

Daily programme for room Andalucia 2

Room Andalucia 2 | Sun, 18 Sep 2022

EPEC1 | AbGradEPEC joint event

Conveners: Hayk Palabikyan, Hector-Andreas Stavrakakis, Noah Jäggi, Ruth-Sophie Taubner

10:00–16:00 **AbGradEPEC joint event**

CE10 | Chair training session

Conveners: Stavro Lambrov Ivanovski, Akos Kereszturi

17:40–18:00 **Chair training session**

CE2 | Diversity Keynote Talk – Let's talk about women astronomers and Wikipedia

Conveners: Arianna Piccialli, Solmaz Adeli

18:00–19:00 **Diversity Keynote Talk – Let's talk about women astronomers and Wikipedia**

Room Andalusia 2 | Mon, 19 Sep 2022

OPS1 | Ice Giant System Science and Exploration

Convener: Thibault Cavalié | Co-conveners: David H. Atkinson, Olivier Mouis, Alena Probst, Sushil K. Atreya, Mark Hofstadter, Leigh Fletcher, Nadine Nettelmann

Chairperson: Thibault Cavalié

- 10:00–10:15 EPSC2022-1237
Does the non-dipolar structure of Uranus' magnetic field produce a relatively weak proton radiation belt?
Adam Masters
- 10:15–10:30 EPSC2022-881
Evolution of the reservoir of volatiles in the protosolar nebula
Antoine Schneeberger, Olivier Mouis, Artyom Aguchine, and Jonathan Lunine
- 10:30–10:45 EPSC2022-166
Monsters of rock: are Uranus and Neptune rock giants?
Nicholas Teanby, Patrick Irwin, Lucy Wright, and Robert Myhill
- 10:45–11:00 EPSC2022-430
The Importance of Noble Gas Isotopic Composition for Understanding the Origins of the Ice Giants
Kathleen Mandt, Olivier Mouis, Jonathan Lunine, Amy Simon, Mark Hofstadter, Erin May, and Laura Mayorga
- 11:00–11:15 EPSC2022-56
Empirical Structure Models of Uranus and Neptune
Benno Neuenschwander and Ravit Helled
- 11:15–11:30 EPSC2022-1205
The Implications of Electrical Conductivity Models of Uranus and Neptune
Deniz Soyuer and Ravit Helled
- Coffee break
- 15:30–15:45 EPSC2022-477
Impact of the methane cycle in tropospheric convection on Neptune revealed by a cloud resolving model
Noe Clement, Jeremy Leconte, Aymeric Spiga, Gwenaél Milcareck, Sandrine Guerlet, and Franck Selsis
- 15:45–16:00 EPSC2022-205
A holistic aerosol model for Uranus and Neptune, including Dark Spots
Patrick Irwin, Nicholas Teanby, Leigh Fletcher, Daniel Toledo, Glenn Orton, Michael Wong, Michael Roman, Santiago Pérez-Hoyos, Arjuna James, and Jack Dobinson
- 16:00–16:15 EPSC2022-1034
Radiative heat sources in the stratosphere of Uranus and Neptune
Gwenaél Milcareck, Sandrine Guerlet, Franck Montmessin, Aymeric Spiga, Jérémy Leconte, Leigh N. Fletcher, Jan Vatan d'Ollone, Michael T. Roman, and Emmanuel Lellouch
- 16:15–16:30 EPSC2022-142
Ionization by Cosmic Rays of the Ice Giant Atmospheres
Gregorio J. Molina-Cuberos, **Olivier Witasse**, Daniel Toledo, and Sachchida Tripathi
- 16:30–16:45 EPSC2022-1263
The evolution of Neptune's arcs since Voyager-2. VLT/SPHERE observations of Neptune's ring arcs and the 2021 Neptune stellar occultation campaign
Damya Souami, Bruno Sicardy, Stéfan Renner, and Maud Langlois
- 16:45–17:00 EPSC2022-1245
Uranian Mid-Sized Icy Moons: Unique Targets of Exploration in the Outer Solar System
Paul Schenk, Richard Cartwright, Chloé Beddingfield, and Julie Castillo-Rogez

Coffee break

OPS3 | Icy ocean worlds: Past and future explorations

Convener: Alice Lucchetti | Co-conveners: Gabriel Tobie, Carly Howett, Frank Postberg, Federico Tosi

Chairperson: Federico Tosi

Ganymede

17:30–17:40 EPSC2022-134

Kinematic restoration of Ganymede's dark terrain

Maximilian Fabi, Thomas Kenkmann, Gerwin Wulf, **Namitha Baby**, Katrin Stephan, and Roland Wagner

17:40–17:50 EPSC2022-305

Uncovering the tectonic past of Ganymede through crater size frequency distribution and tidal Coulomb failure modeling at Nippur/Philus Sulci

