

# WHY THE MOON?

First Announcement and Call for Papers

11<sup>TH</sup> ISU ANNUAL INTERNATIONAL SYMPOSIUM

21 – 23 February 2007, Strasbourg, France



esa



## Scope of the Symposium

Several decades after the Apollo astronauts last walked on its surface there is renewed and growing interest in returning to the Moon. This time the goal is to establish a permanent presence there and to provide a stepping-stone for further exploration of the solar system. For these reasons ISU has selected The Moon as the central theme for its next Annual Symposium.

The 11th ISU Annual Symposium will take place just over one year after our last event at which we took a very broad look at the entire range of space exploration activities in the coming years and decades. This time we will focus on Earth's nearest neighbor, recognizing the important role it will occupy in early phases of the longer-term Vision for Space Exploration.

Following our tradition, we will provide an international forum to address a wide range of issues complementing and extending the scope of conferences more focused on science or technology. Certainly we will include sessions on the scientific and technology

drivers involved in re-establishing a presence on the Moon. But we will give just as much weight to wider considerations such as commercial opportunities that are opening up at the Moon, the prospects that exist for international cooperation in lunar missions and the ways in which public support for these activities can be encouraged.

The Symposium will be held at our Central Campus in Strasbourg over three days from Wednesday 21 to Friday 23 February 2007.

Participants will include leading members of agencies, industry and academia, plus enthusiasts and students with special interests in future lunar exploration by both human and robotic means.



Each selected paper will be allocated 15 minutes for presentation plus 5 minutes for questions. A panel discussion at the end of each session will provide further opportunities for interaction and comment by all participants.

A Poster Session will be held in conjunction with a Reception on the first evening. Posters will then be displayed throughout the following two days, as part of an exhibition area where we hope to include wider cultural aspects of the Moon, in the worlds of art, fiction, etc.

All sessions will take place in ISU's Boeing Auditorium, with seating capacity for up to 250 participants, and the Symposium will be conducted in English.

## Symposium Structure

Following the Welcome and Keynote Address on the first morning, the Symposium will be divided into a series of themed half-day sessions as outlined on the facing page. Each session will commence with one or more papers by leading experts who will be invited to give a broad perspective on the particular theme. There will then be a series of presentations in each session selected from the abstracts received in response to this Call for Papers.

Abstracts of papers are welcomed describing the plans, capabilities and interests in lunar missions in major space-faring nations and elsewhere, embracing both public and private ventures. All important disciplines will be taken into account - physical and life sciences, mission and system architectures, technology development, business and management, policy and law, as well as outreach and educational opportunities.

### KEY DATES

- ◆ **CALL FOR PAPERS**  
Friday, 21 July 2006
- ◆ **DEADLINE FOR ABSTRACTS**  
Friday, 22 September 2006

- ◆ **NOTIFICATION TO AUTHORS**  
Wednesday, 18 October 2006
- ◆ **PRELIMINARY PROGRAM ISSUE**  
Friday, 1 December 2006
- ◆ **EARLY REGISTRATION DEADLINE**  
Friday, 19 January 2007

- ◆ **SUBMISSION OF FULL PAPERS**  
Up to the time of the event
- ◆ **SYMPOSIUM**  
Wednesday 21 – Friday 23  
February 2007

## Program Outline and Call for Papers

This is the first announcement of the Symposium in which we invite you to submit an abstract. After review, you will be notified whether your proposed paper has been accepted for oral presentation in one of the main sessions or offered a place as a poster. Here we provide only a summary of the program and an indication of the scope of each session.

### ■ WEDNESDAY, 21 FEBRUARY

*Registration (from 0830)*

#### ◆ WELCOME AND KEYNOTE ADDRESS

Following a welcome by ISU's President and an introduction to the Symposium by the Program Chair, the scene will be set in a Keynote Address. This will cover the goals and vision of past, current and future exploration of the Moon by both human and robotic means.

#### ◆ SESSION #1: DESTINATION MOON

In this session we will hear more about the goals themselves, to establish some answers to the underlying question of 'Why the Moon?' Closely linked to this are the various program plans that exist – for small and larger missions, in the near and longer term, and in the major space-faring countries and elsewhere. Contributions are welcome from representatives of agencies and industries as well as alternative, independent views.

*////////// Lunch //////////*

#### ◆ SESSION #2: SCIENTIFIC INVESTIGATIONS AT THE MOON

Adopting a description commonly used when considering scientific investigations, we include science that can be performed on, of and from the Moon. Contributions are welcome on research plans and opportunities in physical sciences, astronomy, geology, geodesy and life sciences including recent results (e.g. SMART-1), upcoming missions (Chandrayaan-1, Selene, Chang'e, LRO/LCROSS, etc) and longer-term measurement programs and instruments such as those for lunar-based observatories.

#### ◆ POSTER VIEWING AND SYMPOSIUM RECEPTION IN THE EVENING

### ■ THURSDAY, 22 FEBRUARY

#### ◆ SESSION #3: THE MOON AS A TECHNOLOGY DRIVER AND A TEST-BED FOR FURTHER EXPLORATION

Clearly space transportation is the key to getting back to the Moon's surface. In addition to hearing about the latest plans for the development and operation of launchers and transfer vehicles, we hope to cover a wide range of key technologies. These include infrastructure elements in orbit around the Moon and on its surface, e.g. for communication and navigation, energy conversion and life support as well as proposed concepts for material prospecting, lunar base

construction, in-situ resource utilization, and eventual onward travel from a lunar base.

