

**IAA 50th Anniversary Celebration Symposium in Nagoya – Climate Change / Green Systems
Program (Tentative as of August 3)**

1. The First Day (Aug. 30, 2010)

Opening Session (Room1001)		
TIME	SESSION TITLE	SPEAKER / ORGANIZATION
9:00-9:05	Opening Address	Hiroki Matsuo (Vice President of IAA, LOC General Chair, Japan)
9:05-9:10	JAXA Welcome Address	Yasushi Horikawa (JAXA, Japan)
9:10-9:20	Overview of Space Summit	<u>Speaker:</u> • Jean-Michel Contant (Secretary General of IAA, France)
9:20-9:30	Overview of CC/GS study group activity	<u>Speaker:</u> • John C. Mankins (Chair, IAA CCGS SG; Pres. Artemis Innovation Mgt. Solutions, USA)
9:30-10:30	Plenary Lecture on Global Climate Change	<u>Speakers:</u> • Akimasa Sumi (Prof. University of Tokyo, Japan) Present Perspective of Weather and Climate Prediction • Gen Inoue (Prof. IAA CCGS, Research Institute of Human and Nature, Japan)
10:30-10:40		Coffee Break

Technical Track 1: Climate Change – Earth Observation and Related Issues		Technical Track 2: Green Systems – Alternative Energy from Space		
TIME	SESSION TITLE	SPEAKER / ORGANIZATION	SESSION TITLE	SPEAKER / ORGANIZATION
10:40-12:00	Technical Session 1: Overall Strategic Approach to Earth Observations for Climate Change (Room1101)	<u>Moderator:</u> Yasushi Horikawa (JAXA, Japan) <u>Speakers:</u> • 1-1 Hiroki Kondo (Principal Scientist, JAMSTEC, Japan) Satellite observation and scientific findings – contribution to IPCC assessments - • 1-2 Berrien Moore (Prof. Princeton University) (TBD) • 1-3 Teruyuki Nakajima (Prof. Atmosphere and Ocean Research Institute (AORI) The University of Tokyo, Japan) The roll of the satellite observation for climate change issues • 1-4 Makoto Kajii (CEOS SIT Chair, JAXA, Japan) CEOS role in Climate Change	Technical Session 5: Space Solar Power System for Climate Change Mitigation (Room1102)	<u>Moderator:</u> Susumu Sasaki (JAXA, Japan) <u>Speakers:</u> • 2-1 John C. Mankins (Artemis Innovation Mgt Solutions, USA) Historical Activity in USA for Alternative Energy • 2-2 Leopold Summerer (ESA, Europe) Transition to a post fossil fuel future - contributions from space • 2-3 George Dietrich (President, SPACE Canada, Canada) Clean Energy from Space • 2-4 Naoki Shinohara (Prof. Kyoto University, Japan) Recent SPS Research and Development Activity in Japan
12:00-13:30	LUNCH Break			
13:30-14:50	Technical Session 2: Climate Change Monitoring, Prevention and Adaptation (Part I) (Room1101)	<u>Moderator:</u> (TBD) <u>Speakers:</u> • 1-5 Michel.h.Freilich (NASA HQ's)(TBD) NASA contribution to climate change monitoring • 1-6 Stephen Briggs (ESA, Europe) ESA Climate initiative (Response to GCOS requirements) • 1-7 Achuthan Jayaraman (India) Contribution of ISRO Earth observation satellite • 1-8 Darasuri (GISTDA, Thailand) THEOS contribution to climate change monitoring	Technical Session 6: Environment and Economical Issues Of Space Solar Power System (Room1102)	<u>Moderator:</u> Nobuyuki Kaya (Prof. Kobe University, Japan) <u>Speakers:</u> • 2-5 Hiroyuki Nagayama (Mitsubishi Research Institute, Japan) Environment and Cost issue of SSPS • 2-6 Alex Ignatiev (University of Houston, USA) Utilization of Lunar Resources for Solar Power from Space • 2-7 Patrick Collins (Azabu University, Japan) Risk Analysis of Climate Change, and Potential SPS Contribution to Global Warming or Global Cooling Mitigation • 2-8 Tomoki Kotani (Mitsubishi Space Software, Japan) Ultra-Low Cost Space Transportation for SPS
14:50-16:30	Technical Session 3: Climate Change Monitoring, Prevention and Adaptation (Part II) (Room1101)	<u>Moderator:</u> (TBD) <u>Speakers:</u> • 1-9 Kazuya Kaku (JAXA, Japan) (TBD) • 1-10 Naoto Ebuchi (Prof. Hokkaido University, Japan) Global monitoring of marine surface winds • 1-11 Ken'ichi Okamoto (Prof. Tottori University of Environmental Studies, Japan) The global precipitation map produced by spaceborn remote sensors and its application - Overview of the GSMaP project - • 1-12 Orbita Roswintarti (LAPAN, Indonesia) (TBD) • 1-13 Masanori Homma (JAXA, Japan) JAXA contribution to climate change monitoring	Technical Session 7: Activities for the Realization of Space Solar Power (Room1102)	<u>Moderator:</u> Shoichiro Mihara (USEF, Japan) <u>Speakers:</u> • 2-9 Susumu Sasaki (JAXA, Japan) On-orbit Demonstration for SPS Wireless Power Transmission • 2-10 Frank Little (Texas A&M University, USA) Space Experiments for Space Based Solar Power • 2-11 Yoshiharu Fuse (USEF, Japan) KW-Power Phased Array Microwave wireless Power Transmission Experiment Project • 2-12 Nobuyuki Kaya (Prof. Kobe University, Japan) Long Range Microwave Power Transmission Experiment in Hawaii and Space • 2-13 Takanori Narita (Mitsubishi Heavy Industries, Japan) Study on High Accuracy Phase Control Method for Space Solar Power System
16:30-16:40	Coffee Break			

