The 2nd DESTINY$^+$ Science Working Team (SWT) on-line meeting

Date: 2022 Feb. 24 (Thur.) – Feb. 25 (Fri.)
15:00 - 19:20 (Japan Standard Time), 07:00 - 11:20 (Central European Time)

All talks are 20 minutes including 5 min. Q&A.

<Feb.24>

15:00 Opening remark, Logistics: T. Arai
15:05 - 16:25 Project status

- Overall and system development status: T. Takashima, H. Toyota (ISAS/JAXA)
- Preliminary trajectory design of DESTINY$^+$: Toward Phaethon and multiple asteroids: N. Ozaki (ISAS/JAXA)
- Science mission status, science working team plan: T. Arai (PERC/ChiTech)
- TCAP & MCAP development status: K. Ishibashi (PERC/ChiTech)

16:30 - 18:10 Ground Observation of Phaethon

- Multicolor Simultaneous Photometry of (3200) Phaethon with Seimei/TriCCS: J. Beniyama (The Univ. of Tokyo), T. Sekiguchi (Hokkaido Univ. of Education)
- Polarimetric observation in 2021: M. Ishiguro (Seoul National Univ.)
- Stellar occultation observation in 2021: F. Yoshida (Univ. of Occupational & Environmental Health)
- Shape model of 3200 Phaethon from radar, occultation, and light-curve observations: S. Marshall (Arecibo Observatory & Univ. of Central Florida)
- A thermophysical study of the DESTINY$^+$ mission target 3200 Phaethon: T. Müller (Max-Planck-Institut für extraterrestrische Physik)

18:15 - 19:15

- DDA development status: J. Simolka (Univ. of Stuttgart)
- Status report of ground calibration of DDA: M. Trieloff (Universität Heidelberg)
- DDA mission planning tool: M. Sommer (Univ. of Stuttgart)

19:20 Adjourn

<Feb25>

15:00 - 15:05 Introduction

Invited talks from related asteroid missions:

15:05 - 15:25 Particle Ejection Activity at Asteroid (101955) Bennu: C. Hergenrother (Ascending Node Technologies, LLC)

15:25 - 15:45 Current result of Hayabusa2 curation & sample analysis: T. Usui (ISAS/JAXA)

[DDA science proposal]

15:50 - 18:50

- Distribution of dust ejected from the Lunar surface into the Earth-Moon system: J. Schmidt (Freie Universität Berlin)
- Interstellar dust flux predictions for DESTINY$^+$: S. Hunziker (ETH Zurich)
- Proposed science on DESTINY$^+$/DDA data based on the Rosetta experience: A. Longobardo (INAF-IAPS)
- Identifying and discriminating between endogenous and exogenous water in cosmic dust: J. Hillier (Freie Universität Berlin)
- Investigating IOM with DESTINY$^+$ Dust Analyzer — DDA: N. Khawaja (Freie Universität Berlin)
- Cometary dust trail simulations for the DESTINY$^+$ mission: H. Krüger (Max-Planck-Institute for solar system research)
- (1) Identification of Na-hosting minerals in cosmic dust and Phaethon, (2) Bulk C and S abundance to characterize cosmic dust and Phaethon: T. Arai (PERC/Chitech)
- Experimental modifications on Phaethon surface analogue by thermal processing: E. Palomba (INAF-IAPS)
- In-Situ Mass Spectrometry for Interstellar Dust in Space Missions: A Novel Approach to Study the Physical and Chemical Properties of the Local Interstellar Cloud: H. Kimura (PERC/Chitech)

18:50-19:10 Discussion for future topics (All)

- Science opportunities
- Future ground-based observation
- Future SWT meetings
- Etc.

19:15 Concluding remarks

19:20 Adjourn