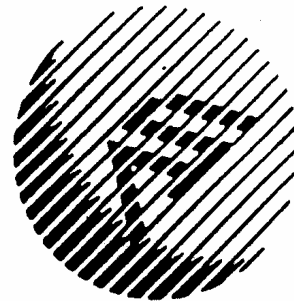


**IAA ASIA-PACIFIC REGIONAL CONFERENCE ON
“ADVANCES IN PLANETARY EXPLORATION”
(IN CONJUNCTION WITH IISL CONFERENCE ON
“BRINGING SPACE BENEFITS TO THE ASIA-PACIFIC REGION”)**

**June 26 – 29, 2005
Bangalore, India**



ORGANISED BY:

**ASTRONAUTICAL SOCIETY OF INDIA (ASI), BANGALORE
INTERNATIONAL ACADEMY OF ASTRONAUTICS (IAA), PARIS**

ORGANISING AND SPONSORING AGENCIES

INDIAN SPACE RESEARCH ORGANIZATION (ISRO)



INTERNATIONAL ACADEMY OF ASTRONAUTICS



INTERNATIONAL INSTITUTE OF SPACE LAW



ASTRONAUTICAL SOCIETY OF INDIA



ANTRIX CORPORATION LIMITED



INTERNATIONAL PROGRAMME COMMITTEE

The technical planning of this Conference was done, based on the IAA guidelines, and was coordinated through the following IAA Members:

- | | | |
|-----|---|------------------|
| 1. | Madhavan Nair, Chairman, ISRO, India | Chairman |
| 2. | Mukund Rao, ISRO, India | Member-Secretary |
| 3. | Ivan Almar, Hungary | Member |
| 4. | Jean-Michel Contant, Secretary General, IAA, France | Member |
| 5. | J N Goswami, PRL, India | Member |
| 6. | Dave Kendall, CSA, Canada | Member |
| 7. | Richard Kline, USA | Member |
| 8. | Daniel Sacotte, ESA/ESTEC, The Netherlands | Member |
| 9. | David Senske, JPL, USA | Member |
| 10. | Kuninori T Uesugi, JAXA, Japan | Member |
| 11. | Michael Yarymovych, USA | Member |
| 12. | Ouyang Ziyuan, CNSA, China | Member |

Secretariat:

13. RLN Murthy, Antrix Corporation, India
14. Venkat Ramu, Antrix Corporation, India

KEY IAA OFFICIALS – GUIDANCE:

15. Ed Stone, President, IAA
16. K Kasturirangan, Vice-President, IAA

IAA CONFERENCE SECRETARIAT

ASI will operate a Secretariat office in Hotel Atria from June 26 onwards. The Contact is as follows:

IAA/IISL CONFERENCE SECRETARIAT
(Attn: RLN Murthy or Venkat Ramu)
Room: Council
Hotel Atria
PB 5089, 1 Palace Road
Bangalore – 560 001 INDIA
Tel: +91 80 2220 5205
Fax: +91 80 2225 6850

However, for all correspondence, the following is the Contact Address:

IAA/IISL CONFERENCE SECRETARIAT
(Attn: RLN Murthy or Venkat Ramu)
c/o ANTRIX CORPORATION
ANTARIKSH Bhavan,
New BEL Road
Bangalore - 560 094 INDIA
Tel : +91 80 2217 2181, 2341 6273
Fax : +91 80 2341 8981
e-mail: murthy@antrix.org

SUMMARY PROGRAMME

VENUE: HOTEL ATRIA

SUNDAY: JUNE 26, 2005

- | | |
|--------------|---|
| 1030 – 1530 | Registration Opens (Room: Council) |
| 1400 – 1500 | IAC-2007 National Planning Committee of ASI: Meeting with Former President(s) of IAA and President, IISL (Room: Chambers) |
| 1500 – 1630 | IAA Programme Committee meeting – All Co-Chairs and Rapporteurs invited (Room: Chambers)
IISL Programme Committee meeting – All Co-Chairs and Rapporteurs invited (Room: Conclave) |
| 1630 – 1800 | Joint meeting of IAA and IISL International Programme Committees with National Organising Committee and Sub-Committees (Room: Chambers) |
| 1900 onwards | Reception & Dinner for IAA/IISL Conference (Hotel Atria) |

