

## Progress report of development and ground calibration of DESTINY+ Dust Analyser 2023

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DESTINY+ Dust Analyser (DDA) is an impact ionization TOF-MS dust analyser to be onboard the JAXA's DESTINY+ spacecraft for Phaethon flyby exploration. DDA will reveal the bulk chemical composition of interplanetary and interstellar dust particles and Phaethon ejecta particles. DDA can obtain TOF mass spectra of positive ions generated by impact ionization of dust particles. This presentation gives the status report of development and ground calibration of DDA in 2022 to early 2023. The manufactured engineering model (EM) of DDA is in the performance test with the dust accelerator at University of Stuttgart. The interface test between DDA electrical simulator (ESIM) and Mission Data Processor (MDP) has started for validating the telemetry and commanding function. Availability of various ionization method such as electron ionization, LILBID, etc. for the calibration of mass spectrometer is under investigation with the selected dust-simulant samples. The critical design review (CDR) is starting.

キーワード：宇宙塵、小惑星フェートン、衝突電離型質量分析器

Keywords: Cosmic dust, 3200 Phaethon, Impact ionization mass spectrometry