Liliane Burkhard, Emily Costello, Bridget Smith-Konter, and Marissa Cameron

17:50–18:00 EPSC2022-743

Multi-frequency Radar Characterization of Ganymede's Near-surface

Kristian Chan, Cyril Grima, Jeffrey M. Moore, and Donald D. Blankenship

18:00–18:10 EPSC2022-987

Spectroscopy and compositional mapping of Ganymede with VLT

Oliver King, Leigh Fletcher, Fraser Clarke, and Andrea Hidalgo

18:10–18:20 EPSC2022-792

Evolution of Insoluble Organic Matter and H₂O mixtures Under Ganymede and Titan's Interior Conditions

Pauline Lévêque, Christophe Sotin, Bruno Bujoli, Olivier Bollengier, Clémence Queffelec, Erwan Le Menn, Adriana Clouet, Yves Marrocchi, and Gabriel Tobie

18:20–18:30 **Discussion**

Europa and Enceladus

Room Andalucia 2 | Tue, 20 Sep 2022

OPS3 | Icy ocean worlds: Past and future explorations

Convener: Alice Lucchetti | Co-conveners: Gabriel Tobie, Carly Howett, Frank Postberg, Federico Tosi

Chairperson: Frank Postberg

- 10:00–10:10 EPSC2022-307
Europa Clipper: exploring Europa's habitability
Robert Pappalardo, Bonnie Buratti, Haje Korth, Kate Craft, Ingrid Daubar, Samuel Howell, Rachel Klima, Erin Leonard, Alexandra Matiella Novak, and Cynthia Philips
- 10:10–10:20 EPSC2022-183
Detecting Europa's water plumes with JUICE's particle instruments
Hans L.F. Huybrighs, Rowan Dayton-Oxland, Thomas Winterhalder, Arnaud Mahieux, David Goldstein, Audrey Vorburger, André Galli, and Peter Wurz
- 10:20–10:30 EPSC2022-234
Impact of melt accumulation on tidal heat production in Europa's mantle
Mathilde Kervazo, Marie Běhounková, Gabriel Tobie, Gaël Choblet, and Caroline Dumoulin
- 10:30–10:40 EPSC2022-1167
Assessing the potential composition of Europa's subsurface ocean from water-rock interactions.
Nisha Ramkissoon, Susanne Schwenzer, Mark Fox-Powell, Alvaro Del Moral, Karen Olsson-Francis, and Victoria Pearson
- 10:40–10:50 EPSC2022-689
Large-scale dynamics and the fate of salts in Europa's icy shell
Tina Rückriemen-Bez, **Ana-Catalina Plesa**, Julia Kowalski, and Benjamin Terschanski
- 10:50–11:00 EPSC2022-301
Chemical composition of erupted brines on Europa
Elodie Lesage, Samuel M. Howell, Mariam Naseem, Marc Neveu, Mohit Melwani Daswani, and Steven D. Vance
- 11:00–11:10 EPSC2022-193
Analogue Experiments for the Mass Spectral Analysis of Organic Compounds from the Salt-rich Surface of Europa
Maryse Napoleoni, Fabian Klenner, Nozair Khawaja, Jon K. Hillier, and Frank Postberg
- 11:10–11:20 EPSC2022-150
Mapping the composition of Europa's young terrain features with SUDA
William Goode, Sascha Kempf, and Juergen Schmidt
- 11:20–11:30 **Discussion**

Coffee break

Chairperson: Carly Howett

- 12:00–12:10 EPSC2022-825
New insights into Europa's surface using Galileo/NIMS data and MCMC modeling
Guillaume Cruz Mermy, Frédéric Schmidt, François Andrieu, Ines Belgacem, Thomas Cornet, and Nicolas Altobelli
- 12:10–12:20 EPSC2022-359
Spectral variation of Europa's regional photometry
Ines Belgacem, Thomas Cornet, Frédéric Schmidt, Guillaume Cruz Mermy, François Andrieu, and Nicolas Altobelli
- 12:20–12:30 EPSC2022-577
Statistical analysis of manually segmented linear surface features in Galileo images of Europa
Caroline Haslebacher and Nicolas Thomas