MONDAY: JUNE 27, 2005

- | | |
|--------------|---|
| 0915 – 1100 | Joint Inaugural Session (Room: Chancery) |
| 1130 - 1300 | Joint Opening Plenary: Planetary Exploration – Technological Challenges and Legal Implications (Joint Plenary Session) (Room: Chancery) |
| 1400 – 1530 | Outreach to Planets – Scientific and Technological Issues Technologies (Room: Chancery) |
| 1545 – 1715 | Mars and Saturn – Recent results from Mars Rover and Cassini Huygens (Room: Chancery) |
| 1715-1800 | Significant results from Space Exploration missions – SOHO, Cluster and others (Room: Chancery) |
| 1800 – 1900 | View and Counter-view – A Student's Oration (Room: Chancery) |
| 1930 onwards | Dinner hosted by Chairman, ISRO (Hotel Grand Ashok) |

TUESDAY: JUNE 28, 2005

- | | |
|-------------|---|
| 0930 – 1100 | Interest in the Moon – USA, Europe, Japan, India, China and others (Room: Chancery) |
| 1130 - 1300 | Interest in the Moon – USA, Europe, Japan, India, China and others (Room: Chancery) – Continued |
| 1400 – 1515 | New Horizons of Space Science and Education (Room: Chancery) |

SUMMARY PROGRAMME

VENUE: HOTEL ATRIA

TUESDAY: JUNE 28, 2005

- | | |
|--------------|---|
| 1515 – 1600 | Planetary Sciences including Extra Solar Planets (Room: Chancery) |
| 1615 – 1800 | Technical Challenges of International Cooperation (Room: Chancery) |
| 1800 – 1900 | Vision Talk by Roddam Narasimha, Eminent Scientist and Member, Space Commission, India (Room: Chancery) |
| 1930 onwards | Dinner Hosted by J B Boda and Company (Hotel Atria) |

WEDNESDAY: JUNE 29, 2005

- | | |
|--------------|---|
| 0930 – 1100 | Planetary Exploration – The Future (Room: Chancery) |
| 1130 - 1315 | Joint IAA/IISL Closing Session (Room: Chancery) |
| 1400 Onwards | Visit to ISRO Satellite Centre (On Request basis as seats are limited; Coach for Visit will start from Hotel Atria) |

MONDAY: JUNE 27, 2005

0915 – 1100

Inaugural Session (Room: Chancery)

- Welcome Remarks: B N Suresh, Chair, National Organizing Committee, ISRO, India
- Opening Address: N. Jasentuliyana, President, IISL
- Opening Address: Michael Yarymovych, Former President, IAA
- Inauguration and Lighting Lamp
- Inaugural Address: Madhavan Nair, Chairman, ISRO
- Address by Guest of Honour: Jean Jacques Dordain, DG, ESA
- Vote of Thanks - R Rajangam, Executive Secretary, ASI, India

1100 – 1130

Tea/Coffee Break

1130 - 1300

Opening Plenary I-1: Planetary Exploration – Technological Challenges and Legal Implications (Joint Plenary Session) (Room: Chancery)

Co-Chair: Michael Yarymovych, IAA

Co-Chair: N Jasentuliyayna, IISL

Rapporteurs: S Seetha, ISRO, India and TS Shobha, Antrix, India

Summary of IAA Study on Next Steps in Exploring Deep Space

Michael Yarymovych, IAA, USA

Reach for the Stars as long as lawfully! – Legal aspects of Planetary Exploration

Von der Dunk, IISL, The Netherlands

Technological Challenges for Planetary Exploration

P S Goel, ISRO, India

Lunar Exploration as a special case of Planetary Exploration – Legal Aspects

Tanja Masson-Zwaan, IISL, Paris

1300 – 1400

Lunch

1400 – 1530

SESSION I-2: Outreach to Planets – Scientific and Technological Issues (Room: Chancery)

