



United Nations/Costa Rica Workshop on Human Space Technology

San José, Costa Rica
7 March – 11 March 2016

Programme

Organized jointly by
United Nations Office for Outer Space Affairs and
the Government of Costa Rica

Co-organized by
International Academy of Astronautics

Hosted by
the Government of Costa Rica

Venue: Crowne Plaza San Jose Corobicí Conference Center



Honorary Committee (in alphabetical order):

Ms. Simonetta DI PIPPO, Director, United Nations Office for Outer Space Affairs
Mr. Peter JANKOWITSCH, President, International Academy of Astronautics
Mr. Luis Guillermo SOLÍS RIVERA, President of Costa Rica

Programme Committee (in alphabetical order):

Mr. Jose A. CASTRO NIETO, Chief Scientist, Ad Astra Rocket Company Costa Rica
Mr. Franklin R. CHANG DÍAZ, CEO, Ad Astra Rocket Company
Ms. Leonora DE LEMOS MEDINA, Professor, Universidad de Costa Rica
Mr. Takao DOI, Expert on Space Applications, United Nations Office for Outer Space Affairs
Mr. Takanori MIYOSHI, HSTI Expert, United Nations Office for Outer Space Affairs
Mr. Jorge Marino PROTTI QUESADA, Professor, Universidad Nacional de Costa Rica
Mr. Giuseppe REIBALDI, Director, Human Space Flight, International Academy of Astronautics

Local Organising Committee (LOC)

<u>Chairman</u>	Mr. Franklin R. CHANG DÍAZ
<u>Co-Chairman</u>	Mr. Jose A. CASTRO NIETO
<u>Secretary-General</u>	Mr. Carlos ALVARADO BRICEÑO
<u>For Logistics</u>	Ms. Mariamalia JIMÉNEZ COTO
<u>For accommodations and venue</u>	Mr. Johnny PAZ CAMPOS
<u>For documentation and protocol</u>	Ms. Mariamalia JIMÉNEZ COTO
<u>For publicity (media)</u>	Ms. Melissa DURÁN GUTIÉRREZ
<u>For visa</u>	Ms. Marcela ZAMORA OVARES
<u>For technical support, badging and IT</u>	Mr. Alexis GUTIÉRREZ ACUÑA
<u>Security</u>	Mr. Mario MONGE CHACON
<u>Cultural Events</u>	Mr. Johnny PAZ CAMPOS
<u>For other matters</u>	Ms. Mariamalia JIMÉNEZ COTO

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Ms. Marcela ZAMORA OVARES
Phone: (+506) 2539-5448
E-mail: mzamora@rree.go.cr

Working Group Abbreviation

Working Group 1: SMS – Space and Micro-Gravity Science
Working Group 2: CSA – Commercial Space Activities
Working Group 3: HSE – Human Space Exploration

Meeting Room Arrangement

The following rooms will be used unless otherwise stated

Activities	Rooms
Opening Ceremony	Chirripó
Plenary technical presentation sessions	Corcovado 1,2 & 3
Working Group 1: SMS (Wednesday, Thursday, Friday)	Corcovado 1
Working Group 2: CSA (Wednesday, Thursday, Friday)	Corcovado 2
Working Group 3: HSE (Wednesday, Thursday, Friday)	Corcovado 3
Secretary office	Carara and Tempisque
Working Area for participants and press	Business Center
Welcome dinner (Monday)	Pérgolas (Pool Area)
Closing cocktail (Thursday)	Pérgolas (Pool Area)
Sponsored lunch (Monday through Friday)	Pérgolas (Pool Area) and Lobby Bar