- 12:30–12:40 EPSC2022-661
Assessing the detectability of subsurface events beneath European multi-ring basins with an interferometric radar sounder: Test-simulations on a Martian crater
Christopher Gerekos, Gregor Steinbrügge, Mark Haynes, Duncan Young, and Donald Blankenship
- 12:40–12:50 EPSC2022-466
The icy regoliths of Enceladus and Europa : experimental and numerical study
Benoit Jabaud, Riccardo Artoni, Gabriel Tobie, Erwan Le Menn, and Patrick Richard
- 12:50–13:00 EPSC2022-304
Experiments for the Identification of Bacterial Cell Material in Single Ice Grains Emitted by Enceladus and Europa
Fabian Klenner, Janine Bönigk, Maryse Napoleoni, Marie Dannenmann, Miriam Pavlista, Nozair Khawaja, Jon Hillier, Karen Olsson-Francis, and Frank Postberg
- 13:00–13:10 EPSC2022-1230
Entombment of microbial biomass within rapidly frozen fluid droplets relevant to the plumes of Enceladus
Mark Fox-Powell, Álvaro del Moral, Ben Stephens, Connor Dazley, David Slade, Grace Richards, Claire Cousins, and Karen Olsson-Francis
- 13:10–13:20 EPSC2022-877
Laboratory studies of irradiated Enceladus ice analogues
Tara-Marie Bründl, Harold Linnartz, Stéphanie Cazaux, and Ko-Ju Chuang
- 13:20–13:30 **Discussion**
- Lunch break
- Chairperson: Gabriel Tobie
- 15:30–15:40 EPSC2022-909
On the Composition of Organic-bearing Plume Ice Grains Detected during Cassini's E5 Enceladus Flyby
Nozair Khawaja, Jon Hillier, Lenz Nölle, Fabian Klenner, Maryse Napoleoni, and Frank Postberg
- 15:40–15:50 EPSC2022-686
Simulating Enceladus' plumes
Stephanie Cazaux, Ferdinand Schrijer, Tara Marie Bründl, Thom Verhoeff, and Tomás Baeta Campos da Rocha Fontes
- 15:50–16:00 EPSC2022-639
Detection of Phosphates Originating from Enceladus' Ocean by Cassini's Cosmic Dust Analyzer
Frank Postberg, Fabian Klenner, Zenghui Zou, Jonathan Karl Hillier, Nozair Khawaja, Lenz Nölle, and Jürgen Schmidt
- 16:00–16:10 EPSC2022-1235
Thermochemical modelling of the ocean composition of Enceladus from ocean floor to outer space
Rachael E. Hamp, Karen Olson Francis, Victoria K. Pearson, and Susanne P. Schwenzer
- 16:10–16:20 EPSC2022-219
Constraining Enceladus' heat flow between its tiger stripes
Carly Howett, Francis Nimmo, and John Spencer
- 16:20–16:30 EPSC2022-1067
Heat transfer in the ocean of Enceladus: connecting unconsolidated core and surface ice shell
Mathieu Bouffard, Gaël Choblet, Gabriel Tobie, Hagay Amit, Ondřej Čadek, and Filipe Terra-Nova
- 16:30–16:40 EPSC2022-1190
Constraining Enceladus' energy emission outside the South Polar Terrain
Georgina Miles, Carly Howett, and John Spencer
- 16:40–16:50 EPSC2022-1072
Preparing for Enceladus: What can seismology reveal?
Kat Dapré and Jessica C. E. Irving
- 16:50–17:00 **Discussion**

Icy Satellites

Room Andalusia 2 | Wed, 21 Sep 2022

OPS2 | Exploration of Titan

Conveners: Alice Le Gall, Anezina Solomonidou | Co-conveners: Ralph Lorenz, Conor Nixon, Marco Mastrogiuseppe, Sandrine Vinatier
Chairpersons: Anezina Solomonidou, Conor Nixon, Sandrine Vinatier

Ionosphere and Atmosphere

- 10:00–10:10 EPSC2022-447
Titan's atmospheric structure from Cassini/UVIS airglow observations
Panayotis Lavvas and Tommi Koskinen
- 10:10–10:20 EPSC2022-479
Seasonal variation of trace species in Titan's ionosphere
Maélie Coutelier, Thomas Gautier, Koyena Das, Joseph Serigano, and Sarah Horst
- 10:20–10:30 EPSC2022-655
The Energy and Momentum Balance of Titan's Stratospheric Polar Vortex as Simulated in a General Circulation Model
Nicholas A Lombardo and Juan M Lora
- 10:30–10:40 EPSC2022-716
Angular Momentum Transfer in Titan's Stratosphere
Cecilia Leung, Leslie Tamppari, Claire Newman, and Yuan Lian
- 10:40–10:50 EPSC2022-258
Isotopic ratios in Titan's HCN and HC3N derived from Cassini/CIRS observations
Sandrine Vinatier, Christophe Mathé, Bruno Bézard, Antoine Jolly, and Thomas Gautier
- 10:50–11:00 EPSC2022-130
Solar occultations observed by VIMS-IR: What haze and methane profiles reveal about Titan's atmospheric dynamics and climate.
Pascal Rannou, Maélie Coutelier, Sébastien Lebonnois, Luca Maltagliati, Emmanuel Rivière, Michaël Rey, and Sandrine Vinatier
- 11:00–11:10 EPSC2022-363
The D/H ratio in Titan's acetylene from high spectral resolution IRTF/Texes observations
Bruno Bézard, Sandrine Vinatier, Tommy Greathouse, Rohini Giles, Conor Nixon, Nicolas Lombardo, Antoine Jolly, and Daniela Despan
- 11:10–11:20 EPSC2022-431
Methane vertical profile in Titan's atmosphere
Thomas Gautier, Joseph Serigano, Koyena Das, Maélie Coutelier, Sarah Hörst, Sandrine Vinatier, Cyril Szopa, and Melissa Trainer
- 11:20–11:30 EPSC2022-445
The IPSL's Titan Global Climate Model : Towards a 3-Dimensional microphysical cloud model
Bruno de Batz de Trenquelléon, Pascal Rannou, Jérémie Burgalat, and Sébastien Lebonnois

