

SOLAR POWER SATELLITE (SPS) 2018 International Symposium and Workshop
PRELIMINARY PROGRAM v1-12*
MAY 23rd – 25th, 2018 Los Angeles, California

Wednesday, May 23rd, 2018

SPS-2018 Day I – Opening Session

- 8:00 am ***SPS-2018 Welcome*** – Symposium Co-chairs (John Mankins, Gary Barnhard)
- 8:30 am ***SPS-2018 Tech Session – The Vision of Space Solar Power (SSP)***
- 8:30 am John Mankins – Systems Engineering
- 9:00 am Darel Preble – Fundamental Imperatives
- 9:30 am Paul Werbos – Economics and Utility Functions (Invited)
- 10:00 am ***Commemoration Panel – 50 Years of SSP***
- John Mankins – Moderator
 - Richard Dickinson
 - Greg Maryniak (Video)
 - Paul Werbos (Invited)
 - TBD – TBD (John is working, Guy?)
- 12:00 n ***SPS-2018 Lunch*** (local vendors)
- 1:00 pm ***SPS-2018 Wireless Power Spectrum Workshop*** (Co-chairs: J. McSpadden, J. Mankins)
- 1:00 pm Introduction – John Mankins
- 1:10 pm Spectrum for Wireless Power Transmission – James McSpadden, Raytheon
- 1:50 pm TBD – TBD
- 2:10 pm Working Discussions
- 4:00 pm Summary
- 4:30 pm Action Plan
- 6:00 pm ***SPS-2018 Dinner*** (Location TBD)
- 10:00 pm SPS-2018 After hours reception, Presidential Suite

Thursday, May 24th, 2018

SPS-2018 Day II

- 8:30 am ***ISDC 2018 – Opening PLENARY Session***
- 10:00 am ***SPS-2018 Tech Session – Recent Developments – Demonstrations*** (Chair: G. Barnhard)
- 10:05 am Criteria for Comparison of Power Beaming Demonstrations – Paul Jaffe, NRL
- 10:30 am Space-to-Space Power Beaming TD³ Mission – Gary Barnhard, XISP-Inc
- 11:00 am Lunar Power & Light Company – from concept to reality, a collaborative discussion
(Gary Barnhard, Brad Blair, David Dunlop, Seth Potter, et al.)
- Standards – Defining the services and interfaces
 - Modeling what we know, how we know it, and what we do not know
 - Addressable Markets – Economics of Electrical Power & Ancillary Services
 - ISS Co-orbiting Systems Applications Requirements
 - LEO/MEO/GEO Applications Requirements
 - Lunar Surface Applications Requirements
 - Cislunar and beyond Applications Requirements
- 12:00 n ***ISDC 2018 – Lunch*** (Keynote Speaker: Dr. Michael Watkins, JPL Director, Voyager Team)
- 2:00 pm ***SPS-2018 Tech Session – Recent Developments – Concepts*** (Chair: P. Jaffe)
- 2:00 pm HESPeruS (Highly Elliptical Solar Power Satellite) – Ian Cash, SICA Design Ltd
- 2:20 pm Space Solar Power Initiative – Michael Kelzenberg, CalTech

SOLAR POWER SATELLITE (SPS) 2018 International Symposium and Workshop
PRELIMINARY PROGRAM v1-12*
MAY 23rd – 25th, 2018 Los Angeles, California

- 2:40 pm Orbit Options for Near-Term Space Solar Power – Seth Potter, SDP Space Systems
- 3:00 pm **SPS-2018 Tech Session – Competing SPS Approaches Panel**
- Paul Jaffe – Moderator
 - Ian Cash – SICA Design Ltd
 - Keith Henson – Independent Researcher
 - Michael Kelzenberg – CalTech
 - John Mankins – Mankins Space Systems, Inc.
- 4:00 pm TBD – Koji Tanaka, JAXA
- 4:30 pm TBD – Shoichiro Mihara, Japan Space Systems (invited)
- 5:00 pm TBD – Guy Pignolet, Reunion Island Space Initiative (invited)
- 6:00 pm **ISDC-2018 – Reception**
- 7:00 pm **ISDC-2018 – Dinner** (Keynote Speaker: Dr. Kathryn Sullivan)
- 10:00 pm **SPS-2018 After hours reception**, Presidential Suite

Friday, May 25th, 2018

SPS-2018 Day III

- 8:30 am **ISDC 2018 – PLENARY Session**
- 10:00 am **SPS-2018 – IAA SSP Decadal Assessment Kick-off meeting** (Chair: J. Mankins)
- 12:00 n **ISDC 2018 – Lunch** (Keynote Speakers: Dr. Linda J. Spilker & Dr. Earl Maize, Cassini Team)
- 2:00 pm **SPS-2018 Tech Session – Recent Developments – Research & International SSP Student Competition** (Co-chairs: John Mankins, Gary Barnhard)
- 2:10 pm UMCP -- Developing a Network of Thin-film Sensors to Detect Debris Damage to the Reflectors on SPS ALPHA
- 2:40 pm UMCP -- Development of an RFID System for SPS-ALPHA
- 3:10 pm UMCP -- Solar Reflective Assembly Pointing Control for Optimal Power Generation for SPS-ALPHA
- 3:40 pm USNA -- Cost Analysis of Modular Space Solar Power Satellites
- 4:10 pm USNA -- LCOE Cost Modeling for Hypothetical SSP Programs
- 4:40 pm NWPT/HIT -- Optical transmission characteristics and optimal design for SPS-ALPHA Mark- II
- 5:10 pm SPS-2018 Closing Remarks – Symposium Co-chairs (John Mankins, Gary Barnhard)
- 6:00 pm **ISDC-2018 – Reception**
- 7:00 pm **ISDC-2018 – Dinner** (Keynote Speaker: Jeff Bezos, CEO & Founder Amazon, Founder Blue Origin & Freeman J. Dyson)
- 10:00 pm **SPS-2018 After hours reception**, Presidential Suite

