

## First Announcement / Call for Papers

# International Planetary Probe Workshop

<http://www.rssd.esa.int/SM/IPPW/>

IPPW-5

**Workshop: 25-29 June 2007 / Short Course: 23-24 June 2007**  
**Bordeaux, France**

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The next steps in the robotic exploration of the solar system involve missions to planets and satellites with significant atmospheres. The four giant planets Jupiter, Saturn, Uranus and Neptune have bottomless atmospheric oceans, whereas Mars, Venus and Saturn's moon Titan have solid accessible surfaces. The **International Planetary Probe Workshop** brings together scientists, spacecraft engineers, technologists, and mission designers interested in the technological challenges and scientific opportunities involved in entry, descent and flight in planetary atmospheres.

### OBJECTIVES OF FIFTH INTERNATIONAL PLANETARY PROBE WORKSHOP

The **Fifth International Planetary Probe Workshop (IPPW-5)**, to be held in Bordeaux, France, will build upon the accomplishments of four previous workshops - two held in Europe (Lisbon, Portugal, 2003 and Athens, Greece, 2005) and two in the USA (NASA Ames Research Center, 2004 and Pasadena, 2006). As with previous workshops, key objectives include **fostering international involvement and collaboration** in probe exploration of planetary atmospheres, and **engaging the next generation of scientists and engineers** in this exciting field.

The fifth workshop will continue to focus on the science, technology, and mission design of probe missions to the **Outer Planets** and **probe and aerial platform missions to Mars, Venus and Titan**. There will be a session on technologies for the extreme environments experienced in entry, descent and flight at these targets.

A two day short course on "**Controlled Entry and Descent into Planetary Atmospheres**" will be held in Bordeaux on June 23-24.

### WORKSHOP GOALS

The **general goals** of the **International Planetary Probe Workshops** are:

- **To Review** the state-of-the-art in science, mission design, engineering implementation and technology for the *in situ* robotic exploration of planets with atmospheres
- **To Share** ideas, mission opportunities, and emerging technologies to enable future mission success.
- **To Serve** as a forum for initiating discussions on innovative methodologies and techniques for future missions to explore planets and satellites with atmospheres.
- **To Involve** young scientists and engineers in the field of entry, descent and flight in planetary atmospheres in an opportunity to learn from experienced researchers and practitioners.
- **To Foster** international collaboration among the communities of scientists, engineers, and mission designers interested in planetary probes.

# International Planetary Probe Workshop

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IPPW-5

- LOCATION:** The IPPW-5 conference will be held at the **AREPA Conference Center** in Bordeaux, France. The AREPA Conference Center is located in the Center of Bordeaux.
- DATES:** The workshop will last for 4 1/2 days, beginning on Monday morning, June 25 and ending at mid-day on Friday, June 29, 2007.
- SHORT COURSE:** Immediately preceding the workshop, on 23-24 June 2007 a two-day short course will be offered: “**Controlled Entry and Descent into Planetary Atmospheres**”.
- REGISTRATION:** Tentative registration costs for the Workshop and Short Course are:
- Workshop  
Regular: **350 Euros** (after May 1, 2007: 400 Euros)  
Student: **100 Euros** (after May 1, 2007: 125 Euros)
- Short Course  
Regular and Student: **100 Euros** (after May 1, 2007: 125 Euros)
- HOTEL:** Early summer is high tourist season in Bordeaux. Block bookings have been made in several 2-star, 3-star, and 4-star hotels. Reservations need to be made before end of April (Date TBA) for taking advantage of the pre-reserved rooms. Non-reserved rooms will be released at this date
- Additional information on the workshop and short course registration, hotel reservations, and the short course and workshop program will be available on the workshop website (<http://www.rssd.esa.int/SM/IPPW/>) in the near future. Please check back.
- MEALS:** The Workshop registration fee includes morning and afternoon refreshments, coffee, sweet breads and buns, and lunch on June 25, 26, 28.
- BANQUET:** The IPPW-5 banquet will be held in the evening of Wednesday, June 27 at an attractive location. The cost of the banquet is included in the workshop registration fees.

