

EUROPLANET PRESS NOTICE
1ST MEDIA ANNOUNCEMENT FOR EUROPEAN PLANETARY
SCIENCE CONGRESS (EPSC) 2014

Date: 01st of August 2014

Ref. PN: EPSC14/01

Issued by: Livia Giacomini - EPSC2014 Press Officer Livia.giacomini@iaps.inaf.it

EUROPEAN PLANETARY SCIENCE CONGRESS 2014
1ST MEDIA ANNOUNCEMENT

The European Planetary Science Congress (EPSC) 2014 will take place from Sunday 07 to Friday 12 September 2014, at the Centro de Congressos do Estoril, Cascais, Portugal.

EPSC is the major European meeting on planetary science and in 2014, the programme will include more than 50 sessions and workshops, with more than 800 scheduled abstracts for oral presentations and posters sessions. Last year's conference, held in London, attracted almost 1000 scientists participating from Europe and around the world.

Highlights of the meeting will include the first results of the European Space Agency's Rosetta mission obtained at comet 67P/Churyumov-Gerasimenko, which will be presented in a special session on Monday 08 September and in other sessions during the week. The scientific programme will cover the entire spectrum of planetary science, including 10 years of exploration with Cassini-Huygens, commercial exploration of asteroids and comets, the search for exoplanets and the emergence of life in the Universe.

On Tuesday 09 September, there will be a 'Town Hall' meeting to discuss how places on Earth that are analogues for other planets and moons can be used as a laboratory for planetary research and to support future missions.

Co-located with EPSC2014, Cascais will also host the 'Astronomy Alliance Education Meeting 2014: High Engagement and Deep Learning of Math, Science and Technology through Astronomy Education' by Global Hands-on Universe:

<http://handsonuniverse.org/astroeducation/>.

To complement the scientific programme, there will be some related public events held across the city, with the support of the Municipality of Cascais.

Details of the Congress and a full schedule of EPSC 2014 scientific sessions and events can be found at the official website:

<http://www.epsc2014.eu/>

Further information will be circulated a few weeks before the meeting, including press notices on presentations that may be of special interest (subject to embargo) and details for the press.

EPSC has a distinctively interactive style, with a mix of talks, workshops and posters, intended to provide a stimulating environment for discussion.

EPSC 2014 is organised by **Europlanet**, and **Copernicus Meetings**.

MEDIA REGISTRATION

Media representatives are cordially invited to attend.

Press room facilities will be available for the duration of the conference from 9 am on Monday 8 September through to 3 pm on Friday 12 September

Media registration is free. Any bona fide media delegates can pre-register by e-mailing Livia.giacomini@iaps.inaf.it

(Advance registration is not essential but encouraged).

FURTHER INFORMATION EUROPLANET

Since 2005, the Europlanet project has provided European's planetary science community with a platform to exchange ideas and personnel, share research tools, data and facilities, define key science goals for the future and engage stakeholders, policy makers and European Citizens with planetary science.

www.europlanet-eu.org

EUROPLANET PRESS NOTICE
MEDIA REMINDER FOR EUROPEAN PLANETARY
SCIENCE CONGRESS (EPSC) 2014

Date: 01st of September 2014

Ref. PN: EPSC14/02

Issued by: Livia Giacomini - EPSC2014 Press Officer Livia.giacomini@iaps.inaf.it

EUROPEAN PLANETARY SCIENCE CONGRESS 2014
MEDIA REMINDER

The European Planetary Science Congress (EPSC) 2014 begins next week: about 800 scientists from all over the world will meet at Cascais, Portugal, at the "Centro de Congressos do Estoril", from Sunday 07 to Friday 12 September 2014. EPSC is the major European meeting on planetary science with 52 sessions and workshops and about 800 abstracts for oral presentations and posters submitted. The 2014 programme will cover the full spectrum of research concerning our own Solar System and those orbiting other stars, including the latest results of the European Space Agency's Rosetta mission.

