

VIII Planetary Science & Solar System Exploration Congress (CPSS-8)

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Monday May 26th

15:00 Welcome & Institutional session

Rector Univ. Málaga, Director Escuela Ingenierías Industriales, J.M. Vadillo, A. Cardesin

15:30 **Planetary Sciences in Spain & Portugal:** Paula Benavidez & Pedro Machado

15:50 **Spanish Space Agency (AEE):** Eva Díaz Catalá & Isabel Pérez Grande*

*ONLINE

16:10 **Spanish Research Agency (AEI):** Marina Díaz Michelena & Minia Manteiga

16:30 Round Table: Science Policy & Funding

Chair: R. Hueso (Universidad del País Vasco)

Participants: M. Díaz Michelena (AEI), M. Manteiga (AEI), E. Díaz Catalá (AEE), I. Pérez Grande (AEE)*

*ONLINE

17:20 Coffee Break

Missions, Instruments & Technology 1

Chairs: A. Campo-Bagatín, J. Hernández-Bernal

18:00 **Planetary Sciences in Malaga (J.M. Vadillo: UMA Laserlab)**

18:10 C. Pérez Del Pulgar: The Role of Robotics in Planetary Exploration, Contributions from the University of Malaga

18:20 **Planetary Science Missions: ESA Science, Exploration & Planetary Defence (M. Küppers)**

18:30 M. Küppers: ESA's Hera Mission at Mars

18:45 O. Prieto/Z. Martins: Report of the Expert Committee for the Large-Class Mission in Esa's Voyage 2050 Plan: Science theme "Moons of the Giant Planets"

19:00 A. Cardesin: Spanish ESA Mini-F Proposals: MACAWS - Mars Constellation for Weather Monitoring & SOVENIRO - Venus Atmosphere Occultations

19:10 A. Escalante: SPICE at ESA: A Geometry Framework Enabling Science Operations in Space Missions

19:30 Cocktail

Tuesday May 27th

Missions, Instruments & Technology 2

Chairs: S. Julve González + G. López Reyes

09:30 F. Rull: The RLS Instrument Onboard Exomars Rosalind Franklin Mission of Esa and Associated Science

09:40 C. Pérez Canora: Raman Spectroscopy At Inta: Innovation and Strategic Development for Planetary Exploration

09:50 I. Reyes-Rodríguez: Gas Analysis with Raman Spectroscopy: Advancing Detection on Mars, Venus and Beyond

10:00 L. De La Cruz-Karnavas: Method for Calibration Sample Manufacturing for Space Instrumentation and Regolith Characterization

10:10 A. G. Moral Inza: Phoenix for Pangaea: New Combined Handheld Instruments for ESA Astronauts Geological Training for Future Lunar In-Situ Exploration

10:30 Poster & Coffee Session: Missions, Instruments & Technology

11:10 Round Table: Public Technology Development

Chair: E. Díaz Catalá (Agencia Espacial Española)

Participants: V. Apestigue (INTA), J. Licandro (IAC), G.Lopez-Reyes (UVa), R. Duffard (IAA)

Missions, Instruments & Technology 3

Chairs: V. Apéstigue + D. Toledo

12:00 A. I. Gómez De Castro: Uriel: Back-Scattered Uv Radiation From Iced Bodies in the Solar System

12:10 M. Centenera: Marcot: a Novel Multi-Mode Photonic Lantern for Exoplanet Research

12:20 J. Samblas Iglesias: Control, Monitoring and Operation Software of a Miniaturized Lidar for Mars Atmospheric Research

12:30 M. Fernández Rodríguez: The Optical Challenge of Designing a Miniaturized Lidar for Mars Atmospheric Research (Mili)

12:40 J. M. Blanes: Power System Design Based on Commercial of the Shelf Components for Deep Space Missions

13:00 Lunch

14:30 Round Table: Private Technology Development

Chair: A. Catalán (Plataforma Aeroespacial Española - PAE)

Participants: F. García de Quirós (EMXYS), S. Campo Pérez (Indra Deimos), M.J. Brazal Aragón (GMV), V. Burgos (DHV)

Terrestrial Planets 1

Chairs: J. Reyes + M.A. López Valverde

15:20 A. Sánchez-Lavega: Mars Singular Clouds in the Southern Hemisphere Around Aphelion

15:30 J. Hernández-Bernal: Homogeneous Nucleation Explains Arsia Mons Elongated Cloud (AMEC) on Mars