**PROGRAMME:** The workshop programme will include both invited talks, contributed talks, and posters. A preliminary list of sessions with session Chairs is provided below. The final session schedule may change according to the papers received.

**SESSION I: CURRENT OUTLOOK. CHAIRS: TBD**

**SESSION II: MISSION CONCEPT STUDIES AND SCIENCE DRIVERS OF TECHNOLOGY – VENUS AND MARS. CHAIRS: TBD**

**SESSION III: ENTRY, DESCENT, AND LANDING CONCEPTS FOR CURRENT AND FUTURE MISSIONS. CHAIRS: M. WRIGHT (NASA-ARC) AND A. BALL (OPEN UNIV.)**

**SESSION IV: TECHNOLOGY SYSTEMS - ELECTRONICS, INSTRUMENTS & SENSORS, COMMUNICATIONS & BATTERIES.  
CHAIR: T. BLANCQUAERT (ESA-ESTEC)**

**SESSION V: MISSION CONCEPT STUDIES AND SCIENCE DRIVERS OF TECHNOLOGY – GIANT PLANETS AND TITAN. CHAIRS: A. COUSTENIS (OBSERVATOIRE DE MEUDON) AND T. SPILKER (JPL)**

**SESSION VI : TECHNOLOGY SYSTEMS - THERMAL CONTROL & PRESSURE VESSELS. CHAIR: N. CHEATWOOD (NASA LARC)**

**SESSION VII: EMERGING, ENABLING, AND EXTREME ENVIRONMENT TECHNOLOGIES; CROSS-CUTTING TECHNOLOGIES.  
CHAIR: L. PELTZ (BOEING)**

**SESSION VIII: EARTH ATMOSPHERIC ENTRY FOR SAMPLE RETURN MISSIONS.  
CHAIR: J. ARNOLD (NASA ARC) AND B. FOING (ESA-ESTEC)**

**SESSION IX: CLOSING SESSION (CHAIRS: TBD)**

**CONTACT INFORMATION:** For more information, please contact the **IPPW-5 Secretariat** at

<mailto:ippw-5@rssd.esa.int>

## CALL FOR PAPERS

Papers and Posters on topics related to the science, technology, and design of missions for entry and descent probe exploration of planetary atmospheres are invited. Topics to be addressed include (but are not limited to)

- Mission Concept Studies and Science Drivers of Technology for missions to Venus and Mars
- Mission Concept Studies and Science Drivers of Technology for missions to the Giant Planets and Titan
- Entry, Descent, and Landing Concepts for Current and Future Missions
- Technology Systems - Electronics, Instruments, and Sensors, Communications, and Batteries
- Technology Systems - Thermal Control and Pressure Vessels
- Emerging, Enabling, and Extreme Environment Technologies
- Cross-Cutting Technologies
- Earth Atmospheric Entry for Sample Return Missions

Please check the IPPW-5 website for information on how to submit abstracts. The deadline for abstract submission is **13 April 2007**. Oral presentations will be limited to no more than 15 minutes. Preferred formats for submission of abstracts are MS Word, PDF, or text files. To the extent possible, please avoid any figures or complex mathematical expressions in the abstract. Due to space and time constraints, only a limited number of papers can be accepted as oral presentations. However, all presentations (oral and poster) that are accepted will be eligible for inclusion in the proceedings. A notice of paper acceptance will be sent to authors of papers selected by **27 April 2007**.

### STUDENTS

A limited number of student scholarships will be available. Information on how to apply will be available during the month of January 2007. Check the IPPW-5 website for details at

<http://www.rssd.esa.int/SM/IPPW/>

For more information and questions, please contact the IPPW-5 Organizing Committee at

<mailto:ippw-5@rssd.esa.int>