Co-Chair: B N Suresh, ISRO, India

Co-Chair: Kuninori Uesugi, JAXA, Japan

Rapporteur: Jean-Michel Contant, IAA, France

Exploration of the Solar System Through NASA's Completed Missions Programs

Gregg Vane, JPL, USA

Plans and strategy for the exploration of the Outer Solar System

Dave Senske, JPL, USA

MONDAY: JUNE 27, 2005

- 1400 – 1530 **Outreach to Planets – Scientific and Technological Issues (Room: Chancery) (CONTINUED)**
- Challenges of Planetary Exploration in the Indian Context***
 T K Alex, ISRO, India
- Canadian Perspective on Planetary Exploration***
 Dave Kendall, CSA, Canada
- 1530 – 1600 **Tea/Coffee Break**
- 1545 – 1715 **SESSION I-4: Mars and Saturn – Recent results from Mars Rover and Cassini Huygens (Room: Chancery)**
- Co-Chair: S Bhattacharya, TIFR, India
 Co-Chair: David Senske, JPL, USA
 Rapporteur: SC Chakrabarty, ISRO, India
- NASA's Mars Exploration Program and Mars Odyssey Mission - A Perspective***
 Phil Varghese, JPL, USA
- New Results from the Robotic Exploration of Mars: Spirit and Opportunity***
 Robert Anderson, JPL, USA and Athena Science Team
- Highlights from HRSC High Resolution Stereo Camera on ESA's Mars Express Mission***
 Bernard Foing, ESA and G. Neukum, R. Jaumann, H. Hoffmann, E. Hauber, J. Albertz, T. Mc Cord, W.J. Markiewicz and the HRSC team
- Iapetus' endogenic activity - interpretation of the Cassini data***
 L. Czechowski, University of Warsaw, Poland and J. Leliwa-Kopystynski, Poland
- 1715-1800 **SESSION I-5: Significant results from Space Exploration missions – SOHO, Cluster and others (Room: Chancery)**
- Co-Chair: Satoshi Tanaka, JAXA, Japan
 Co-Chair: E Janardhana, ISRO, India
 Rapporteur: R Sreekumar, ISRO, India
- Major Science Highlights of SOHO***
 N Gopalswamy, NASA, USA; Bernhard Fleck, ESA/GSFC, USA & J Gurman, NASA, USA
- New Results from SUMER/SOHO***
 B N Dwivedi, BHU, India
- 1800 - 1900 **View and Counter-view – A Student's Oration (Room: Chancery)**
- 1930 onwards **Dinner hosted by Chairman, ISRO (Hotel Grand Ashok)**

TUESDAY: JUNE 28, 2005

0930 – 1100

SESSIOON I-3: Interest in the Moon – USA, Europe, Japan, India, China and others (Room: Chancery)

Co-Chair: K N Shankara, ISRO, India
Co-Chair: O. Ziyuan, CNSA, China
Rapporteur: M Annadurai, ISRO, India

Japanese interest in the Moon

Satoshi Tanaka, Manabu Kato and Kuninori Uesugi, JAXA, Japan

Lunar Exploration Program of China

Hao Xifan, LEPC/CNSA, China

Tapping the Wealth of the Moon

Klaus Heiss, High Frontier Inc, USA

Chandrayaan-1: Technological and Scientific Challenges

JN Goswami, PRL, India

1100 – 1130

Tea/Coffee Break

1130 - 1300

SESSIOON I-3: Interest in the Moon – USA, Europe, Japan, India, China and others (Room: Chancery) - CONTINUED

ESA's SMART-1 mission at the Moon: first results and perspectives

Bernard Foing, ESA and SMART-1 Team

Mini-SAR Imaging Instrument for Chandrayaan-1: Scientific Challenges

Paul Spudis, Johns Hopkins University, USA

NASAs Clementine Mission

Stewart Nozette, NASA, USA

Moon Mineralogy Mapper (M3) for Chandrayaan-1: Opportunities and Challenges

Carlie Pieters, Brown University, USA

1300 – 1400

Lunch

TUESDAY: JUNE 28, 2005

1400 – 1515

SESSION I-6: New Horizons of Space Science and Education (Room: Chancery)

Co-Chair: B L Deekshatulu, ISRO, India
Co-Chair: JM Contant, IAA, France
Rapporteur: Back-Impallomeni, IAA, Italy

Educational and outreach activities in support of the European Space Exploration Programme