15:40 E. Larsen: Mid Latitude Elongated Clouds on Mars

15:50 M. A. López Valverde: Martian Atmospheric Thermal Structure and Composition with Solar Occultation Measurements: Nomad & ACS on board TGO

16:00 A. Brines: Water Vapor Global Climatology From Exomars-TGO Nomad Observations and Comparison with Models

16:10 M. Á. Gamonal García-Galán: Martian Atmospheric Aerosol During Three Mars Years From Nomad/Tgo Observations

16:30 Poster & Coffee Session: Terrestrial Planets

Terrestrial Planets 2

Chairs: E. Larsen + A. Brines

17:10 R. Rodríguez-Veloso: Aerosol Optical Properties Observed by MEDA Radiation and Dust Sensor (Rds) At Jezero Crater, Mars

17:20 J. A. Manrique: Supercam's Raman Observations During the Margin Unit and Crater Rim Campaigns

17:30 E. Velasco Domínguez: Magnetic Survey in Rio Tinto Area: a Mars Analogue

17:40 F. Alberquilla: Palmarab (Palma Lunar Martian Analogue Laboratory): a Multi-Disciplinary Field Campaing in a Natural Testbed

17:50 J. Reyes-Guerrero: Variability of Clouds Properties and Temperature Profiles in Venus Atmosphere From Virtis/Vex Measurements

18:00 J. Álvarez-Lozano: Tectonic Stretching Estimation in Tessera Terrain, Venus

18:15 Demo UMA Space Robotics Lab

20:00 Junior Pint4Science Event (@Molly Malone)

Wednesday May 28th

Small bodies 1

Chairs: N. Attree + T. Santana-Ros

- 09:30 J. A. Fernández: The Current Mass Loss Rate of the Asteroid Belt: Considerations About Its Past Evolution
09:40 R. Gil-Hutton: Change in the Polarimetric Properties of Asteroids Due To Rotation
09:50 D. Morate: Asteroid Taxonomy From Oaj Surveys
10:00 F. Roig: Can Tidal Disruption Explain the Observed Population of Small Neos?
10:10 A. Campo-Bagatin: Collisions vs. Yorp: How Do Binary Asteroids form?
10:20 Po-Yen Liu: formation of Binary Asteroids Via Collisional Spin-Up Events

10:40 Poster & Coffee Session: Small Bodies

Small bodies 1 (cont)

Chairs: N. Attree + T. Santana-Ros

- 11:20 J. Ormó: May Impact-Generated Clastic Injections Cause Stratification in Rubble-Pile Asteroids?
11:30 N. E. Trógo: formation and Evolution of Narrow Rings Around Asteroids
11:40 S. R. Schwartz: Using Laboratory Data To Inform Granular Dynamics Simulations in Planetary Science
11:50 L. Parro: Clues About Small Bodies' Subsurfaces Through the Analysis and Comparison of Geological Features

Europlanet Activities

Iberian Awards

Planetary PhD & Master Thesis Awards

*ONLINE

Amateur Solar System Astronomy Awards

*ONLINE

12:50 PHOTO

13:00 Lunch

Round Table: Science-Industry Synergy

Chair: A. Moral (INTA)

Participants: C. Ortega (AVS), R. Lladró (TASE), J.M. Madariaga (UPV-EHU), CAB?

Small bodies 2

Chairs: I. Herreros + J.L. Rizos

- 15:20 J. Sánchez España: Sulfides and Phyllosilicates of the Ryugu Asteroid: Mineral Controls of S- and N-Species
15:30 L. Coloma: Chemical and Mineralogical Comparison of Mil 090030, Mil 090136, Mil 090032 and Mil 03346 Paired Meteorites
15:40 T. Santana-Ros: Hayabusa2# Mission Target 1998 Ky26 Preview: a Small Optically Bright Rapid Rotator
15:50 I. Marblanca Escalona: Activity of Comet 7p/Pons-Winnecke During the 2021 Apparition
16:00 A. Castellón Serrano: Tracking Meteors with the Uma-Sma Stations

16:20 Poster & Coffee Session: Small Bodies

Small bodies 3

Chairs: N. Pinilla + J.M. Gómez-Limón

- 17:00 P. Santos-Sanz: Jwst Reveals the Rings of the Centaur (10199) Chariklo Through a Stellar Occultation
17:10 V. De Or: Physical Characterization of the Centaur (54598) Bienor Using Cutting-Edge Technologies
17:20 J. M. Gómez-Limón: Size and Shape of the Trans-Neptunian Object (470316) 2007 Oc10: Comparison with thermal Data
17:30 A. Rodríguez Colucci: Estimation of the Viscosity of Trans-Neptunian Dwarf Planets Through the Synchronous Motion of Eris *ONLINE
17:40 A. Álvarez-Candal: NIR Absolute Magnitudes of Small Bodies
17:50 B. Maté: Porosity and Infrared Refractive Indices of H₂O:CO₂ Ices
18:00 M. Á. Satorre Aznar: Astrophysically Relevant Water Ice Density and Structure

