

11th Dust Workshop



Tuesday, March 18, 2025 - Thursday, March 20, 2025

Scientific Program

Rosetta Dust Workshop 18-20 March 2025, Venice
Tuesday 18/03

10:00 Welcome – Giovanna and Stavro - Logistics and scientific programme overview

Session 1 Observations

10:10 Olena Shubina "Dust environment of comet 67P/Churyumov–Gerasimenko in 2021-2022 apparition" (20+5 min)

10:35 L. Kolokolova and J. Markkanen "Agglomerate Zoo: Exploring the diversity of dust particles in the solar system." (20+5 min)

11:00 – 11:30 Coffee break

Session 2 Models

11:35 Nicholas Attree "Towards a self-consistent model of gas and dust emission on comet 67P/Churyumov-Gerasimenko" (20+5 min)

12:00 Marco Fulle "Sodium depletes carbon dioxide in cometary comae" (20+5 min)

12:25 Yuri Skorov "Structural characteristics of porous media and their application in thermophysical models." (20+5 min)

12:50 Q&A of the morning session

13:00 – 14:30 Lunch

Session 3 Laboratory

14:30 Christopher Kreuzig, Introduction to CoPhyLab experiments (20+5 min)

14:55 Gerwin Meier, "Determination of dust-to-gas ratio" (15+5 min)

15:15 Jonathan Pfeifer, Properties of ejected particles (15+5 min)

15:35 Calvin Knoop, Analysis of visible sample-material loss (15+5 min)

15:55 Maximilian Timpe, Mechanical evolution of the sample (15+5 min)

16:15 Jurgen Blum, Interpretation of the CoPhyLab findings (20+5 min)

16:40 Discussion of the Lab session

17:00 – 18:30 Welcome Reception and Dust Art Performance

Wednesday 19/03

Session 4 Observations

09:30 Oleksandra Ivanova "Dust properties of distant comet C/2014 N3 (NEOWISE) beyond the snow line" (20+5 min)

09:55 Brian Murphy "Deconstructed Coma Evolution of Comet 67P/Churyumov" (20+5 min)

10:20 Maria Mastropietro "Investigating the activity of the disrupted asteroid 62412 (2000 SY178)" (20+5 min)

10:45 Discussion

11:00 – 11:30 Coffee break

Session 5 Laboratory

11:30 Jürgen Blum & Christian Schuckart “ The release of μm -sized dust grains from evaporating micro-granular dust-ice mixtures - application to cometary activity” (20+5 min)

11:55 Guttler Carsten “Diffusive gas transport and sintering” (20+5 min)

12:20 Paula Maria Heitmann Lab thesis topic “Surface energy of micrometer sized water ice particles at low-temperatures “(10+5 min)

12:35 Jan Niklas Cybulski Lab thesis topic “Compression of granula packages” (10+5min)

12:50 Discussion

13:00- 14:30 Lunch

Session 6 Models

14:30 Vladimir Zakharov et al. “Variation of dust column density as a function of phase angle as it follows from the dust coma model” (20+5 min)

14:55 Bykov N.Y. et al. “Ejection velocities of dust particles from the near-surface layer of a cometary nucleus” supported by RSF (grant No. 24-12-00299) (20+5 min)

15:20 S. Ivanovski “Dust dynamical simulations and dust size constraints of asteroid ejecta” (20+5 min)

15:45 - 16.00 Discussion

16:00 – 16:30 Coffee break

16:30 - 18.00 Space Science at INAF (A. Argan) and round table “The nowadays challenges for the dust cometary science” (All, panelists: Carsten, Oleksandra and Vladimir) - moderators G. Rinaldi and S.Ivanovski

20:00 Social dinner

Thursday 20/03

Session 7 Observations and Models

10:10 Hideyo Kawakita “20 years of cometary polarimetric imaging in optical wavelength region by PICO.” (20+5 min)

10:35 Klaus Hornung " Structure and strength information of 67/P dust from COSIMA ." (20+5 min)

11:00 – 11:30 Coffee break

11:35 Johannes Markkanen “Preliminary analysis of dust in the coma of Comet C/2017 K2 observed by JWST/MIRI.” (20+5 min)

12:00 Giovanna Rinaldi on behalf of Matteo Teodori and Luca Maggioni "SPH model: application to

plumes and jet emission" (20+5 min)

12:30 Concluding remarks and the next meeting

13:00 – 14:30 Lunch

15.00 Palazzo Ducale visit