SESSION HIGHLIGHTS FOR THE MEDIA

- Rosetta (special Session) SB0

Mon, 08 Sep, 11:00–12:30 / 14:00–15:30 / Room Jupiter

A special session with invited talks devoted to presenting the first (and latest) results of the Rosetta mission obtained at the comet 67P/Churyumov-Gerasimenko, after its rendez-vous on the 6th of August.

- Celebrating 10 years of exploration with Cassini-Huygens GP3

Tue, 09 Sep, 09:00–12:30 / 14:00–17:30 / Room Jupiter

Wed, 10 Sep, 09:00–12:30 / 14:00–15:50 / Room Saturn

A session to highlight the major discoveries of Cassini-Huygens in its 10 years of exploration of the Saturn System through a series of invited overview talks.

- Town Hall Meeting on Planetary Analogues TM1

Tue, 09 Sep, 09:00–12:30 / Room Mars

An open, Town Hall type meeting about Mars and, more in general, planetary terrestrial analogues organized by the International Space Exploration Coordination Group (ISECG), a committee of space agencies to coordinate planetary exploration.

Many sessions will be of sure interest to the media. Among others: highlights on future planetary missions and instruments (MTI1, Mon. 08 and Tue. 09), the latest studies on Mars (TP4.1, Wed. 10 and Thu. 11) and Venus (TP3, Thu. 11 and Fri. 12), lunar science and exploration (TP5, Thu. 11 and Fri. 12), theoretical and laboratory results in asteroids' science (SB1, Thu. 11) and for Dawn and Vesta, the two targets of Dawn mission (SB4, Wed. 10), the search of planetary habitability in the Solar System and beyond (AB2, Fri. 12),

the revolution made by Gaia telescope in the field of asteroids' science (SB2, Fri. 12), commercial exploration of asteroids and comets (SB11/MTI9, Fri. 12).

Full details of EPSC 2014 can be found at the meeting website: <http://www.epsc2014.eu/>

Press releases on presentations of special interest to the media will be circulated during the meeting (these may be subject to embargo) and will be posted at www.europlanet-eu.org/epsc2014

ASTRONOMY EDUCATION ALLIANCE MEETING 2014

Co-located with EPSC2014, Cascais will also host the **Astronomy Education Alliance Meeting 2014: High Engagement and Deep Learning of Math, Science and Technology through Astronomy Education** by Global Hands-on Universe (<http://handsonuniverse.org/astroeducation/>). The Meeting is sponsored by the municipality of Cascais.

ACTIVITIES FOR THE PUBLIC

To complement the programme of EPSC2014 and the Astronomy Education Alliance Meeting, some activities for the public are being organized:

9th of September (21:00 - 22:00) "Rosetta - Europe's comet chaser", a free public talk by Matt Taylor (ESA, Rosetta Project Scientist), moderated by Pedro Russo (Astronomer, University of Leiden) at the Pavilion of Knowledge - Ciência Viva in Lisbon (<http://www.pavconhecimento.pt>);

13th of September 2014 (21:00 - 22:30) a public lecture with Babak Tafeshi (Astrophotographer, National Geographic Internacional and The World at Night) followed by public night sky observation with telescope;

14th of September (10:00-11:30) a public workshop moderated by Pedro Russo, with Babak Tafeshi and Sævar Helgi Bragason (astronomer, voted "Most Promising Young 2014" in Iceland).

The two events are part of "**Cosmic Light**", an open workshop about the International Year of Light 2015 that will take place at the Museum of Light (<http://www.museudaluz.org.pt/101000/2/index.htm>), with the organization of the University of Leiden (Netherlands), the Universe Awareness and The World at Night.

The Museum of Light is located in the beautiful region of Alentejo, a 2.5-hour drive from Cascais/Lisbon, and is partner of the Dark Skies Alqueva project (<http://www.darkskeyalqueva.com/eng/>).