Coffee break

Chairpersons: Alice Le Gall, Marco Mastrogiuseppe, Ralph Lorenz

- 12:00–12:05 **Heading to the surface**
- 12:05–12:15 EPSC2022-981
Turbulence in Titan's Planetary Boundary Layer explored by Large-Eddy Simulations with realistic physics
Aymeric Spiga, Maxence Lefèvre, and Sébastien Lebonnois
- 12:15–12:25 EPSC2022-452
Turbulence Models for Titan Exploration
Ralph Lorenz

- 12:25–12:35 EPSC2022-776
Chemical composition analysis of Titan's equatorial and midlatitude surface regions
Anezina Solomonidou, Ashley Schoenfeld, Michael Malaska, Rosaly Lopes, Athena Coustenis, Sam Birch, Alice Le Gall, and Bernard Schmitt
- 12:35–12:45 EPSC2022-657
Updated radiative transfer model for Titan in the near-infrared wavelength range: Validation on Huygens atmospheric and surface measurements and application to the analysis of the VIMS/Cassini observations of the Dragonfly landing area
Maël Es-Sayeh, Sébastien Rodriguez, Maélie Coutelier, Pascal Rannou, Bruno Bézard, Luca Maltagliati, Thomas Cornet, Bjorn Grieger, Erich Karkoschka, Benoit Seignovert, Stéphane Le Mouélic, Christophe Sotin, and Athena Coustenis
- 12:45–12:55 EPSC2022-749 | **MI**
Understanding coarse alluvial sediment on Titan: Abrasion and its consequences
Anthony Maue and Devon Burr
- 12:55–13:05 EPSC2022-182
Palaeoclimate of Titan with methane oceans and continents simulated by a global climate model
Tetsuya Tokano
- 13:05–13:15 EPSC2022-108
Capillarity processes at Titan and beyond
Daniel Cordier, Gérard Liger-Belair, David Bonhommeau, Thomas Séon, and Nathalie Carrasco

CE6 | Diversity Round Table

Conveners: Solmaz Adeli, Arianna Piccialli, Marina Molla

13:45–15:15 **Diversity Round Table**

OPS3 | Icy ocean worlds: Past and future explorations

Convener: Alice Lucchetti | Co-conveners: Gabriel Tobie, Carly Howett, Frank Postberg, Federico Tosi

Chairperson: Federico Tosi

- 15:30–15:40 EPSC2022-1050
Pending the next "ocean worlds" missions: Callisto's surface properties and composition from near-infrared telescopic data
Nicolas Ligier, Lucie Riu, John Carter, Wendy M. Calvin, Chris Paranicas, and François Poulet
- 15:40–15:50 EPSC2022-434
Sublimation driven convection in Sputnik Planitia on Pluto
Adrien Morison, Adrien Labrosse, and Gaël Choblet
- 15:50–16:00 EPSC2022-120
Are the Surface Textures of Pluto's Wright Mons and its Surroundings Exogenic?
Jeffrey M. Moore, Alan D. Howard, Oliver L. White, Orkan M. Umurhan, Kelsi N. Singer, and Paul M. Schenk
- 16:00–16:10 EPSC2022-454
Properties of Icy Surfaces from their Thermal Emission: the Mimas case.
Cécile Ferrari and Antoine Lucas
- 16:10–16:20 EPSC2022-731
Laboratory Research on Ice Rheology in support of Ocean World Exploration
Christine McCarthy, Maheenuz Zaman, Vishaal Singh, and Rob Skarbek
- 16:20–16:30 EPSC2022-967
Effect of ice-water phase change on the material transport between ice shell and subsurface ocean on icy moons of Jupiter and Saturn
Martin Kihoulou and Ondřej Čadek
- 16:30–16:40 EPSC2022-650
Study of convection in high-pressure ice layers of large icy moons and implications for habitability
Laëtitia Lebec, Stéphane Labrosse, Adrien Morison, and Paul J. Tackley

16:40–16:50 EPSC2022-756
Salty SeaFreeze: new experimental efforts toward a comprehensive thermodynamic representation for icy moons hydrospheres.
Baptiste Journaux, J. Michael Brown, Anna Pakhomova, Matthew Powell-Palm, Steve Vance, Olivier Bollengier, and Gabriel Tobie

16:50–17:00 **Discussion**

Coffee break

Chairperson: Gabriel Tobie

17:30–17:40 EPSC2022-729
Powering fire and ice with iron: Strong metallic core dissipation within the Galilean satellites
Samuel Howell, Steven Vance, Bruce Bills, Mohit Melwani Daswani, Marshall Styczinski, and Hamish Hay

17:40–17:50 EPSC2022-194
Project THOR: Test Results for a Full-Scale, Nuclear-Compatible Ocean World Ice Penetrator
Veronica Guerrero, William Stone, Victoria Siegel, Bartholomew Hogan, Kristof Richmond, John Harman, Krista Myers, Scott Lelievre, Chris Flesher, James Ralston, Neal Tanner, Nathan Wright, Justin Smith, Rachel Price, Josh Moor, Mimi Alexander, and Alberto Lopez

