to go from 1 to 2 columns

See the full sample below.

Body text is double column (3.32” each, 0.33” spacing), First line indent of 0.25”

Introduction: Combination abstract/introduction would go here.

If inserting a graphic, set its paragraph style to have a spacing of 3pt above and below. The caption below it, if any, should have a spacing of 6pt after. The figure and caption paragraphs should have no indentation. For example:

Figure 1. The CS3 complex in California.

More text goes here.

Results: Say something about the results of the research.

Conclusions: Conclusions and/or summary of entire presentation.

Acknowledgements: It’s a good idea to give credit to any funding and other acknowledgements requested/required by those upon whose research this paper is based.

References: [1] Jones, J. (2016). *Minor Planet Bulletin* **42**, 7-8. [2] Smith, A. (2017). *Minor Planet Bulletin* **44**, 10-12.

UPDATE ON THE NEAR-EARTH ASTEORID PROGRAM AT THE CENTER FOR SOLAR SYSTEM STUDIES. Robert D. Stephens[1,2], Brian D. Warner[1,2]. [1]Center for Astronomical Studies, 446 Sycamore Ave., Eaton, CO 80615. [2]MoreData!, Inc.

Introduction: In 2013, the Center for Solar System Studies - located in the Mojave Desert in Southern California - began a concentrated campaign using up to nine robotic telescopes to find reliable rotation periods for as many NEAs as possible. This paper reports on the status of results obtained to date.

As of May 2019, the asteroid lightcurve database (LCDB; Warner et al., 2009) contains about 1,450 near-Earth asteroids with statistically useful rotation rates, or almost 7% of all known NEAs. The Center for Solar System Studies (CS3) found rotational periods for 870 (60%) of those measured NEAs.

While these counts are sufficient to make reasonable inferences about NEA rotation rate statistics, the significantly smaller sampling of binaries, tumblers, and known spin orientations in both the NEA and the general populations often leads to more questions than answers.

Figure 1. The Center for Solar System Studies in California.

We sometimes obtained multiple dense lightcurve sets over one or more apparitions to be used in lightcurve inversion if the viewing aspect and/or phase angle changed sufficiently to get a reliable model. We worked closely with the radar teams at Arecibo and Goldstone so that we could supplement their radar observations with dense lightcurves. This can lead to a successful determination of the spin orientation in less time than by either method alone.

Results: We report on the results of our efforts, which includes 870 lightcurves for 802 NEAs, about 60% of all NEA lightcurves reported in this time span. The CS3 lightcurve set has almost 80 periods of $P <= 2$ h, about 21% of this class of fast rotator.

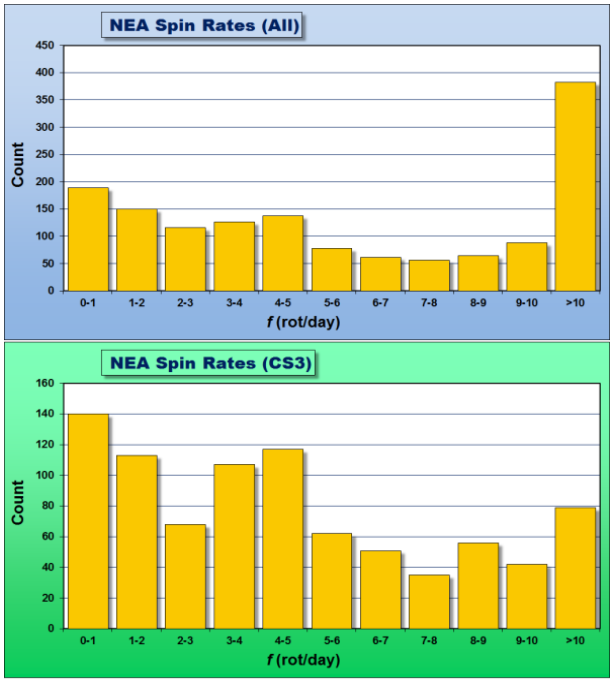

Figure 2. Comparison between CS3 NEA results and all those listed in the LCDB[1].

Conclusions: The Center for Solar System Studies typically has clear nights 80% of the time, allowing observations of Near Earth Asteroids. It's six year program has reported 60% of all NEA rotational periods providing rotational statistics which can be used in family population studies.

Acknowledgements: Observations at CS3 and continued support of the asteroid lightcurve database (LCDB; Warner et al., 2009) are supported by NASA grant 80NSSC18K0851. The authors gratefully acknowledge Shoemaker NEO Grants from the Planetary Society (2007, 2013). These were used to purchase some of the telescopes and CCD cameras used in this research.

References: [1] Warner, B.D., Harris, A.W., Pravec, P. (2009). *Icarus* **202**, 134-14 6. *http://minorplanet.info/lightcurvedatabase.html*. Updated 2019 January 31.