*////////// Lunch //////////*

#### ◆ SESSION #4: THE MOON AS A BUSINESS OPPORTUNITY

To quote from a speech by OSTP Director John Marburger in late March 2006: "The greatest value of the Moon lies neither in science nor in exploration, but in its material.... A not unreasonable scenario is a phase of highly subsidized capital construction followed by market-driven industrial activity..." Here we will address the ways in which private industry can support a return to the Moon. We also encourage inputs on commercial exploitation in areas such as material extraction, energy conversion, siting of 'technology reservations' and lunar tourism.

#### ◆ SYMPOSIUM CONCERT AND DINNER IN THE EVENING

### ■ FRIDAY, 23 FEBRUARY

#### ◆ SESSION #5: LEGAL AND POLICY ISSUES IN RETURNING TO THE MOON

Exploration or exploitation; co-operation or competition – how to achieve the best, safest and most sustainable combination of these aspects? This session provides an opportunity to address policy matters as well as legal and ethical issues associated with the utilization and appropriation of lunar materials.

*////////// Lunch //////////*

#### ◆ SESSION #6: THE MOON AS A STIMULUS FOR PUBLIC ENGAGEMENT

Aside from its very visible role in outreach and education about space, the Moon is a source of inspiration in the world of art, music, fiction and philosophy. For this session we look forward to receiving abstracts that touch on any of these topics in ways that will allow us to build the high level of support from the public that will be necessary to push forward ambitious plans to return to and establish a permanent presence on the Moon.

#### ◆ CLOSING SESSION (ENDS AT 1700)

In submitting your abstract please indicate for which session it is proposed or tell us if it is intended as a poster. Contributions that highlight international and interdisciplinary issues (scientific, technical, organizational, economic, political, etc) are encouraged. Abstracts of up to 500 words should include the title, authors' names, affiliations and contact addresses (both e-mail and postal), and should be sent by 22 September 2006 to [symposium11@isu.isunet.edu](mailto:symposium11@isu.isunet.edu).

Authors will be notified of acceptance by 18 October 2006. Further instructions to authors will be provided later in the year after acceptance of abstracts.

# Further Information

## REGISTRATION FEE (PRELIMINARY)

Before the deadline of 19 January 2007, the 'early-bird' registration fee will be 500 Euros with further reductions for students and ISU alumni. Further details will follow in the Preliminary Program in early December 2006. The fee includes:

- Access to all conference facilities during the Symposium.
- Transport to and from the city center.
- Welcome Reception, lunches and refreshments over the three days.
- Symposium Dinner and Concert.
- Book of Abstracts.
- CD ROM containing papers and presentations.

## ISU LOCATION

The ISU Central Campus is located in the Parc d'Innovation at Illkirch-Graffenstaden, in the southern part of Strasbourg Urban Community. It is about 30 minutes from the city center by public transport. Full details of how to get to ISU appear at <http://www.isunet.edu/EN/65>.



## ACCOMMODATION

ISU has made block bookings at preferential rates at a number of local hotels as listed at our Web site. For a complete list of Strasbourg hotels, contact the local tourist office:

Tel: +33 (0)3 88 52 28 28  
 Fax: +33 (0)3 88 52 28 29  
<http://www.strasbourg.com>

Updated Symposium information will appear in the coming months at <http://www.isunet.edu/EN/191> or e-mail us directly at: [symposium11@isu.isunet.edu](mailto:symposium11@isu.isunet.edu) or use ISU contact details at right.

## STRASBOURG AND THE SURROUNDING REGION

There will be an opportunity to sample some of the delights of Strasbourg itself on the second evening when all participants are invited to join us at a short concert in a historic church before enjoying Alsatian cuisine at the Symposium Dinner. The city and its surroundings offer a wide range of attractions to suit all tastes throughout the year. Those who don't already know the region (and those who do!) may well be tempted to extend their stay into the weekend to discover more of its character and charm. Take a look at the tourist office website (<http://www.ot-strasbourg.fr/>) to find out more about the many historic and cultural opportunities on offer including the famous cathedral, the 'European district', where many international institutions are based, and many other interesting places to visit while you are here.



# PROGRAM COMMITTEE

## CHAIR OF PROGRAM COMMITTEE

- ◆ **Walter Peeters,**  
ISU Dean

The Program Committee is being established presently and will include recognized experts in the field of lunar exploration.

## ORGANIZING TEAM

- ◆ **John Farrow,**  
*ISU Resident Faculty and Chair of Organizing Team*
- ◆ **Nadia Repussard,**  
*ISU Symposium Logistics Coordinator*
- ◆ **Caroline Ritter,**  
*ISU Coordinator for External Relations and Development*
- ◆ **Nikolai Tolyarenko,**  
*Director, ISU Masters of Space Studies*
- ◆ **Jim Burke,**  
*The Planetary Society, USA*
- ◆ **John Connolly,**  
*NASA Exploration Mission Systems Directorate, USA*
- ◆ **Patrick Eymar,**  
*Vice President, Business Development, EADS Space Transportation*
- ◆ **Rene Laufer,**  
*Institute of Space Systems, University of Stuttgart, Germany*
- ◆ **Piero Messina,**  
*Aurora Programme, European Space Agency (ESA)*
- ◆ **Ian Pryke,**  
*Senior Fellow, Center for Aerospace Policy Research, George Mason University, USA*

## INTERNATIONAL SPACE UNIVERSITY

Strasbourg Central Campus  
 1, rue Jean-Dominique Cassini  
 Parc d'Innovation  
 67400 Illkirch-Graffenstaden  
 France  
 Phone: 00 33 3 88 65 54 30  
 Fax: 00 33 3 88 65 54 47