Piero Messina, ESA

1400 – 1515

**SESSION I-6: New Horizons of Space Science and Education
(Room: Chancery) – CONTINUED**

***Space Science Education in Asia Pacific region – the CSSTEAP
Perspective***

HSS Sinha, R N Mishra and Karl Harmsen, UN CSSTEAP, India

***Education and Training for the Next Generation of Scientists –
Opportunities and Experience***

Rosalyn Pertzborn, University of Wisconsin, USA

Scientific researches and applications for Chang'E-1 Programme

Zou Yongliao, CNSA, China

1515 – 1600

**SESSION I-7: Planetary Sciences including Extra Solar Planets
(Room: Chancery)**

Chairs: Satoshi Tanaka, JAXA, Japan

Co-Chair: V Adimurthy, ISRO, India

Rapporteur: Jayati Dutta, ISRO, India

Planetary Sciences in India – Recent Developments

R Sridharan, SPL, India

Report of Decadal Panel for Solar System Exploration

Sanjay Limaye, University of Wisconsin, USA

1545 – 1615

Tea/Coffee Break

1615 – 1800

**SESSION I-8: Technical Challenges of International Cooperation
(Room: Chancery)**

Co-Chair: Piero Messina, ESA

Co-Chair: JM Contant, IAA, France

Rapporteur: Jacob Ninan, ISRO, India

Initiatives for Exploring Moon: Benefits of International Cooperation

Carlie Pieters, Brown University, USA

The Spacecraft of the “Chang’e”-1 Mission

Zhang Wu and Deng Xiangjin, CNSA, China

International Cooperation in Space Science Missions

Lessons Learned and Perspective

Kuninori Uesugi, JAXA, Japan

***The European Space Exploration Programme in the International
Context***

Piero Messina, ESA

International Cooperation Opportunities in Indian Space Science

V Sundararamaiah, ISRO, India

TUESDAY: JUNE 28, 2005

- 1800-1900 **Vision Talk (Room: Chancery)**
Dr Roddam Narasimha, Eminent Scientist and Member, Space Commission, India
- 1930 onwards **Dinner (Hosted by J B Boda and Company) at Hotel Atria**

WEDNESDAY: JUNE 29, 2005

- 0930 – 1100 **SESSION I-10: Planetary Exploration – The Future (Room: Chancery)**
- Co-Chair: M. Yarymovych, IAA, USA
Co-Chair: P S Goel, ISRO, India
Rapporteur: V Koteshwara Rao, ISRO, India
- NASA program strategy for solar system exploration***
Gregg Vane, JPL, USA
- JAXAs Planetary Exploration Vision***
Kuninori Uesugi, JAXA, Japan
- The next robotic European missions to Mars***
Bruno Gardini, ESA/ESTEC
- Martian Space Environmental Probe- Chinese Mars Exploration Initiative***
Zhao Hua, CNSA, China
- Space Sciences and Planetary Exploration Programs in India: The next decade***
George Joseph, J N Goswami and N Bhandari, India
- ILEWG Roadmap for future lunar exploration***
Bernard Foing and ILEWG members, ESA
- 1100 – 1130 Tea/Coffee Break**
- 1130 - 1315 **JOINT IAA/IISL CONFERENCE CLOSING SESSION (Room: CHANCERY)**
- Welcome by V Sundararamaiah, ISRO, India
 - Vision Talk by Dr K Kasturirangan, Member of Parliament, India
 - Report of IAA Sessions by – Mukund Rao, ISRO, India
 - Report of IISL Sessions by – K R Sridhara Murthi, Antrix, India
 - Remarks on behalf of IAA - by Jean-Michel Contant, IAA, France
 - Remarks on behalf of IISL - by Tanja Masson, IISL, France
 - Vote of Thanks by Rajeev Lochan, ISRO, India
- 1315 – 1400 Lunch**
- 1430 onwards Visit to ISRO Satellite Centre (On Request Basis; Limited Seats available; Coach will start from Hotel Atria and back to Hotel Atria)

IAA/IISL CONFERENCE ORGANISATION COMMITTEES (MEMBERS FROM ASI, ISRO AND OTHER INDIAN AGENCIES)

