Accepted Manuscript

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Jiř í Šilha, Jean-Noël Pittet, Michal Hamara, Thomas Schildknecht

PII:	S0273-1177(17)30786-X
DOI:	https://doi.org/10.1016/j.asr.2017.10.048
Reference:	JASR 13480
To appear in:	Advances in Space Research
Received Date:	25 June 2017
Revised Date:	23 October 2017
Accepted Date:	26 October 2017



Please cite this article as: Šilha, J., Pittet, J-N., Hamara, M., Schildknecht, T., Apparent rotation properties of space debris extracted from photometric measurements, *Advances in Space Research* (2017), doi: https://doi.org/10.1016/j.asr.2017.10.048

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ACCEPTED MANUSCRIPT

Apparent rotation properties of space debris extracted from photometric measurements

Jiří Šilha

Astronomical Institute, University of Bern, CH-3012 Bern, Switzerland

Comenius University, Faculty of Mathematics, Physics and Informatics, 84248 Bratislava, Slovakia

Jean-Noël Pittet

Astronomical Institute, University of Bern, CH-3012 Bern, Switzerland

Michal Hamara

Comenius University, Faculty of Mathematics, Physics and Informatics, 84248 Bratislava, Slovakia

Thomas Schildknecht

Astronomical Institute, University of Bern, CH-3012 Bern, Switzerland

Abstract

Knowledge about the rotation properties of space debris objects is essential for the active debris removal missions, accurate re-entry predictions and to investigate the long-term effects of the space environment on the attitude motion change. Different orbital regions and object's physical properties lead to different attitude states and their change over time.

Since 2007 the Astronomical Institute of the University of Bern (AIUB) performs photometric measurements of space debris objects. To June 2016 almost 2000 light curves of more than 400 individual objects have been acquired and processed. These objects are situated in all orbital regions, from

Preprint submitted to Advances in Space Research

^{*}Corresponding author

Email addresses: jiri.silha@fmph.uniba.sk (Jiří Šilha),

jean-noel.pittet@aiub.unibe.ch (Jean-Noël Pittet), michal.hamara@fmph.uniba.sk (Michal Hamara), thomas.schildknecht@aiub.unibe.ch (Thomas Schildknecht)

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