Monday, 7 March 2016			
Time	Morning		
09:00	<i>Registration</i>		
10:00	<p><u>Welcome Address</u></p> <ul style="list-style-type: none"> ○ Mr. Eduardo TREJOS LALLI, Minister a.i. of Foreign Affairs, Costa Rica ○ Mr. Marcelo JENKINS, Minister of Science, Technology and Telecommunications, Costa Rica ○ Mr. Giancarlo GENTA, Professor, International Academy of Astronautics ○ Ms. Simonetta DI PIPPO, Director, United Nations Office for Outer Space Affairs 		
10:25	<p><u>Keynote Speeches</u></p> <ul style="list-style-type: none"> ○ Mr. Franklin R. CHANG DÍAZ, Chair, Local Organizing Committee, Costa Rica ○ Mr. Charles F. BOLDEN Jr., Administrator, National Aeronautics and Space Administration, United States of America ○ Mr. Bill NELSON, Senator (D Florida), United States of America 		
11:00	<p><u>Presidential Address</u></p> <ul style="list-style-type: none"> ○ Mr. Luis Guillermo SOLÍS RIVERA, President of Costa Rica 		
11:15	<u>Group Photo</u>		
12:00	<i>Lunch</i>		
Time	Afternoon		
14:00	<p><u>General Announcement</u></p> <p><u>Welcome Address</u></p> <ul style="list-style-type: none"> ○ United Nations Development Programme in Costa Rica <p><u>Introduction to the United Nations Office for Outer Space Affairs</u></p> <ul style="list-style-type: none"> ○ Ms. Simonetta DI PIPPO, Director, United Nations Office for Outer Space Affairs 		
	<p><u>Technical Presentation Session-1: National, Regional & International Space Programmes-1</u> <i>Chairperson:</i> Mr. Takao DOI <i>Rapporteur:</i> Ms. Mabel SEGURA</p>		
14:30	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">European Space Agency (ESA) Space Exploration Strategy and Programmatic Framework</td> <td style="width: 50%;">Mr. Bernhard HUFENBACH, European Space Agency</td> </tr> </table>	European Space Agency (ESA) Space Exploration Strategy and Programmatic Framework	Mr. Bernhard HUFENBACH, European Space Agency
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14:50	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">The Future of Space Commercialization</td> <td style="width: 50%;">Mr. Mark MULQUEEN, the Boeing Company, United States of America</td> </tr> </table>	The Future of Space Commercialization	Mr. Mark MULQUEEN, the Boeing Company, United States of America
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15:10	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Costa Rica's Path to Space Development and Potential Central American Cooperation Program</td> <td style="width: 50%;">Mr. Carlos ALVARADO BRICEÑO, Central American Aeronautical and Space Association (ACAE), Costa Rica</td> </tr> </table>	Costa Rica's Path to Space Development and Potential Central American Cooperation Program	Mr. Carlos ALVARADO BRICEÑO, Central American Aeronautical and Space Association (ACAE), Costa Rica
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15:30	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Development of the Space Sector in Mexico and its Current Projects</td> <td style="width: 50%;">Mr. Francisco MENDIETA JIMÉNEZ, Mexican Space Agency, Mexico</td> </tr> </table>	Development of the Space Sector in Mexico and its Current Projects	Mr. Francisco MENDIETA JIMÉNEZ, Mexican Space Agency, Mexico
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16:10	<i>Break & Poster Session-1</i>		
	<p><u>Technical Presentation Session-2: Human Space Exploration-1</u> <i>Chairperson:</i> Mr. Franklin R. CHANG DÍAZ <i>Rapporteur:</i> Ms. Natalia COTO</p>		
16:40	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">IAA Study Group on Global Human Mars System Missions Exploration</td> <td style="width: 50%;">Mr. Giancarlo GENTA, Politecnico Di Torino, Italy, International Academy of Astronautics</td> </tr> </table>	IAA Study Group on Global Human Mars System Missions Exploration	Mr. Giancarlo GENTA, Politecnico Di Torino, Italy, International Academy of Astronautics
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17:00	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">International Space Station: Science, Technology, Exploration</td> <td style="width: 50%;">Mr. Luca PARMITANO, European Space Agency</td> </tr> </table>	International Space Station: Science, Technology, Exploration	Mr. Luca PARMITANO, European Space Agency
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17:20	Adaptation of Humans to New Environments - from Space to the Patient	Mr. Alexander CHOUKER, University of Munich, Germany
17:40	High-Power Electric Propulsion with VASIMR® Technology	Mr. Jose CASTRO NIETO, Ad Astra Rocket Company Costa Rica, Costa Rica
19:00	<u>Welcome Dinner</u>	
21:00	<i>End of Day 1</i>	