17:50–18:00 EPSC2022-337
Melting probe - thermomechanical modeling of descent rate
Jiří Malík and Ondřej Souček

18:00–18:10 EPSC2022-760
Enabling Subsurface Exploration of Ocean Worlds: Technology Developments for Sending Signals Through the Ice (STI)
Kate Craft, Emily Asenath-Smith, Robert Coker, Christopher German, Michael Jakuba, Rudi Lien, Ralph Lorenz, Christine McCarthy, G. Wesley Patterson, Alyssa Rhoden, Herman Sequeira, Mathew Silvia, Vishaal Singh, Robert Stilwell, and Matthew Walker

18:10–18:20 EPSC2022-1010
An RF Concept for Communicating with a Subsurface Cryobot on an Ocean World
Wes Patterson, Kate Craft, Ralph Lorenz, Hermann Sequeira, Robert Coker, and Robert Stilwell

18:20–18:30 **Discussion**

Room Andalucia 2 | Thu, 22 Sep 2022

OPS6 | Aerosols and clouds in planetary atmospheres

Convener: Panayotis Lavvas | Co-conveners: Nathalie Carrasco, Anni Määttä

- 10:00–10:15 EPSC2022-197
Aerosols in the atmospheres of the Giant Planets
Patrick Irwin, Nicholas Teanby, Leigh Fletcher, Daniel Toledo, Glenn Orton, Michael Wong, Michael Roman, Santiago Pérez-Hoyos, Jose Francisco Sanz Raquena, Arjuna James, Charlotte Alexander, and Jack Dobinson
- 10:15–10:25 EPSC2022-244
Regional mapping of aerosol population and surface albedo of Titan by the massive inversion of the Cassini/VIMS dataset
Rodriguez Sébastien, Es-sayeh Maël, Cornet Thomas, Maltagliati Luca, Appéré Thomas, Rannou Pascal, Coutelier Maélie, Le Mouélic Stéphane, Sotin Christophe, Barnes Jason W., and Brown Robert H.
- 10:25–10:40 EPSC2022-990
Heterogeneous Reactivity in the Atmosphere of Rocky Planets
Jerome Lasne
- 10:40–10:50 EPSC2022-448
Heterogeneous chemistry on Titan : Evolution of Titan's tholins through time with gas phase chemistry
Zoé Perrin, Nathalie Carrasco, Nathalie Ruscassier, Julien Maillard, Isabelle Schmitz Afonso, Thomas Drant, Ludovic Vettier, and Guy Cernogora
- 10:50–11:00 EPSC2022-246
Exploring in the Laboratory the Impact of Low Energy Oxygen Ions on Titan's Aerosols
Julia Shouse, Thibault Launois, Naïla Chaouche, Cédric Wolters, Philippe Boduch, Eric Quirico, Fabien Stalport, Laurène Flandinet, François-Régis Orthous-Daunay, Hervé Cottin, and **Véronique Vuitton**
- 11:00–11:10 EPSC2022-665
Dust climatology from NOMAD UVIS channel
zachary flimon, justin erwin, Ann Carine vandaele, lori Neary, arianna piccialli, loic trompet, yannick willame, sophie bauduin, frank daerden, ian thomas, bojan ristic, jon mason, cedric depiesse, manish patel, giancarlo bellucci, and jose juan lopez moreno
- 11:10–11:20 EPSC2022-1087
Exoplanetary cloud retrieval using YunMa in transit spectroscopy
Sushuang Ma, Quentin Changeat, Ahmed Al-Refaie, Yuichi Ito, and Giovanna Tinetti
- 11:20–11:30 EPSC2022-328
Sensitivity of hot-Jupiter haze retrieval on eddy parameterization
Anthony Arfaux and Panayotis Lavvas

Coffee break

OPS4 | Jupiter and Giant Planet System Science: New Insights From Juno

Convener: Scott Bolton | Co-conveners: Yamila Miguel, Yasmina M Martos, Corentin Louis, Stavros Kotsiaros, Kimberly Moore
 Chairperson: Corentin Louis

- 12:00–12:10 EPSC2022-95
Jovian Satellite and Ring Observations from the Juno Stellar Reference Unit, plus Plans for the Dark Side Perijoves
Heidi Becker, Meghan Florence, Martin Brennan, Candice Hansen, Paul Schenk, Michael Ravine, John Arballo, Scott Bolton, Jonathan Lunine, Alexandre Guillaume, and James Alexander
- 12:10–12:20 EPSC2022-145
Validation of ASIMUT-ALVL against observational data of Jupiter's atmosphere
Miriam Estefanía Cisneros González, Manuel López-Puertas, Justin Erwin, Ann Carine Vandaele, Clément Lauzin, François Poulet, and Séverine Robert