NATIONAL ORGANISING COMMITTEE OF ASI

1.	B. N. Suresh, Director, VSSC	Chair
2.	K R Sridhara Murthi, ED, ANTRIX	Alternate Chair
3.	V Sundararamaiah, Scientific Secretary, ISRO	Member
4.	Joint Secretary, DOS	Member
5.	JS (L&T), MEA	Member
6.	M. Y. S. Prasad, Director, MCF	Member
7.	A. Jaigovind, Director, NLSIU	Member
8.	R. K. Rajangam, Executive Secretary, ASI	Member
9.	Ram Sagar	Member
10.	Chandy Andrews, CCA, DOS (Chair, JF&C)	Member
11.	Rajeev Lochan, ISRO HQ	Member
12.	L. M. Gangarade, ISAC	Member
13.	Devalina Chatterjee, Antrix	Member-Secretary

Secretariat:

14. R L N Murthy, Antrix Corporation, India
15. Venkat Ramu, Antrix Corporation, India

FINANCE AND CONTRACTS COMMITTEE OF ASI

1.	Chandy Andrews, CCA, DOS	Chair
2.	N Mudukavi, Sr Accounts Officer, ISRO HQ	Member
3.	Sharada Chowdappa, Sr Administrative Officer, ISRO HQ	Member
4.	S B Iyer, Director (Contract Mgmt), ISRO HQ	Member
5.	Mukund Rao, DD (NRR), ISRO HQ	Member
6.	S Krishnamurthy, Director P&PR, ISRO HQ	Member
7.	R Ramana Reddy, Director, DOS	Member
8.	K Suryaprakasha Rao, Sr Purchase Officer, ISRO HQ	Member-Secretary

ASI LOCAL ORGANISATION SUB-COMMITTEES

1. Reception, Transport and Accommodation Sub-Committee:

1.	L M Gangrade, GD-PPEG, ISAC	Chairman
2.	GA Kumar, HPS, ISAC (Reception)	Member
3.	R Murugesan, ISAC (Accommodation)	Member
4.	V Somasekharan, PA to ED, Antrix, ISRO HQ	Member
5.	V Adinarayana, Admn. Officer, ISRO HQ (Transport)	Member Secretary

2. Registration Sub-Committee:

1.	H N Madhusudan, Director, BEA, ISRO HQ	Chairman
2.	Shri MS Chandrasekhar, PP&PM, ISRO HQ	Alt. Chairman
3.	MN Mudakavi, SAO, ISRO HQ	Member
4.	Hansa Raman, Admn. Officer, ISRO HQ	Member
5.	M Sameena, Sci/Engr-SD, EOS/NNRMS	Member
6.	PS Dutta, Business Dev. Executive, Antrix	Member Secretary

3. Sessions Management:

- | | | |
|----|---|------------------|
| 1. | SS Balakrishnan, Deputy Director, LVPO, ISRO HQ | Chairman |
| 2. | Radhakrishnan, Sci/Engr-SF, LVPO, ISRO HQ | Member |
| 3. | Ashok P Seth, Sci/Engr – SE, LVPO | Member |
| 4. | Hanumantharayappa, Sci/Engr-SE, SCPO, ISRO HQ | Member Secretary |

4. Secretariat:

- | | | |
|----|---|------------------|
| 1. | RLN Murthy, Manager, Business Development, Antrix | Chairman |
| 2. | Venkat Ramu, Business Development Executive, Antrix | Member |
| 3. | V. Gopalakrishnan, Sci/Engr-SE, HRD/Sci.Sec.Off, ISRO HQ | Member |
| 4. | HS Ravindra, Accounts Assistant, Antrix | Member |
| 5. | Jayalakshmi Chandrasekhar, PA to Director, TT&IC, ISRO HQ | Member |
| 6. | R Murali, Assistant-A, EOS/NNRMS | Member |
| 7. | Rajeev Jaiswal, Sci/Engr –SD, EOS/NNRMS,ISRO HQ | Member Secretary |

5. Overall Coordination across sub-committees and Programme Committees

- | | | |
|----|---------------------------------------|--|
| 1. | Shri MS Chandrasekhar, PP&PM, ISRO HQ | |
|----|---------------------------------------|--|