Tuesday, 8 March 2106	
Time	Morning
08:30	<i>Registration</i>
	Technical Presentation Session-3: Space and Microgravity Science-1 Chairperson: Mr. Marco GÓMEZ Rapporteur: Ms. Nathalie VALENCIA
09:00	Gravity in life and Physical Sciences Mr. Jack VAN LOON, VU Medical Center Amsterdam, Netherlands
09:20	Individualized Centrifugation Training for Improving Microgravity Induced Orthostatic Tolerance Mr. Nandu GOSWAMI, Medical University of Graz, Austria
09:40	Changes in Sugarcane Plants after Microgravity using VSB-30 sounding Rocket Ms. Katia SCORTECCI, Universidade Federal do Rio Grande do Norte – UFRN, Brazil
10:00	The Zero Gravity Instrument Project: Promoting Space Education and Research in Microgravity among School Children in Nigeria Ms. Omowumi ALABI, African Regional Centre for Space Science and Technology Education, Nigeria
10:20	China Space Science and Technology Development Mr. ZHAO Jian, China National Space Administration, China
10:40	<i>Break & Poster Session-2</i>
	Technical Presentation Session-4: Commercial Space Activities-1 Chairperson: Mr. Jose CASTRO NIETO Rapporteur: Ms. Diana ALVARADO
11:10	Cryogenics: When Extremely Low Temperatures Enable Human Space Flight, Fundamental Physics and Global Monitoring Mr. Benoit CHIDAINE, Air Liquide, France
11:30	Building an International Team to Build the International Space Station Mr. Kenneth CAMERON, Science Applications International, United States of America
11:50	Space Exploration as a Driver for Growth - Status of ESA's Initiative to Foster Strategic Partnerships with the Private Sector Mr. Bernhard HUFENBACH, European Space Agency
12:10	Micro Satellites Fostering Space Technology Development and Training in Space Emerging Nations with the Focus on the Support for Human Space Exploration Ms. Wisniewska KATARZYNA, Surrey Satellite Technology Ltd., United Kingdom
12:30	<i>Lunch</i>
Time	Afternoon
	Cultural Activity Tour
14:00	Transferring participants to Espiritu Santo Coffee Tour, Naranjo
15:00	○ Coffee Tour at Espiritu Santo Plantation
17:30	Transferring participants to the hotel
18:30	<i>End of Day 2</i>