MEDIA REGISTRATION

Media representatives are cordially invited to attend EPSC. Media registration* is free. Press room facilities will be available for the duration of the conference from 9 am on Mon. 8 through to 3 pm on Fri. 12

Any bona fide media delegates can pre-register by e-mailing Livia.giacomini@iaps.inaf.it

EPSC is on **Twitter @EPSC_2014**

** Advance registration is not essential but encouraged*

FURTHER INFORMATION EUROPLANET

Since 2005, the Europlanet project has provided European's planetary science community with a platform to exchange ideas and personnel, share research tools, data and facilities, define key science goals for the future and engage stakeholders, policy makers and European Citizens with planetary science.

www.europlanet-eu.org

EUROPLANET PRESS NOTICE FOR EUROPEAN PLANETARY SCIENCE CONGRESS (EPSC) 2014

Date: 08th of September 2014

Ref. PN: EPSC14/03

Issued by: Livia Giacomini - EPSC2014 Press Officer Livia.giacomini@iaps.inaf.it

Embargo 08 SEPTEMBER at 12:30 (GMT+1)

Science Contact Person:

David Vokrouhlicky (Paolo Farinella Prize 2014 winner)
Charles University, Prague, Czech Republic
vokrouhl@cesnet.cz

FARINELLA PRIZE 2014 AWARDED TO CZECH PHYSICIST DAVID VOKROUHLICKY

The fourth "Paolo Farinella Prize" is being awarded in 2014 to Prof David Vokrouhlicky (Charles University, Prague), a Czech dynamicist who has made major contributions to our understanding of the dynamics and physics of solar system, including how pressure from solar radiation affects the orbits of both asteroids and artificial satellites. The Prize will be presented on Monday 8th of September, during the opening ceremony of the European Planetary Science Congress (EPSC) 2014, at the Centro de Congressos do Estoril, Cascais, Portugal. The ceremony includes a public lecture by Vokrouhlicky on the topic "non gravitational forces in the Solar System".

The prize was established in 2010 to honor the memory of the Italian scientist Paolo Farinella (1953–2000) and each year, it acknowledges an outstanding researcher not older than 47 years (the age of Farinella when he passed away) who has achieved important results in one of Farinella's fields of work. Vokrouhlicky not only collaborated with Farinella as a scientist, but also co-authored with him and Bruno Bertotti "Physics of the Solar System", a textbook that stands as a comprehensive compendium of the advances in the field. Vokrouhlicky and Farinella were the first to set out a unified version of the Yarkovsky effect, a small but significant force experienced by small asteroids caused when the surface absorbs sunlight and then re-emits that energy as heat. At that time when radiation forces were seen relevant only for dust particles, Vokrouhlicky and Farinella set a new paradigm by showing that these tiny forces could drive minor bodies into the internal region of the solar system and be responsible for triggering their capture into resonances.

Before receiving the prize Vokrouhlicky commented: "I had the privilege to collaborate with many splendid scientists over the past twenty years and I certainly would achieve only a small fraction of my results without their contribution. So, undoubtedly, I feel like sharing the prize with many of them. That said, Paolo Farinella should be in the first place among them, since I owe him enormously for bringing me from other areas of astronomy to planetary science and helping me to

do the first steps in this field. So in one sense I am sad I cannot share the honor of receiving this prize with him. On the other hand, the fact that the prize holds his name is special to me. While certainly Paolo's memory continues in his work, I am also very happy that "his" prize exists and helps to recall this extraordinary scientist and gentle man to a wider community of planetary researchers and astronomers today.”

