Dusty Visions 2023 (FU Berlin, 24.05-26.05. 2023) - Program

(as of 26.05.2023)

Wednesday

09:00 - 10:00 **Registration**

10:00 - 10:10 **Welcome and local arrangements**

10:10 - 13:00 **Asteroids & Comets** (Chair persons: Jessica Agarwal & Jamey Szalay)

10:10 - 10:30 *Deficiency of Dust on Small Asteroid Ryugu – Upper Limit from Thermal Infrared Observations* - Maximilian Hamm
10:30 - 10:50 *Fine-grained Regolith Loss on Sub-km Asteroids* - Sean Hsu
10:50 - 11:10 *Triple main-belt comet 288P: A condensed showcase of asteroid evolution* - Jessica Agarwal
11:10 - 11:30 *Activity of the Main-Belt Comet 324P/La Sagra* - Maria Mastropietro

11:30 - 12:00 Break

12:00 - 12:20 *Space dust science on Wikipedia* - Eberhard Grün
12:20 - 12:40 *IMEX-Streams simulations for Earth's cometary meteoroid trail environment* - Harald Krüger (presentation will be given by Peter Strub)
12:40 - 13:00 *Physical properties of dust particles collected in the coma of comet 67/P with COSIMA instrument onboard ROSETTA* - Martin Hilchenbach

Lunch Break

14:00 - 17:10 **IDPs** (Chair persons: Mihaly Horanyi & Tony McDonnell)

14:00 - 14:20 *Kuiper Belt Dust in the Inner Solar System* - George Flynn
14:20 - 14:40 *The Near-Sun Dust Environment: Observations from Parker Solar Probe* - Jamey R. Szalay
14:40 - 15:00 *Earth's Space Particulate Environment, watch this Space!* - Tony McDonnell
15:00 - 15:20 *Micrometeoroid Impacts on to the X-Ray Telescope Mirrors of XMM-Newton and eROSITA/SRG* - Peter Strub

15:20 - 15:50: Break

15:50 - 16:10 *Linking micrometeorites to their parental bodies: What can we learn from urban collections and experimentally produced analogs* - Lutz Hecht
16:10 - 16:30 *26Al and 10Be in urban and Antarctic micrometeorites: Exploring their origin based on cosmic-ray exposure* - Jenny Feige
16:30 - 16:50 *The search for extraterrestrial organic matter in the Atacama Desert, Chile* - Alessandro Airo

16:50 - 17:00 Mini-Break

17:00 - 18:30 **Poster Session** (Wednesday)

P1: *Distinguishing Isomeric Amino Acids using Impact Ionization Mass Spectrometry* - Janine Bönigk
P2: *Optical properties of dust mixtures for comet pebbles in the THz regime* - Christian Kranhold
P3: *Discriminating structurally similar, single-ringed organic molecules in ice grains using an analogue experiment for impact ionization mass spectrometry* - Thomas O'Sullivan
P4: *Analysis of Impact Ionization Mass Spectra of Anthracene Dust Particles: A Pilot Study Characterizing Polycyclic Aromatic Hydrocarbons (PAHs) Using Dust Analyzer Instrument* - Rebecca Mikula
P6: *Upgrades of a small dust accelerator* - Yanwei Li
P7: *Low Velocity Dust Impacts on Polyvinylidene Fluoride Films* - Alex Doner
P8: *Measuring Micro-Debris In-Situ with the DESTINY+ Dust Analyzer* - Max Sommer
P9: *Detecting and analyzing interstellar and interplanetary dust particles with the IDEX instrument* - Zoltan Sternovsky
P10: *Fast code to derive the distribution of dust ejected from an atmosphereless body moving around the Sun* - Anastasiia Ershova
P11: *Dynamical analysis of mineral dust in the Saturnian system* - Christian Fischer
P12: *Iron depleted silicates stemming from Saturn's main rings* - Simon Linti
P13: *Indications for space weathering effects based on the compositional profile of the E ring* - Lenz Nölle
P14: *Particulate control in EUV-induced H2 plasma in EUV lithographic tools* - Hariprasad Mylapravan Gangadharan

Thursday

09:00 - 10:40 **Extrasolar Dust** (Chair persons: Jenny Feige & Jan Leitner)

09:00 - 09:20 *Calcium Isotope Studies of Silicate Stardust: Implications for Galactic Chemical Evolution* - Jan Leitner
09:20 - 09:40 *New Insights into the Stellar Sources of Presolar Dust Grains* - Peter Hoppe
09:40 - 10:00 *Current & near-future endeavors in dust-heliosphere research* -Veerle Sterken
10:00 - 10:20 *A multi-mission study of interstellar dust in the heliosphere: lessons about the past and for the future* - Lennart R. Baalmann
10:20 - 10:40 *Populations of Exogenous Dust at Saturn seen by Cassini CDA* - Nicolas Altobelli