Wednesday, 9 March 2106		
Time	Morning	
08:30	<i>Registration</i>	
	Technical Presentation Session-5: National, Regional & International Space Programme-2 Chairperson: Ms. Adriana CHAVARRÍA Rapporteur: Mr. Marco GÓMEZ	
09:00	International Academy of Astronautics Human Spaceflight Activities	Mr. Giancarlo GENTA, Politecnico Di Torino, Italy / Mr. Giuseppe REIBALDI, International Academy of Astronautics
09:20	China Manned Space Programme Achievements and Future Development	Mr. CHAO Chun, China Manned Space Agency, China
09:40	Space Activities in Brazil	Mr. Marcos PONTES, United Nations for Industrial Development Organization
10:00	The Ecuadorian Civilian Space Program: Manned Research Missions in a Low Cost Space Program	Mr. Ronny NADER, Ecuadorian Civilian Space Agency Ecuador, Ecuador
10:20	Strategic Roadmap of a Panamanian Space Agency	Mr. Eduardo PÉREZ DENADAI, Panama Commission of Space Affairs, Panama
10:40	<i>Break & Poster Session-3</i>	
	Technical Presentation Session-6: Space and Microgravity Science-2 Chairperson: Ms. Leonora DE LEMOS MEDINA Rapporteur: Ms. Diana MONTERO	
11:10	DropTES – A UN Fellowship Program at the Bremen Drop Tower	Mr. Thorben KOENEMANN, Centre of Applied Space Technology and Microgravity, University of Bremen, Germany
11:30	Tuned Mass Damping System for a Pendulum in Gravity and Microgravity Fields	Mr. Nabil AYOUB, German Jordanian University, Jordan
11:50	Low Cost Options for Microgravity Drop Towers: Between Classroom Physics and High-Tech Research	Mr. Michal VACLAVIK, Czech Space Office, Czech Republic
12:10	A Summary of Ad Astra Rocket Company's Microgravity Flight Campaigns Related to the Testing of the VF-200 Cooling System	Mr. Marco GÓMEZ, Costa Rica Institute of Technology, Costa Rica
12:30	<i>Lunch</i>	
Time	Afternoon	
	Technical Presentation Session-7: Human Space Exploration-2 Chairperson: Mr. Giancarlo GENTA Rapporteur: Mr. Takanori MIYOSHI	
14:00	Astrobiological Studies on Extremophiles and Its Application for Desertification Control	Mr. Fengyuan ZHUANG, Beihang University, China

14:20	Aerospace Engineering Group at the University of Costa Rica	Ms. Leonora DE LEMOS MEDINA, University of Costa Rica, Costa Rica	
14:40	The Use of Remote Presence Robotic Technology to Narrow the Gap of Inequality in Health Care Delivery in Remote Underserved Locations.	Mr. Ivar MENDEZ, University of Saskatchewan, Canada	
15:00	Human Challenges in Long-Duration Space Flight	Mr. David SAINT-JACQUES, Canadian Space Agency, Canada	
15:20	Production of Biofuel in Microgravity Environment Through Genetic Transportation of Barley	Ms. Funmilola OLUWAFEMI, National Space Research and Development Agency, Nigeria	
15:40	Introduction to Working Groups (Organisational Aspects) Mr. Takao DOI, United Nations Office for Outer Space Affairs		
15:50	<i>Break & Poster Session-4</i>		
16:20	Working Group Session-1		
	Working Group 1: SMS <i>Chairperson:</i> Mr. Jack VAN LOON <i>Rapporteur:</i> Mr. Nandu GOSWAMI	Working Group 2: CSA <i>Chairperson:</i> Ms. Melania GUERRA <i>Rapporteur:</i> Ms. Ana ÁVILA BECERRIL	Working Group 3: HSE <i>Chairperson:</i> Mr. Giancarlo GENTA <i>Rapporteur:</i> Mr. Marco GÓMEZ
17:50	<i>Break</i>		
	<u>Astronaut Public Forum</u>		
18:30	Transferring participants to the venue		
19:00	<ul style="list-style-type: none"> ○ Opening /Welcoming Speeches ○ Panel Discussion ○ Questions and answers with audience 		
21:00	Transferring participants to the hotel		
22:00	<i>End of Day 3</i>		