ATTACHED FILES



David Vokrouhlicky, Paolo Farinella Prize 2014 winner, at EPSC2014. Credits: EPSC 2014
Link to image: http://www.europlanet-eu.org/images/epsc2014/david_vokrouhlicky.jpg

MORE ABOUT THE PAOLO FARINELLA PRIZE

The Paolo Farinella prize was established to honor the memory and the outstanding figure of Paolo Farinella (1953–2000), an extraordinary scientist and person, in recognition of significant contributions given in the fields of interest of Farinella, which span from planetary sciences to space geodesy, fundamental physics, science popularization, and security in space, weapons control and disarmament. The winner of the prize is selected each year on the basis of his/her overall research results in a chosen field, among candidates with international and interdisciplinary collaborations, not older than 47 years, the age of Farinella when he passed away, at the date of April 30, 2014. The prize has first been proposed during the "International Workshop on Paolo Farinella the scientist and the man", held in Pisa in 2010, supported by the University of Pisa and by IAPS-INAF (Rome). The first "Paolo Farinella prize" was awarded in 2011 to William Bottke, for his contribution to the field of "physics and dynamics of small solar system bodies". In 2012 the prize went to John Chambers, for his contribution to the field of "formation and early evolution of the solar system " and in 2013, to Patrick Michel, for his contribution to the field of "collisional processes in the Solar System”.

MORE ABOUT David Vokrouhlicky , 2014 WINNER

David Vokrouhlicky, (Charles University, Prague, Czech Republic) is a dynamicist who has not only made major contributions to crucial questions in the physics and dynamics of the Solar System, but has also brought forward new ideas that are now the basis for broader explorations in the field of

small bodies.

Vokrouhlicky was a close collaborator and friend of Paolo Farinella, sharing his interest in the dynamics of both artificial and natural celestial bodies, exploiting this interdisciplinary approach to enrich both disciplines. In the 90's their collaboration with the group at the Observatoire de la Cote d'Azur (CERGA) led to numerous fundamental papers dealing with how non-gravitational perturbations affect the geodetic satellite LAGEOS (solar radiation pressure and spin-orbit coupling). This spacecraft plays a key role in the realization of Earth's reference frame.

These early works on artificial space-based objects were critical in setting the stage for their papers on how non-gravitational thermal forces modify the orbits and spin states of asteroids. Their work provided dynamicists a new way to understand the migration of small bodies across the main asteroid belt and onto pathways that could take them to Earth.

More specifically, Vokrouhlicky and Farinella were pioneers in developing a new unified version of the diurnal and seasonal variants of the so-called "Yarkovsky effect", allowing them to glean new insights into the importance of thermal forces on the long term orbital evolution of small asteroids. In this era, radiation forces were most often seen as relevant only for dust particles. Their work provided the dynamics community with a new paradigm, namely that these tiny forces could drive small asteroids into planetary resonances that could deliver them onto planet-crossing orbits. Their predictions have since been confirmed by direct observations of asteroids, and today the Yarkovsky effect is a perennial hot topic. The linear Yarkovsky effect model published by Vokrouhlicky in 1999 remains one of the primary references for the subject, and his formalism has been used by other noted papers to understand the origin of near-Earth asteroids. Vokrouhlicky and his collaborators also helped to popularize so-called YORP thermal torques that strongly affect the spin vectors of asteroids. It has since been shown that YORP largely determined the spin state of small asteroids, with collisions playing a smaller role than previously suggested. Scores of papers on both the Yarkovsky and YORP effects are now published every year as the field finds new variants or applications of these forces.

The contributions of Vokrouhlicky are well known in the solar system community, with Vokrouhlicky involved with several key review papers on the Yarkovsky and YORP effect. In 2003 and 2007 Vokrouhlicky co-authored two Science papers on the first direct detection of the Yarkovsky and YORP effects, respectively, in agreement with his theoretical predictions.

His work combines the best of analytical studies and highly sophisticated theoretical models, with applications that can readily be tested against observations. This combination of skills leads to mathematically clean and elegant papers that also contain valuable physical insights. The textbook "Physics of the Solar System" that he wrote with Bruno Bertotti and Paolo Farinella, stands as a comprehensive compendium of the advances in the field and as evidence of his breadth of interests and the range of his expertise.