- 12:20–12:30 EPSC2022-174
Exploring the depth of weather storms and vortices in Jupiter's atmosphere
Scott Bolton and the Juno MWR Science Team
- 12:30–12:40 EPSC2022-220 | **MI**
Bolide Impacts in Jupiter's Atmosphere in 2020-2021
Ricardo Hueso, Marc Delcroix, Agustín Sánchez-Lavega, Mikel Sánchez-Arregui, Csaba Palotai, and Mark Boslough
- 12:40–12:50 EPSC2022-221
Jupiter's banded circulation through the eyes of VLT/ESPRESSO
José Eduardo Silva, Pedro Machado, Francisco Brasil, Ruben Gonçalves, and Miguel Silva
- 12:50–13:00 EPSC2022-257
Preliminary atmospheric study of Jupiter using ISO/SWS data
José Ribeiro, Pedro Machado, Santiago Pérez-Hoyos, João Dias, and Patrick Irwin
- 13:00–13:10 EPSC2022-324
Formation and structure of hazes over Jupiter's Great Red Spot
Asier Anguiano-Arteaga, Santiago Pérez-Hoyos, and Agustín Sánchez-Lavega
- 13:10–13:20 EPSC2022-355
ALMA observations of the spatial distribution of CO and HCN in the stratosphere of Jupiter
Thibault Cavalié, Ladislav Rezac, Raphael Moreno, Emmanuel Lellouch, Thierry Fouchet, Bilal Benmahi, Thomas K. Greathouse, James A. Sinclair, Vincent Hue, Paul Hartogh, Michel Dobrijevic, Nathalie Carrasco, and Zoé Perrin
- 13:20–13:30 EPSC2022-427
Revisiting Planetesimal Accretion onto Proto-Jupiter
Sho Shibata, Ravit Helled, and Hiroshi Kobayashi
- Lunch break
- Chairperson: Jack Connerney
- 15:30–15:40 EPSC2022-475 | **MI**
Juno Characterisation of Cyclonic "Folded Filamentary Regions" within Jupiter's Polar Domains
Leigh Fletcher, Fabiano Oyafuso, Glenn Orton, Zhimeng Zhang, Shawn Brueshaber, Michael Wong, Cheng Li, Alessandro Mura, Davide Grassi, Henrik Melin, Steve Levin, Scott Bolton, John Rogers, and Shannon Brown
- 15:40–15:50 EPSC2022-534
Effect of magnetospheric disturbances on Jovian radio emissions: an in situ case study from Juno data
Corentin Louis, Caitriona Jackman, Aoife O'Kane Hackett, Elliot Devon-Hurley, William Kurth, George Hospodarsky, Philippe Louarn, Frederic Allegrini, John Connerney, Dale Weigt, Sean McEntee, Alexandra Fogg, James Waters, and Scott Bolton
- 15:50–16:00 EPSC2022-535
Investigating Thermal Contrasts Between Jupiter's Belts, Zones, and Polar Vortices with VLT/VISIR
Deborah Bardet, Pdraig Donnelly, Leigh N. Fletcher, Arrate Antuñano, Michael T. Roman, Glenn S. Orton, Sandrine Guerlet, Henrik Melin, and Jake Harkett
- 16:00–16:10 EPSC2022-855
The role of phyllosilicates in shaping the Galilean moons' density gradient
Olivier Mouis, Antoine Schneeberger, Jonathan Lunine, Christopher Glein, Alexis Bouquet, Steven Vance, and Vassilissa Vinogradoff
- 16:10–16:20 EPSC2022-267
What the JADE electron and ionospheric measurements told us about the aurora and atmosphere of Ganymede
J. Hunter Waite, Philip Valek, Thomas Greathouse, Frederic Allegrini, Robert Ebert, Randall Gladstone, and Scott Bolton
- 16:20–16:30 EPSC2022-719
Field line resonances in Ganymede's magnetosphere observed by Juno
Yasmina M Martos, Norberto Romanelli, Jared Espley, Jack Connerney, and Stavros Kotsiaros