Thursday, 10 March 2016		
Time	Morning	
08:30	<i>Registration</i>	
	Technical Presentation Session-8: Commercial Space Activities-2 Chairperson: Mr. Jeffrey MANBER Rapporteur: Mr. Carlos ALVARADO	
09:00	Commercial Pathways to Space Utilization	Mr. Jeffrey MANBER, NanoRacks LLC, United States of America
09:20	Remote-Controlled Miniaturized Nanosatellite Lab Platforms for Microgravity Research and Chemical/Biological Scientific Applications	Mr. Yossef YAMIN, SpacePharma SA, Israel
09:40	Painting with Light-a Story about How a Small Rogue Team of Designers Influenced the Outcome of the NASA Commercial Crew Program	Ms. Rachelle ORNAN, the Boeing Company, United States of America
10:00	Commercial Opportunities in the Space Logistics Market	Mr. Franklin R. CHANG DÍAZ, Ad Astra Rocket Company, Costa Rica
10:20	<i>Break & Poster Session-5</i>	
	Technical Presentation Session-9: National, Regional & International Space Programmes-3 Chairperson: Ms. Katia SCORTECCI Rapporteur: Ms. Diana ALVARADO	
10:50	Achievements and Results - Nicaragua Pro Tempore Secretariat of the Space Conference of the Americas	Ms. Guadalupe MARTÍNEZ VALDIVIA, Nicaragua
11:10	Building a Technology Economy in Ghana through Space Technology	Mr. Emmanuel ADZRI, Ghana Space Science and Technology Institute, Ghana
11:30	Philippines Promotes Technology-Self Reliance: Achievements, Current Activities and Future Plans on Space Technology Applications in the Philippines	Ms. Clarinda REYES, Department of Science and Technology, Philippines
11:50	Continuous GPS for Earthquake Cycle Monitoring: the Successful Case of Nicoya in NW Costa Rica	Mr. Jorge PROTTI QUESADA, Costa Rica Volcanological and Seismological Observatory, Universidad Nacional, Costa Rica
12:10	Status Report of Human Spaceflight and Microgravity Research in Czech Republic	Mr. Michal VACLAVIK, Czech Space Office, Czech Republic
12:30	<i>Lunch</i>	
Time	Afternoon	
	Technical Presentation Session-10: Human Space Exploration-3 Chairperson: Mr. Fengyuan ZHUANG Rapporteur: Ms. Marcela ZAMORA	
14:00	Japanese Space Exploration Scenario	Mr. Naoki SATO, Japan Aerospace Exploration Agency, Japan
14:20	Indian Philosophy and the Universe	Ms. Anjana VYAS, CEPT University, India
14:40	A Giant Leap for Thailand in Human Space Technology Initiatives	Mr. Ravit SACHASIRI, Geo-Informatics and Space Technology Development Agency(GISTDA), Thailand
15:00	Intensity-Difference Based Monocular Visual Odometry for Planetary Rovers: A case study	Mr. Geovanni MARTÍNEZ, University of Costa Rica, Costa Rica

15:20	Space Mineral Resources - an International Assessment	Mr. Art DULA, International Academy of Astronautics	
15:40	<i>Break & Poster Session-6</i>		
16:10	<u>Working Group Session-2</u>		
	Working Group 1: SMS Chairperson: Mr. Jack VAN LOON Rapporteur: Mr. Nandu GOSWAMI	Working Group 2: CSA Chairperson: Ms. Melania GUERRA Rapporteur: Ms. Ana ÁVILA BECERRIL	Working Group 3: HSE Chairperson: Mr. Giancarlo GENTA Rapporteur: Ms. Diana MONTERO
18:00	Closing Cocktail (Pool Area)		
20:00	<i>End of Day 4</i>		

