

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

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Monday May 26th

15:00	Welcome & Institutional session Rector Univ. Málaga, Director Escuela Ingenierías Industriales, J.M. Vadillo, A. Cardesín	
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
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	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. Cardesín: 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
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Tuesday May 27th

	Missions, Instruments & Technology 2 Chairs: S. Juve 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
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11:10	Round Table: Public Technology Development Chair: E. Díaz Catalá (Agencia Espacial Española) Participants: V. Apéstegui (INTA), J. Licandro (IAC), G. Lopez-Reyes (Uva), R. Duffard (IAA)
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	Missions, Instruments & Technology 3 Chairs: V. Apéstegui + 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. Sambias 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
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14:30	Round Table: Private Technology Development Chair: A. Catalán (Plataforma Aeroespacial Española - PAE) Participants: F. García de Quirós (EMXYS), S. Campo Perez (Indra Deimos), M.J. Brazal Aragón (GMV), V. Burgos (DHV)
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	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
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	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: PalmaLab (Palma Lunar Martian Analogue Laboratory): a Multi-Disciplinary Field Campaign 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
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20:00	Junior Pint4Science Event (@Molly Malone)
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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-Bagatín: 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. Ormό: May Impact-Generated Clastic Injections Cause Stratification in Rubble-Pile Asteroids?
11:30 N. E. Trdgolo: 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

12:00 **Europlanet Activities**

Iberian Awards

- Planetary PhD & Master Thesis Awards
Amateur Solar System Astronomy Awards

*ONLINE

*ONLINE

12:50 **PHOTO**

13:00 **Lunch**

14:30 **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. Maríblanca 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 Ori: 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
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

*ONLINE

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 Río

- 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 Ch_n and H_nS Clouds in the Atmospheres of the Ice Giants
10:10 P. Beltrú Roura: 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
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

14:30 Round Table: Planetary Exploration & In-Situ Resource Utilization

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

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
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 Exteriors
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

16:10 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