10:40 - 11:10 Break

11:10 - 13:20 **Dust Around Planets** (Chairs: Frank Spahn & Larry Esposito)

11:10 - 11:30 *Micro-meteoroids falling into the Saturnian system detected by Cassini CDA* - Jürgen Schmidt
11:30 - 11:50 *The Age of Saturn's Rings Constrained by the Meteoroid Flux Into the System* - Sascha Kempf
11:50 - 12:10 *Exploring the dusty environment in the vicinity of Saturn's F ring and the nearby moons* - Simon Linti

12:10-12:20 Mini-Break

12:20 - 12:40 *How Predator-Prey Dynamics Creates 'Straw' in the Strongest Density Waves* - Larry Esposito
12:40 - 13:00 *Stochastic Charging Fuelling Saturn's Ring Rain and Dynamical Segregation of Dust Species* - Daniel Schirdewahn
13:00 - 13:20 *Simulating the Martian dust cycle: From source to sink* - Demetrius Ramette (withdrawn)

Lunch Break

14:15 - 17:20 **Icy Moons** (Chair persons: Murthy Gudipati & Nozair Khawaja)

14:15 - 14:35 *The Organic Inventory of Enceladus's Subsurface Ocean* - Nozair Khawaja
14:35 - 14:55 *Detection of phosphate in ice grains from Enceladus' ocean with implications for habitability in the outer solar system* - Frank Postberg
14:55 - 15:15 *Compositional Profiles of the Enceladus Plume* - Anastasiia Ershova
15:15 - 15:35 *Chemical Evolution Driven by Hydrothermal-Freeze Cycles within Enceladus* - Maxwell Craddock

15:35 - 16:00 Break

16:00 - 16:20 *Detecting Cell Material in a Single Icy Dust Grain Emitted from Enceladus or Europa* - Janine Bönigk
16:20 - 16:40 *Mass spectrometric fingerprints of organics in salt rich ice grains: implications for Europa Clipper* - Maryse Napoleoni
16:40 - 17:00 *Characterizing the mechanical and spectral properties of fresh ice deposit analogues on Enceladus and Europa* - Gabriel Tobie
17:00 - 17:20 *Radiation Processing and Sputtering of Icy Surfaces* - Murthy Gudipati

18:45 **Conference Dinner: Tomasa Villa Kreuzberg**

Friday

09:00 - 12:10 **Missions & Instruments** (Chair persons: Sean Hsu & Zoltan Sternovsky)

09:00 - 09:20 *Dust detection by antenna instruments* - Zoltan Sternovsky
09:20 - 09:40 *A deep-learning approach to classify Cassini Cosmic Dust Analyzer signal data* - Thomas Albin
09:40 - 10:00 *Development status of the DestinyPlus Dust Analyzer* - Jonas Simolka
10:00 - 10:20 *From the Cassini Cosmic Dust Detector to the DestinyPlus Dust Analyzer* - Ralf Srama

10:20 - 10:50 Break

10:50 - 11:10 *Modeling the II-TOF-MS Measurements of Interplanetary and Interstellar Dust Particles* - Ethan Ayari (given by Mihaly Horanyi)
11:10 - 11:30 LILBID-OLYMPIA: *High Resolution Mass Spectrometry for the Calibration of Spaceborne Hypervelocity Ice Grain Detector* - Arnaud Sanderink
11:30 - 11:50: *HANKA – Cubesat Space Dust Analyser* - Jan Zabka
11:50 - 12:10 *The Science Case for in-situ Dust Investigation at Uranus* - Sean Hsu

Lunch Break

13:00 - 15:30 **Dust analogues & Lab experiments** (Chairs: Jon Hillier & Bernd Abel)

13:00 13:20 *Recent laboratory results on dust charging and mobilization* - Mihaly Horanyi
13:20 - 13:40 *Synthesis and Characterization of Polypyrrole-Coated Anthracene Microparticles: A New Synthetic Mimic for Polyaromatic hydrocarbon-based Cosmic Dust* - Steven P Armes
13:40 - 14:00 *Palladium coated cosmic dust analogues* - Jon Hillier

14:00 - 14:30 Break

14:30 - 14:50 *Charged ice particle beams with selected narrow mass and kinetic energy distributions* - Bernd Abel
14:50 - 15:10 *Generation of Charged Water Ice Particle Beams of Defined Size Distribution by SELINA* - Anatolii Spesyvyi
15:10 - 15:30 *Fast ejecta particles generated from oblique impacts with regolith-like targets* - Yanwei Li

15:30 - 16:00 **Wrap up and outlook** (next Dusty Vision meeting?)