

Comet Workshop 2017: Comet formation paradigm after Rosetta. What is the hallmark of cometary nuclei formation in protoplanetary discs inherited from Rosetta?

Monday Afternoon June 19th

- 14.00 **Capria, Bonev, Ivanovski** - *Welcome and logistics*
- 14.20 Welcome address from Bulgarian Academy of Sciences
- 14.30 *In memoriam: Akiva Bar-Nun*
- 14.35 *In memoriam: M. A'Hearn*
- 14.40 **Tanyu Bonev** - *Cometary Science in Bulgaria.*
- 15.10 **Matt Taylor** - *A brief overview of the ESA Rosetta mission.*

Session title: **Introduction. Early evolution of the solar system. Planet migration.**

- 15.40 **Klaus Jockers** *The early evolution of our solar system and of nascent planetary systems: hints for the origin of comets?*
- 16.10 Coffee break
- 16.40 **Maria Drozdovskaya** *Prestellar chemical fingerprint in protoplanetary disks and comets.*
- 17.10 **Bertram Bitsch** *Planet migration during the formation of the Solar System.*
- 17.40 **Discussion and Poster Session** (5 minutes for everyone who would like to present poster highlights. All posters will be exposed during the whole workshop week)
- 19.00 Welcome Reception

Tuesday Morning June 20th

Session title: **Chemical composition around protostars. What is retained in a comet? From molecular clouds to icy grains. Composition of comets. Collisional comet formation and implications of the stratified inner structure.**

- 09.00 **Ana Lopez** *The path towards understanding the molecular zoo around protostars.*
- 09.30 **Murthy Gudipati** *Interstellar Ice Grain Chemical Composition retained in a Comet?*
- 10.00 **Cessateur Gael** *Non-planarity of icy grains surface in molecular clouds: impact on O₂ formation.*
- 10.20 Coffee break
- 10.50 **Olivier Mousis** *Origin of molecular oxygen in comets.*
- 11.20 **Martin Jutzi** *Collisional formation of two-component cometary nuclei: low-velocity mergers vs. high-velocity disruptions.*
- 11.50 **Matteo Massironi** *Implications of the stratified inner structure of comet 67P on cometesimal formation.*
- 12.20 **Discussion**
- 12.30 Lunch

Tuesday Afternoon June 20th

Session title: [Planetesimal formation / from planetesimals to comet evolution. Rosetta instrumental-data view on 67P formation /Part 1/.](#)

14.00 **Sean Raymond** *Radial mixing of planetesimals during different phases of Solar System formation.*

14.30 **Michiel Lambrechts** *From planetesimals to planets by pebble accretion.*

15.00 **Juergen Blum** *Comet 67P - the first close-up view of a planetesimal. What have we learned about its formation?*

15.30 **Martin Hilchenbach** *Some in-situ experiments with cometary dust particles next to comet 67P/Churyumov-Gerasimenko*

16.00 Coffee break

16.30 **Carsten Guettler** *An inter-instrumental view on Rosetta dust results*

16.50 **Philip Heinisch** *Surface mechanical properties based on Philae's touchdowns*

17.10 **Discussion**

18.00 -18.30 **Public Outreach Talk/Event** (TBC)

Wednesday Morning June 21st

Session title: [Properties of JFC](#)

8.50 **Rossita Kokotanekova** *Ensemble properties of Jupiter family comets from ground photometric observations*

9.10 **Fabrizio Capaccioni** *VIRTIS/Rosetta observes Comet 67P/CG: nucleus derived composition and physical properties.*

Session title: [Planetesimal formation / from planetesimals to comet evolution. Rosetta instrumental-data view on 67P formation /Part 2/](#)

09.40 **Wladimir Lyra** *Connecting the solar nebula to extrasolar nebulae. Observing, modeling and interpreting comet formation sites in circumstellar disks.*

10.00 Coffee break

10.30 **Marco Fulle** *No catastrophic collisions in the outer Solar System.*

11.00 **Tom Andert** *The gravity field of Comet 67 P/Churyumov-Gerasimenko before and after perihelion.*

11.30 **Valerie Ciarletti** *Constraints on the interior of 67P/C-G's nucleus from CONSERT measurements.*

12.00 **Thurid Mannel** *Microstructure of 67P dust: Insight into dust agglomeration and comet formation.*

12.20 **Discussion**

12.30 Lunch

14.00 Workshop trip to Plovdiv city.

Thursday Morning June 22nd

Session title: Volatiles in cometary coma. Distributed sources of semi-volatile material, volatile grain morphology. Cometary dust properties.

09.00 **Charlotte Vastel** *Molecular complexity in prestellar cores*

09.30 **Diana Laufer** *Formation conditions and evolution of comets as derived from experimental results compared to Rosetta's measurements.*

10.00 **Dominique Bockelée-Morvan** *The composition of comets: clues to solar system formation*

10.30 Coffee break

11.00 **Martin Rubin** *Evidence for depletions in the heavy silicon isotopes measured at comet 67P/Churyumov-Gerasimenko.*

11.30 **Johan De Keyser** *Distributed sources of semi-volatile material in the coma of comet 67P/Churyumov-Gerasimenko*

11.50 **Chia-Yu-Tzou** *Volatile grain morphology and statistics in the coma of comet 67P/Churyumov-Gerasimenko as seen by Rosetta ROSINA/COPS.*

12.10 **Discussion**

12.30 Lunch

Session title: Dust particles as the best preserved representatives of the icy planetesimals that dominated the bulk and solid mass in the early Solar system

14.00 **Flavia Dell'Agli** *AGB stars: dust factory of their host environment.*

14.30 **Andrew Westphal** *The Future of Stardust Science.*

15.00 **Jeremie Lasue** *Texture analysis of IDPs and comparison to 67P dust particles.*

15.20 **Sihane Merouane** *Properties of the cometary dust particles from 67P/Churyumov-Gerasimenko measured in-situ by Rosetta/COSIMA.*

15.50 Coffee break

16.20 **Cecilia Tubiana** *67P/Churyumov-Gerasimenko: the dust environment as seen through OSIRIS onboard Rosetta.*

16.40 **Giovanna Rinaldi** *Cometary coma dust size distribution from in-situ IR spectra.*

17.00 **Stavro Ivanovski** *Dynamical properties of the cometary dust grains in the 67P/Churyumov-Gerasimenko coma constrained by the GIADA data.*

17.20 **Discussion**

17.30 **Rosetta Dust Group - Splinter meeting**

20.00 Workshop dinner

Friday Morning June 23rd

Session title: Comet formation paradigm after Rosetta. What is the hallmark of cometary nuclei formation in protoplanetary discs inherited from Rosetta?

09.00 **Susanne Pfalzner** *The Formation of the Solar System – New Challenges.*

09.30 **Dina Prialnik** *The effect of amorphous ice on the structure and activity of comet nuclei.*

10.00 Summary of Rosetta Dust Splinter meeting (TBC)

10.30 Coffee break

11.00 **Maria Teresa Capria et al.** *Scientific highlights and summary of the workshop + General discussion.*

12.15 Concluding remarks

12.30 Lunch