- 16:30–16:40 EPSC2022-691
Io hot spots detection as revealed by JUNO/JIRAM data
Francesca Zambon, Alessandro Mura, Julie Rathbun, Rosaly Lopes, Federico Tosi, Roberto Sordini, Raffaella Noschese, Alberto Adriani, Mauro Ciarniello, Gianrico Filacchione, Davide Grassi, Giuseppe Piccioni, Christina Plainaki, Giuseppe Sindoni, Diego Turrini, Shawn Brooks, Candice Hansen-Koharcheck, and Scott Bolton
- 16:40–16:50 EPSC2022-733 | **MI**
Dissecting Jupiter's Thunderstorms: Results from JIRAM, JunoCam, MWR and Earth-Based Observations
Shawn Brueshaber, Glenn Orton, Zhimeng Zhang, Fabiano Oyafuso, Alessandro Mura, Davide Grassi, Gerald Eichstadt, Candice Hansen, Leigh Fletcher, Shinji Mizumoto, Thomas Momary, Steve Levin, and Scott Bolton
- 16:50–17:00 EPSC2022-741
Closed Fluxtubes and Proton Conics in Jupiter's Polar Cap
Jamey Szalay, George Clark, George Livadiotis, David McComas, Don Mitchell, Jamie Rankin, Ali Sulaiman, Frederic Allegrini, Fran Bagenal, Rob Ebert, Randy Gladstone, Bill Kurth, Barry Mauk, Phil Valek, Rob Wilson, and Scott Bolton
- Coffee break
- Chairperson: Yasmina M Martos
- 17:30–17:40 EPSC2022-761
Exploring the Depth of Planetary-Scale Changes in Jupiter from Juno Microwave Radiometer Observations
Glenn Orton, Leigh Fletcher, Fabiano Oyafuso, Cheng Li, Zhimeng Zhang, Shawn Brueshaber, Michael H. Wong, Thomas Momary, Steven Levin, Scott Bolton, Kevin Baines, Emma Dahl, and James Sinclair
- 17:40–17:50 EPSC2022-817
Modelling the full 2-5 μm Juno JIRAM spectral range with NEMESIS: Zonal Profiles of Jupiter's Aerosols, Condensables, and Disequilibrium Species
Henrik Melin, Leigh Fletcher, Pat Irwin, Davide Grassi, and Alessandro Mura
- 17:50–18:00 EPSC2022-843
The shape of Jupiter and Saturn based on winds, occultations and gravity measurements
Eli Galanti, Maria Smirnova, Yohai Kaspi, and Tristan Guillot
- 18:00–18:10 EPSC2022-891
Reproducing the composition of Jupiter's envelope from the gas phase of the protosolar nebula
Artyom Aguichine, Olivier Mousis, and Jonathan Lunine
- 18:10–18:20 EPSC2022-943
Numerical simulations demonstrating Eddy-driven jets and meridional circulation cells on gas giants
Keren Duer, Eli Galanti, and Yohai Kaspi
- 18:20–18:30 EPSC2022-975
A revision of the CH₄ concentration in Jupiter's upper atmosphere from near-IR measurements
Manuel López-Puertas, Alejandro Sánchez-López, Maya García-Comas, Bernd Funke, Thierry Fouchet, and Ignas Snellen

Room Andalusia 2 | Fri, 23 Sep 2022

SB5 | Tools for characterizing planetary and small bodies surfaces, atmospheres, and dust particles (Imagery, photometry, spectroscopy, spectrophotopolarimetry)

Conveners: Oleksandra Ivanova, Frédéric Schmidt | Co-conveners: Stefano Bagnulo, Ludmilla Kolokolova, Johannes Markkanen, Olga Muñoz, Olivier Poch, A.Chantal Levasseur-Regourd, Stéphane Erard, Antti Penttilä, Maria Gritsevich

Chairpersons: Olivier Poch, Ludmilla Kolokolova

Laboratory measurement

- 10:00–10:20 EPSC2022-512 | **MI**
Reflectance properties of analogues for small bodies and planetary surfaces. Overview of experimental characterizations at the University of Bern
Antoine Pommerol, Lucas Patty, Stefano Spadaccia, Lukas Affolter, Patricio Becerra, Holly Capelo, Romain Cerubini, Camila Cesar, Tatiana Drozhzhova, Clément Feller, Kristina Kipfer, Linus Stoeckli, Adomas Valantinas, Zuriñe Yoldi, and Nicolas Thomas
- 10:20–10:30 EPSC2022-821
Hyperfine grains can explain altogether the Vis-NIR spectral slope, MIR emissivity, and V-band polarimetric phase curves of primitive small bodies
Olivier Poch, Robin Sultana, Pierre Beck, Stefano Spadaccia, Lucas Patty, Antoine Pommerol, Eric Quirico, and Bernard Schmitt
- 10:30–10:40 EPSC2022-516
Small phase angle polarization properties of regolith-like materials - the "Mixing Effect"
Stefano Spadaccia, Lucas Patty, Holly Larson Capelo, Nicolas Thomas, and Antoine Pommerol
- 10:40–10:50 EPSC2022-740
Characterizing cometary dust grains with polarimetry
Daniel Guirado, Olga Muñoz, Elisa Frattin, Juan Carlos Gómez Martín, Julia A. Martikainen, Fernando Moreno, Teresa Jardiel, Marco Peiteado, and Amador C. Caballero
- 10:50–11:00 EPSC2022-840
Spectral behavior of regolith analogues weathered by heating under reducing conditions.
Jeremie Lasue, Patrick Pinet, Pierre Beck, Mike Toplis, Pascal Munsch, and Marine Oustric
- 11:00–11:10 EPSC2022-1082
Cometary Physics Laboratory: spectrophotometric experiments
Clement Feller, Antoine Pommerol, Anthony Lethuillier, and Bastian Gundlach
- 11:10–11:20 EPSC2022-951 | **MI**
The ICAPS & Laplace experiments to investigate the initial stage of planet formation
Ingo von Borstel, Jürgen Blum, Rainer Schräpler, Coskun Aktas, Daniyar Balapanov, Andrei Vedernikov, Julie Brisset, Noah Molinski, and Ben Schubert
- 11:20–11:30 EPSC2022-334
Dichotomy of Cometary Outgassing
Murthy Gudipati, Benjamin Fleury, Martin Rubin, and Kathrin Altwegg