19:30 [Exhibition Sociedad Malagueña de Astronomía \(@Ámbito Cultural El Corte Inglés\)](#)

21:00 [Dinner Cocktail \(@Patio de Beatas\)](#)

Thursday May 29th

Giant Planets, Moons and Rings

Chairs: D. Toledo + T. Del Rio

- 09:30 M. Sánchez Arregui: a Long-Term Study of Jupiter's Equatorial Atmosphere At the Upper Troposphere-Lower Stratosphere
09:40 R. Hueso Alonso: Jupiter Impacts in 2010-2025: Updated Impact Rate of Small Objects and Consequences for Juice Observations
09:50 A. Flix: Saturn's Atmospheric Winds Between 2021 and 2024
10:00 D. Toledo: Microphysical Modeling of CH₄ and H₂S Clouds in the Atmospheres of the Ice Giants
10:10 P. Betriú Roure: Enhancing Long-Term Stability in Planetary Atmospheric Models with Improved Dissipation Control
10:20 A. Mahieux: Simulation of Underground Cryovolcanism At Enceladus Considering Hydrogen
10:30 M. López Puertas: JWST/MIRI and NIRSPEC Spectroscopic Observations of Titan's Atmosphere

10:50 Poster & Coffee Session: Giant Planets + Astrobiology + Exoplanets

Astrobiology

Chairs: E. Mateo Martí + E. Velasco Domínguez

- 11:30 A. Anglés: Mars Analog Research: Insights From Four Analog Sites and Implications for Habitability and Biosignature Detection *ONLINE (TBC)
11:40 C. Cabada: Progress in the Study and Cultivation of Marine Tardigrades At the University of Vigo: Effects of Magnetic Field Alterations
11:50 S. Fernández: Evolution of Albedo and Spectral Reflectance in Antarctic Ice: Implications for the Study of Ice on Mars, Icy Moons and Pluto
12:00 H. Carrascosa: UV-Photoprocessing of Methane Ice
12:10 M. Mayoral-Yagüe: Expanding the Limits of Raman Analysis: SERS As a Tool for Future Planetary Exploration Missions
12:20 E. Mateo-Martí: Identification of Spectroscopic Fingerprints of Nucleic Bases Under Simulated Mars Conditions.
12:30 M. R. López-Ramírez: Stability of Biosignatures on Lichens After Space and Mars Like Conditions Studied By Raman Spectroscopy
12:40 G. M. Muñoz Caro: Mimicking Ice Processes in the Lab for the Interpretation of JWST Observations of Solar System Ices
12:50 R. Martín Doménech: Energetic Processing of Interstellar Ice Mantles Containing Sulfur

13:10 Lunch

Round Table: Planetary Exploration & In-Situ Resource Utilization

Chairs: R. Duffard (IAA), D. Morate (CEFECA)

Exoplanets

Chairs: A. Sánchez López + M.A.F. de Melo e Sousa

- 15:00 A. Canet: Ultraviolet Signatures From Stellar Wind-Planet Interactions in Earth-Like Exoplanets *ONLINE (TBC)
15:10 A. Sánchez López: Sub-Neptune Atmospheres: formation and Evolution of Potentially Habitable Worlds
15:20 R. Alves-Silva: Applications of the Three-Dimensional Creep Tide theory
15:30 A. Peláez-Torres: Tightest Constraints To Date on the Cloudy Atmosphere of GJ 436 B with CARMENES
15:40 H. Kasperer: Exoplanetary Interiors From Stellar Extremes
15:50 S. Iglesias Álvarez: Characterization of Transiting Exoplanets with One-Dimensional Convolutional Neural Networks *ONLINE
16:00 M. A. F. De Melo e Sousa: Doppler Tomography: a Novel Approach for Broadband Characterization of Exoplanet Atmospheres

Round Table: Iberoamérica

Chair: P. Benavidez (U. Alicante)

Participants: R. Gil-Hutton (UNSJ-CONICET), F. Roig (O.N. Rio Janeiro), J. Fernandez (Univ. Rep. Uruguay)

16:40 Final Debate

17:00 END