About the European Planetary Science Congress (EPSC)

EPSC is the major European meeting on planetary science. EPSC 2014 is taking place at the "Centro de Congressos do Estoril", Cascais, Portugal, from Sunday 07 to Friday 12 September 2014, with more than 800 scientists participating from Europe and around the world and a

programme that includes 52 sessions and workshops, and more than 800 scheduled abstracts for oral presentations and posters sessions. Details of the Congress and a full schedule of scientific sessions and events can be found at the official website: <http://www.epsc2014.eu/>

EPSC 2014 is organised by Europlanet and Copernicus Meetings.

Follow **#epsc2014 @epsc2014 @europlanetmedia** on Twitter

About Europlanet

Europlanet is a network of planetary scientists, whose aim is to bring together the disparate European community so that Europe can play a leading role in space exploration. Europlanet's activities complement the mission activities of the European Space Agency through field work at planetary-analogue terrains on Earth, laboratory measurements, computer modelling and observations from ground-based telescopes. Founded in 2002 and funded by the European Commission from 2005-2012, Europlanet has evolved into a community-based organisation that will carry on this work and plan for future missions and mission support.

www.europlanet-eu.org

EUROPLANET PRESS NOTICE FOR EUROPEAN PLANETARY SCIENCE CONGRESS (EPSC) 2014

Date: 09th of September 2014

Ref. PN: EPSC14/04

Issued by: Livia Giacomini - EPSC2014 Press Officer Livia.giacomini@iaps.inaf.it

Science Contact Person:

Nicolas Altobelli, *ESA Cassini-Huygens Project Scientist*
nicolas.altobelli@sciops.esa.int

TEN YEARS OF CASSINI AT EPSC

Ten years ago, the Cassini-Huygens mission entered the Saturnian System and in January 2005, the Huygens probe landed softly on the surface of Saturn's largest moon, Titan. These historic events, which revolutionized our understanding of Saturn and of Solar System exploration, were possible thanks to a strong international collaboration led by NASA, ESA and ASI. Representatives of that collaboration will discuss a decade of Cassini results from the mission during a two-day session organized on the 9th and 10th September at the European Planetary Science Congress (EPSC) 2014 in Cascais, Portugal. On 9th September at 13:00 GMT+1 (Link: <https://plus.google.com/events/ce8360kqq989h723uuetpo76kmo>), Nicolas Altobelli (ESA), Linda Spilker (JPL) and other members of the mission team will participate in an EPSC Hangout, hosted by CosmoQuest's Pamela Gay, to talk about discoveries by Cassini-Huygens and answer questions from the public.

Nicolas Altobelli, ESA Cassini-Huygens Project Scientist and Convener of the session says, "It is exciting to see more than two dozen teams of researchers sharing a decade of science with the international Cassini mission, along with new findings. Cassini's exploration of the Saturn System is composed of five broad, overlapping scientific disciplines: Titan, the atmosphere of Saturn, its rings, magnetosphere, and icy satellites. In each area, Cassini has made major discoveries, provided answers to old questions, and posed new questions that may be answered in the mission's final years."

The final phase of Cassini's Northern Solstice Mission is one of the major topics that will be discussed during the session: the end of the mission, covering a period of roughly ten months, will explore for the first time the region between the rings and planet. The last orbit on 15 September 2017 will plunge the spacecraft into Saturn, where it will be vaporized by the planet's atmosphere.

Many "firsts" by Cassini over the last 10 years will be presented and discussed during the session. Cassini-Huygens explored Titan, whose surface was 'terra incognita' before the mission arrival since its dense atmosphere even precluded high-resolution observations by the cameras onboard the Voyager spacecraft. Cassini discovered that Titan has hydrocarbon lakes and seas, the majority of which are located near the north pole, studied their seasonal changes and measured

that the Ligeia Mare is up to 150-200 meters deep. Cassini also revealed that Titan's south polar haze is a seasonal phenomenon.