* Symposium attendees should register for the ISDC 2018 conference, meals, special events, and lodging via the conference website at <http://isdc2018.nss.org>. Please register as soon as possible to ensure availability. The ISDC 2018 Conference continues for two more days. The ISDC Program At-A-Glance is included on the next page.

SOLAR POWER SATELLITE (SPS) 2018 International Symposium and Workshop

PRELIMINARY PROGRAM v1-12*

MAY 23rd – 25th, 2018 Los Angeles, California

International Space Development Conference® 2018 Program At-A-Glance

Update as of 3-27-18

	8:30	10:00	11:00	12:00	1:00	2:00	3:00	3:30	4:00	5:00	6:00	7:00	8:00
Wednesday May 23	Registration (PM)	Tours Seminar Room: Space Solar Power 8:00-12:00											
Thursday May 24	Registration (all day)	Grand Ballroom Plenary Thomas Mueller Propulsion Chief Technology Officer, SpaceX	Hemosa Space Settlements Laguna Moon Development & Settlement Malibu Space Operations Redondo Solar System Exploration Seminar Room Space Solar Power Gateway NextGen Grand DEF Student Plenary Grand ABC Posters 1:30 - 3:30 Prefunction Exhibitors 10:00 - 6:00	Grand Ballroom Lunch Voyager Team Jet Propulsion Laboratory Dr. Mark Watkins Director	Hemosa Space Settlements Laguna Mars Exploration & Settlement Malibu Space Operations Redondo Solar System Exploration Seminar Room Space Solar Power Gateway NextGen Grand ABC Posters 1:30 - 3:30 Prefunction Exhibitors 10:00 - 6:00	Grand Ballroom Reception 5:00 slot	Grand Ballroom Dinner Dr. Kathryn Sullivan Former Secretary of Commerce for NASA NOAA Administrator and Space Shuttle Astronaut NSS Chapter Awards						
Friday May 25	Registration (all day)	Grand Ballroom Plenary Space Exploration and the Media (panel)	Hemosa Mars Exploration & Settlement Laguna Space Solar Power Malibu Space Transportation Redondo Interstellar Salon 210 Many Roads to Space Gateway Planetary Defense Grand DEF Student Plenary Grand ABC Posters Prefunction Exhibitors 10:00 - 6:00	Grand Ballroom Lunch Cassini Team Jet Propulsion Laboratory Dr. Luca J. Spilker Deputy Project Scientist Dr. Earl Maize Cassini Program Manager	Hemosa Mars Exploration & Settlement Laguna Space Solar Power Malibu Space Transportation Redondo Interstellar Salon 210 Many Roads to Space Gateway NextGen Grand ABC Posters 1:30 - 3:30 Prefunction Exhibitors 10:00 - 6:00	Grand Ballroom Reception 5:00 slot NSS Article of the Year Award NSS Excellence Awards							
Saturday May 26	Registration (all day)	Grand Ballroom Plenary Space Business and Space Development (panel)	Hemosa Moon Development & Settlement Laguna Space Business Malibu Space Transportation Redondo SETI & METI Gateway Planetary Defense Grand DEF Student Plenary Grand ABC Posters Prefunction Exhibitors 10:00 - 6:00	Grand Ballroom Lunch Dr. Frank Drake Former President of the SETI Institute Jim Bean Award	Hemosa Moon Development & Settlement Laguna Space Business Malibu Space Elevators Redondo SETI & METI Gateway NextGen Grand ABC Posters 1:30 - 3:30 Prefunction Exhibitors 10:00 - 6:00	Grand Ballroom Reception 5:00 slot Dance Party 9:30 - 12:30							
Sunday May 27	Registration (all day)	Grand Ballroom Plenary Destinations: Putting People into Space (panel)	Hemosa Space Settlements Laguna Space Business Malibu Space Security & Governance Redondo LaunchPad Talks Salon 210 Many Roads to Space Gateway NextGen Grand DEF Student Plenary Prefunction Exhibitors 10:00 - 6:00	Grand Ballroom Lunch Peter Wilhelm Retired Director, Naval Center for Space Technology, U.S. Navy Research Laboratory	Hemosa Space Settlements Laguna Space Business Malibu Space Security & Governance Redondo NASA Innovative Advanced Concepts Salon 210 Many Roads to Space Gateway Grand ABC Student Awards Prefunction Exhibitors 10:00 - 6:00	Grand Ballroom Reception 5:00 slot Gala Dinner Dr. Wang Li Director, Space Solar Power Satellite Technology Space Technology							