Coffee break

Chairpersons: Frédéric Schmidt, Stéphane Erard

- 12:00–12:20 EPSC2022-273 | **MI**
The Entire Visible Sky (EnVisS) imager for the Comet Interceptor ESA mission
Vania Da Deppo, Vincenzo Della Corte, Paola Zuppella, Simone Nordera, Claudio Pernechele, Luisa M. Lara, José M. Castro, Jaime Jiménez, Ignacio Martínez, and Jaan Praks and the EnVisS Team
- 12:20–12:30 EPSC2022-539
A new spectral database for silicate glasses: a fundamental resource to interpret characteristics of volcanic terrains on planetary bodies
Alessandro Pisello, Angelo Zinzi, Matteo Bisolfati, Massimiliano Porreca, and Diego Perugini

- 12:30–12:40 EPSC2022-950
Reference emission spectral data for astronomical observations
Juraj Orszagh, Barbora Stachova, Jan Blasko, Stefan Matejčík, Dennis Bodewits, and Steven Bromley
- Numerical Modelling**
- 12:40–12:50 EPSC2022-151
Light backscattering from numerical analog of planetary regoliths
Yevgen Grynko, Yuriy Shkuratov, Samer Alhaddad, and Jens Foerstner
- 12:50–13:00 EPSC2022-793
Extension of RT-CB code to dense discrete random media
Johannes Markkanen
- 13:00–13:10 EPSC2022-415
Modeling the effect of particle size distribution on spectra for optically large particles
Antti Penttilä, Julia Martikainen, and Karri Muinonen
- 13:10–13:20 EPSC2022-547
Roughness of planetary surfaces: Hapke theory and statistical multi-facet algorithm applied to dwarf planet Ceres and comet 67P data
Andrea Raponi, Mauro Ciarniello, Gianrico Filacchione, Fabrizio Capaccioni, Maria Cristina De Sanctis, and Alessandro Frigeri
- 13:20–13:30 EPSC2022-789
Analysis of a particle in the surroundings of 67P using ImageJ
Julia Marín-Yaseli de la Parra, Michael Kueppers, Jacint Roger, and and the Osiris Team

Lunch break

Chairpersons: Oleksandra Ivanova, Yuna Kwon

Observation campaign

- 15:30–15:40 EPSC2022-190
Near-infrared spectropolarimetry of Oort-cloud comet C/2020 T2 (Palomar): Can polarimetry reflect any gradients in the Oort cloud?
Yuna Kwon, Joseph Masiero, and Johannes Markkanen
- 15:40–15:50 EPSC2022-216
Complex study of hyperbolic comet C/2013 X1 (PANSTARRS)
Olena Shubina and Oleksandra Ivanova
- 15:50–16:00 EPSC2022-1111
Unusual polarimetric properties for interstellar comet 2I/Borisov
Stefano Bagnulo, Alberto Cellino, Ludmilla Kolokolova, **Rok Nežič**, Toni Santana-Ros, Galin Borisov, Apostolos Christou, Philippe Bendjoya, and Maxime Devogèle
- 16:00–16:10 EPSC2022-503
Spitzer-IRS spectral maps of 67P/Churyumov-Gerasimenko
Manuela Lippi, Johannes Markkanen, and Jessica Agarwal
- 16:10–16:20 EPSC2022-1094
The Return of Rosetta's Comet: Photometric and Polarimetric Observations of Comet 67P/Churyumov-Gerasimenko in its 2021-22 Apparition.
Zuri Gray, Stefano Bagnulo, Hermann Boehnhardt, Olga Muñoz, Geraint Jones, Pedro José Gutiérrez, Ludmilla Kolokolova, Yuna Kwon, Luisa Lara, Julia Martikainen, Fernando Moreno, Rok Nežič, and Colin Snodgrass
- 16:20–16:30 EPSC2022-203
Dust environment of active asteroid (248370) 2005 QN173
Oleksandra Ivanova, Igor Luk'yanyk, and Marek Husárik

16:30–16:40 EPSC2022-809

Polarization of Jupiter's large moons

Vera Rosenbush, Nikolai Kiselev, Karri Muinonen, Lioudmila Kolokolova, Alexandr Savushkin, and Nikolay Karpov

16:40–16:50 EPSC2022-1096

MINERALOGY OF THE SURFACE OF CERES FROM 1 μm ABSORPTION

Filippo Giacomo Carrozzo, Maria Cristina De Sanctis, Andrea Raponi, Mauro Ciarniello, Eleonora Ammannito, Federico Tosi, and Marco Ferrari

16:50–17:00 EPSC2022-455

Modelling dust particle dynamics in the coma of 67P/Churyumov-Gerasimenko

Pablo Lemos