<i>Friday, 11 March 2016</i>			
Time	<i>Morning</i>		
09:00	<u>Working Group Session 3</u>		
	Working Group 1: SMS <i>Chairperson:</i> Mr. Jack VAN LOON <i>Rapporteur:</i> Mr. Nandu GOSWAMI	Working Group 2: CSA <i>Chairperson:</i> Ms. Melania GUERRA <i>Rapporteur:</i> Ms. Ana ÁVILA BECERRIL	Working Group 3: HSE <i>Chairperson:</i> Mr. Giancarlo GENTA <i>Rapporteur:</i> Mr. Marco GÓMEZ
10:30	<i>Break</i>		
11:10	<u>Joint Working Group Session</u> <i>Moderators:</i> Mr. Takao DOI and Mr. Franklin R. CHANG DÍAZ <i>Rapporteur:</i> Ms. Ana ÁVILA BECERRIL <i>Round Table Speakers:</i> <ul style="list-style-type: none"> ○ Mr. Jack VAN LOON, VU Medical Center Amsterdam, Netherlands ○ Ms. Melania GUERRA, University of Washington, Costa Rica ○ Mr. Giancarlo GENTA, Politecnico Di Torino, Italy, International Academy of Astronautics ○ Mr. Thorben KOENEMANN, Centre of Applied Space Technology and Microgravity, University of Bremen, Germany ○ Mr. Fengyuan ZHUANG, Beihang University, China ○ Mr. Carlos ALVARADO BRICEÑO, ACAE, Costa Rica ○ Ms. Rachelle ORNAN, the Boeing Company, United States of America 		
12:30	<i>Lunch</i>		
Time	<i>Afternoon</i>		
14:00	<u>Wrap Up Session</u> <i>Co-Chairs:</i> Mr. Franklin R. CHANG DÍAZ and Mr. Takao DOI <i>Rapporteur:</i> Ms. Ana ÁVILA BECERRIL <ul style="list-style-type: none"> ○ Review of the Workshop, approval of recommendations, and discussions on future activities 		
15:00	<u>Closing Remarks</u> <ul style="list-style-type: none"> ○ Mr. Marcelo JENKINS, Minister of Science, Technology and Telecommunications, Costa Rica ○ Mr. Giancarlo GENTA, Professor, International Academy of Astronautic ○ Mr. Takao Doi, Expert on Space Applications, United Nations 		
15:30	<i>End of the Workshop</i>		

Poster Sessions during Break, 7 - 11 March 2016

No.	Date	Title	Author
1	Mon, 7 March Poster Session-1	Autonomous Robots for Space Exploration: Humanoid Robot Project	Mr. Wilber HERNÁNDEZ RUIZ, Autonomous Robots and Cognitive Systems Laboratory from Electrical Engineering School, Universidad de Costa Rica, Costa Rica
2	Mon, 7 March Poster Session-1	Satellite and Airborne Systems for Precision Farming and Natural Resources Management in Costa Rica	Mr. Carlomagno SOTO CASTRO, EARTH University (Escuela de Agricultura de la Región Tropical Húmeda), Costa Rica
3	Mon, 7 March Poster Session-1	Zero-Gravity Instrument Project “ZGIP”	Mr. Takao DOI, United Nations Office for Outer Space Affairs
4	Tue, 8 March Poster Session-2	Impedance Control Joint	Mr. Sebastian CHINCHILLA GUTIÉRREZ, Electrical Engineering School of the University of Costa Rica, Costa Rica
5	Tue, 8 March Poster Session-2	Hexapod Robot Based on Arthropod Locomotion for Difficult Exploration Areas on Mars	Ms. Jenory BALLADARES BARBOZA, The Mars Society Peru/ARCOS-Lab Laboratory, Costa Rica
6	Tue, 8 March Poster Session-2	The Mars Society Peru: Mars Settlement Research in La Joya, Peru	Mr. Diego GUILLÉN, The Mars Society Peru, Peru
7	Wed, 9 March Poster Session-3	Drop Tower Experiment Series “DropTES”	Mr. Takanori MIYOSHI, United Nations Office for Outer Space Affairs
8	Wed, 9 March Poster Session-3	The Mexican Space Program: The Way Forward is Up	Ms. Teresa CASTILLO OLASCOAGA, Mexican Space Agency, Mexico
9	Wed, 9 March Poster Session-3	Costa Rica Aerospace Cluster	Mr. Marko MILETA, Costa Rica Aerospace Cluster, Costa Rica
10	Wed, 9 March Poster Session-3	Sokol-KV2 Spacesuit	Mr. Art DULA, International Academy of Astronautics
11	Wed, 9 March Poster Session-4	Effect of Science Education on the Development in Costa Rica and Central America	Mr. José Francisco AGUILAR SÁNCHEZ, Fundación para el Desarrollo de las Ciencias la Sociedad y el Estado, Costa Rica
12	Wed, 9 March Poster Session-4	Career Formulation Electromechanical Engineering with Emphasis in Aviation Maintenance	Mr. Víctor J. HERNÁNDEZ GONZÁLEZ, Tecnológico de Costa Rica, Costa Rica
13	Wed, 9 March Poster Session-4	Product Implementation Experience of Space Technologies in Teaching Cartography Cuajiniquil River Basin, Puntarenas, Costa Rica	Ms. Betsy CEDEÑO MONTOYA, Universidad Nacional de Costa Rica, Costa Rica
14	Wed, 9 March Poster Session-4	The ESA Large Diameter Centrifuge (LDC) Facility Cooperating with the United Nation’s - Human Space Technology Initiative (UN-HSTI)	Mr. Jack VAN LOON, VU Medical Center Amsterdam, Netherlands
15	Thu, 10 March Poster Session-5	The United Nations/Japan Cooperation Programme on CubeSat Deployment from the International Space Station (ISS) Japanese Experiment Module (Kibo) “KiboCube”	Mr. Takanori MIYOSHI, United Nations Office for Outer Space Affairs