Among the mission's others major successes, perhaps the most emblematic discovery is the cryo-volcanic activity of Enceladus, which feeds the E ring with icy grains and loads Saturn's magnetosphere with water. Other spectacular observations include a large hurricane raging at Saturn's north pole, as well as the onset and evolution of a massive storm that lasted nearly a year and encircled the planet. Distinctive, propeller-like structures were observed in the rings, demonstrating that accretion processes are on-going, while other ring features appeared to be records of past, large meteorite impacts. Last but not least, radio science investigations showed that a subsurface ocean must exist in Titan's interior, as well as a liquid subsurface layer at the south pole of Enceladus. In both cases, this liquid is most likely a mixture of water and ammonia. These findings actually open a new field of planetary investigations, confirming the astrobiological potential of icy moons around gas giants through their ability to maintain water in liquid form, even in the cold outer regions of the Solar System.

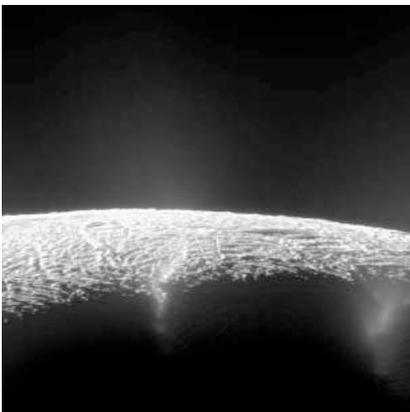


Figure 1: Elevated View of Enceladus' South Pole by Cassini (full resolution at <http://photojournal.jpl.nasa.gov/catalog/PIA17183>) Credits: NASA/JPL-Caltech/Space Science Institute

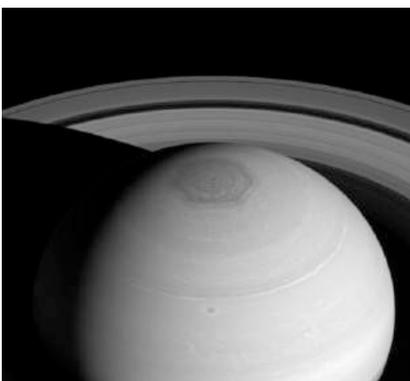


Figure 2: The Cassini spacecraft captures three magnificent sights at once: Saturn's north polar vortex and hexagon along with its expansive rings. (full resolution at <http://photojournal.jpl.nasa.gov/catalog/PIA18274>). Credits: NASA/JPL-Caltech/Space Science Institute

About Cosmoquest

The CosmoQuest virtual research facility brings together citizen science projects related to a growing number of NASA missions along with online programs that range from seminars and round tables held using Google Hangouts on Air, to virtual star parties. In coming months they also plan to add classes on a variety of topics (some for free, some for fee). The goal of CosmoQuest is to create a virtual research center that allows people to successfully collaborate on projects that help advance our understanding of the universe. CosmoQuest is lead out of Southern Illinois University Edwardsville and supported by the efforts of partners around the world. Find it online at cosmoquest.org.

About the European Planetary Science Congress (EPSC)

EPSC is the major European meeting on planetary science. EPSC 2014 is taking place at the “Centro de Congressos do Estoril”, Cascais, Portugal, from Sunday 07 to Friday 12 September 2014, with more than 800 scientists participating from Europe and around the world and a programme that includes 52 sessions and workshops, and more than 800 scheduled abstracts for oral presentations and posters sessions. Details of the Congress and a full schedule of scientific sessions and events can be found at the official website: <http://www.epsc2014.eu/>

EPSC 2014 is organised by Europlanet and Copernicus Meetings.

Follow #epsc2014 @epsc2014 @europlanetmedia on Twitter

About Europlanet

Europlanet is a network of planetary scientists, whose aim is to bring together the disparate European community so that Europe can play a leading role in space exploration. Europlanet’s activities complement the mission activities of the European Space Agency through field work at planetary-analogue terrains on Earth, laboratory measurements, computer modelling and observations from ground-based telescopes. Founded in 2002 and funded by the European Commission from 2005-2012, Europlanet has evolved into a community-based organisation that will carry on this work and plan for future missions and mission support.

www.europlanet-eu.org