Technical Track 1 (Cont.): Climate Change – Earth Observation and Related Issues		Technical Track 3: Green Systems –Environmentally Conscious Propellants		
16:40-18:00	Technical Session 4: Climate Change Monitoring, Prevention and Adaptation (Part III) (Room1101)	<u>Moderator:</u> (TBD) <u>Speakers:</u> • 1-14 Susumu Sambommatsu (President, USEF, Japan) New challenge by Japanese small satellites toward Green System Development • 1-15 Eric Maliet (EADS Astrium Satellites SAS, France) Observation from Space for Environment and Climate Change • 1-16 Tomukum Chia (Cameroon) Potential Role of Small Satellites in Addressing the Impact of Climate Change • 1-17 Jason Hatton (ESA, Europe) The International Space Station as a Platform for Climate Change Studies	Technical Session 8: Environmentally Conscious Propellant Systems (Part I) (Room1102)	<u>Moderator:</u> Kuninori Uesugi (JAXA, Japan) <u>Speakers:</u> • 3-1 Max Calabro (The Inner Arch, France) What is a Green propellant? For which future applications? • 3-2 Keiichi Hori (ISAS/JAXA, Japan) Mechanism of High Burning Rate of HAN based solutions • 3-3 Toshiyuki Katsumi (ISAS/JAXA, Japan) Combustion characteristics of Hydroxylammonium nitrate solutions • 3-4 Tetsuya Matsuo (Mitsubishi Heavy Industries, Japan) Safety Evaluation of HAN-based liquid Propellant and Its Advantages Applied to Spacecraft
18:00-19:00	Panel Discussion: Climate Change Monitoring, Prevention and Adaptation (Part IV) (Room1101)	<u>Moderator:</u> Yasushi Horikawa (JAXA, Japan) <u>Speakers/ Panelists:</u> • (TBD)	Technical Session 9: Environmentally Conscious Propellant Systems (Part II) (Room1102)	<u>Moderator:</u> Kuninori Uesugi (JAXA, Japan) <u>Speakers:</u> • 3-5 Kjell Anflo (Hagersten, Sweden) First Results From The IN-SPACE Demonstration of a Green • 3-6 Yasuhiro Morita (ISAS/JAXA, Japan) Advanced Solid Rocket Propellant for Cost Effective Launchers • 3-7 Harunori Nagata (Hokkaido University, Japan) CAMUI Type Hybrid Rocket as Non-Toxic Propellant Sounding Rocket
19:10-21:10	Reception sponsored by Aichi Prefecture			

2. The Second Day (Aug. 31, 2010)

Technical Track 4: Climate Change and Green Systems – Cross-Cutting Topics and Considerations		
TIME	SESSION TITLE	SPEAKER / ORGANIZATION
9:00-10:40	Plenary session (Room1001)	<p>Moderator: (TBD)</p> <p>Special Lecture:</p> <ul style="list-style-type: none"> 4-1 Berrien Moore (Prof. Princeton University) (TBD) <p>Speakers:</p> <ul style="list-style-type: none"> 4-2 Lal Samarakoon (Director of GIS, AIT, Thailand) Best approaches for space based technology transfer 4-3 Paivi Jukola (Finland) The Art of Policy Making for Climate Change and Green Solutions 4-4 Max Grimard (EADS astrium, France) International Cooperation of IAA CC/GS Study Group
IAA Closed Workshop		Technical Tour For Guests
11:00-12:00	Preparation for Summit of the Space Agencies (Closed) (RoomTBA)	<p>Moderator: <u>John C. Mankins (Chair, IAA CCGS SG; Pres. Artemis Innovation Mgt. Solutions, USA)</u></p> <p>Closed discussion by IAA members: IAA members only (Teleconference)</p>
12:00-14:00	LUNCH Break	
IAA Open Workshop		Tour
14:00-16:00	Open Discussion on IAA CC/GS Study (Room1001)	
18:00-21:00	Gala Dinner	

Side Event - Outreach Activity (Aug. 29-31, 2010)

"Science Cafe"

Theme of Discussion: Day-1(Aug. 29) "Climate Change"

Day-2(Aug. 31) "Space Debris"

"Kids Technical Tour" (Aug. 30)

Factory Tour for Aerospace Company (Mitsubishi Heavy Industries)