16	Thu, 10 March Poster Session-5	Volunteering as an Engine of Progress towards Development in Aerospace Research	Ms. Yolanda CECILIANO JIMÉNEZ, Central American Association for Aeronautics and Space, Costa Rica
17	Thu, 10 March Poster Session-5	Social Development and the Aerospace Industry in Costa Rica	Pablo Elías GURDIÁN BOND, Fundación para el Desarrollo de las Ciencias la Sociedad y el Estado, Costa Rica
18	Thu, 10 March Poster Session-6	Lightening Protection Scheme for Nigeria Sat OI Ground Control Station after Thunderstorm Lightening Failure	Ms. Aboila OLANREWAJU, University of Ibadan, Nigeria
19	Thu, 10 March Poster Session-6	Introducing Enthusiasm for Aerospace to Kids	José LUNA SÁNCHEZ, ACAE, Costa Rica
20	Thu, 10 March Poster Session-6	Aerospace Technology. From Children to Business Opportunities in Latin America	Russel TORRES CASTRO, Fundación para el Desarrollo de las Ciencias la Sociedad y el Estado, Costa Rica

Appendix I

SESSION GUIDELINES

I. Objectives of Sessions

Presentation Sessions:

Exchange information and learn from other people's work.

Working Group Sessions:

We are planning to have three working groups. They are Space and Micro-Gravity Science (SMS), Commercial Space Activities (CSA), and Human Space Exploration (HSE). Each working group has the following phases and objectives:

- (1) Mapping Phase: Identify niches, capabilities and current activities in countries which could be of relevance for the topics of the working groups.
- (2) Observation Phase: Identify issues and problems in countries that are trying to implement specific objectives.
- (3) Recommendation Phase: Discuss how to solve any issues and problems and how to foster new activities.

Joint Working Group Sessions:

- (1) Share observations and recommendations identified in the different Working Groups.
- (2) Consolidate recommendations

Wrap Up Session

Finalize recommendations.

II. How to Run the Sessions

Presentation Session:

Each speaker is given 20 minutes (including five minutes for Questions and Answers).

Working Group Session:

- (1) Ask each participant to choose one (in principle) working group to join.
- (2) Identify opportunities, issues and problems in implementing specific objectives. The pre-workshop questionnaire can be used for the Mapping/Observation Phases.
- (3) Discuss how to resolve the issues and problems and how to foster the new activities in the Recommendation phase.

Joint Working Group Session:

We are planning to have experts (to be designated) at the round table.

- (1) Each working group chairperson will present observations and recommendations of his/her working group.
- (2) Experts at the round table will make comments on any findings.
- (3) The session will be open to the floor for further comments.

Wrap Up Session:

Review and conclude the observations and the final recommendations.