

As of 5-17-18

Registration

8:00 am - 7:00 pm

Student Registration

9:00 am - 5:00 pm

Exhibit Hall

10:00 am - 7:00 pm

Space Art Exhibition

10:00 am - 5:00 pm

Morning Plenary

8:30 am - 9:45 am

Student Plenary

10:00 am - 10:45 am

Friday, May 25

Century Prefunction

Grand ABC

Gateway & Century Prefunction

California Prefunction

The Art of Space - International Association of Astronomical Artists (IAAA)

Grand Ballroom

"Amazing Stories of Space: Selling the Final Frontier" (panel)

Panelists: Michael Clark (TMRO), Calla Cofield (JPL), Dan Goods (JPL), Mat Kaplan (*Planetary Radio*), Dr. Pascal Lee (Mars Institute), Geoff Notkin (Aerolite Meteorites, Inc), Rich Sternbach (International Association of Astronomical Artists)

Moderator: Rod Pyle, Space Author, Journalist, Historian and Editor-at-Large, *Ad Astra* Magazine, National Space Society

Grand Ballroom

"How To Prepare for the Astronaut Job Fair"

Keynote Speaker: Mike Mongo, Astronaut Teacher, Vice President, Icarus Interstellar, and Strategic Director, Starship Congress

10:00 am - 12:00 noon

Interstellar

10:00 am

10:10 am

10:40 am

11:00 am

11:30 am

Many Roads to Space

10:00 am

10:30 am

11:00 am

11:30 am

Mars Exploration

10:00 am

10:30 am

11:00 am

11:30 am

Morning Sessions & Symposia

Redondo Room

Welcome from the Tau Zero Foundation. Marc Millis (Tau Zero Foundation)

Interplanetary and Interstellar Missions. Jeff Greason (Tau Zero Foundation, Agile Aero and Electric Sky)

Earth-Mars Cycling Trajectories. Dr. Andrew Aldrin (Tau Zero Foundation and Florida Institute of Technology)

Interstellar Travelers in Action, the Future of Voyager and New Horizons. Dr. Pontus Brandt (Johns Hopkins Applied Physics Laboratory)

A Program Framework for the Exploration of the Interstellar Medium, as a First Step Towards Interstellar Explorers. Dr. Leon Alkalai (NASA Jet Propulsion Laboratory)

Salon 210 (2nd floor)

Overview of ASTRAX Space Services including over 50 Space Businesses. Taichi Yamazaki (ASTRAX, Inc.)

Introducing the Space Business and Space Flight Services School ASTRAX Academy in Japan. Keiichi Iwasaki (Future Learning, Inc.)

Overview of the Rocket Prince Project. Mayuko & Mahiro Ishii (ASTRAX STUDIO, Inc.)

Space Musical: The Rocket Prince Star Story. Hiroko Kodama (ASTRAX Music) & Daisuke Matsuzaki (Music Artist)

Hermosa Room

Mars Exploration & Settlement

Mars In Our Time. Dr. Robert Zubrin (The Mars Society)

Starting Small and Mars, Then Going Big. Hoppy Price (NASA Jet Propulsion Laboratory)

Mars Exploratoion and Settlement Questions Occasioned by the Success of SpaceX. Larry Lemke (NASA, retired)

Human Exploration Landing Site Selection Activities and Status. Richard Davis (NASA)

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Friday, May 25

Space Solar Power	
10:00 am	
10:15 am	
10:30 am	
10:45 am	
11:00 am	
Space Transportation	
10:00 am	
10:20 am	
10:40 am	
11:00 am	
11:20 am	
11:40 am	

Laguna Room

Recent Developments in SPS: Research & Development

Overview of Wireless Power Transmission Research and Development in China. Dr. Shiwei Dong (China Academy of Space Technology)
 Space Solar Power Orbital Options. Dr. Seth D. Potter (SDP Space Systems)
 Experimental Demo of Wireless Power Transmission for Space Solar Power. Dr. Mingyu Lu (West Virginia University Institute of Technology)
 Economic Model for Power Sats. Keith Henson (Independent Researcher)
 Panel: Where does the Status of Space Solar Power "Stand" Globally? Gary Barnhard (Xtraordinary Innovative Space Partnerships, Inc.), Dr. Paul Jaffe (Naval Research Laboratory), James McSpadden (Raytheon, Inc.), Keith Henson and Ian Cash (International Electric).
 Moderator: John C. Mankins (Mankins Space Technology)

Malibu Room

Space Transportation - Launch

Rocket Lab: Opening Space with Electron. Brad Schneider (Rocket Lab USA)
 Firefly Alpha: Economical and Convenient Small Satellite Launch. Thomas E. Markusic and Eric Salwan (Firefly Aerospace)
 Responsive Launch For Small Satellites. Monica Jan and Stephen Eisele (Virgin Orbit)
 Overview of United Launch Alliances in Development Vulcan Rocket. Chris Deel (United Launch Alliance)
 Space Launch System: Enabling Deep Space Human Exploration to the Moon, Mars and Beyond! Dr. Paul McConnaughey (NASA Marshall Space Flight Center)
 Design Progress and Flight Results for the Autonomous Mobile On-Orbit Diagnostic System (AMODS). Edward Hanlon (U.S. Navy)

Student Program

11:00 am - 12:00 noon

Gateway Ballroom

Workshop: Planetary Defense from Asteroids and Comets
 Dr. Nahum Melamed, Project Leader, The Aerospace Corporation

Lunch

12:00 noon - 1:50 pm

Grand Ballroom

"Reconnoitering the Ringed World: Cassini's 20 Years at Saturn"
 Keynote Speaker: Dr. Linda J. Spilker, Cassini Project Scientist, NASA Jet Propulsion Laboratory, Dr. Earl Maize, Cassini Program Manager, NASA Jet Propulsion Laboratory and Dr. Jean-Pierre Lebreton, Huygens Project Scientist, European Space Agency
 Presenting of NSS Space Pioneer Award to Cassini-Huygens Team
 MC: Rod Pyle, Author, Writer, Editor-at-Large, *Ad Astra* Magazine, National Space Society

Student Poster Session

1:30 pm - 3:30 pm

Grand ABC

NSS/NASA Ames Space Settlement Contest posters on display with the student presenters.

2:00 pm - 5:00 pm

Afternoon Sessions & Symposia

Interstellar	
2:00 pm	
2:30 pm	
3:00 pm	
3:10 pm	
3:40 pm	
4:10 pm	
4:20 pm	

Redondo Room

The James Webb Space Telescope and our Manifest Destiny In Space. Dr. Jon Arenberg (Northrup Grumman Corporation)
 Exoplanet Discovery. Humphrey (Hoppy) Price (NASA Jet Propulsion Laboratory)
 NSS/NASA Ames Student Space Settlement Contest Presentation
 Sailbeam Interstellar Probes. Jeff Greason (Tau Zero Foundation, Agile Aero and Electric Sky)
 Graphene Sails. Dr. Joseph Meany (Ionic Flask Materials Group)
 NSS/NASA Ames Student Space Settlement Contest Presentation
 Mass and Photon Beam Interstellar Propulsion Updates and Ideas. Gerald Nordley (Experimental Rocket Propulsion Society)

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Friday, May 25

Many Roads to Space

- 2:00 pm The Ryman Small Satellite Project. Mayu Murayama (Ryman Satellite Project Team Representative)
- 2:30 pm The Missed Frontier: Unbuilt and Conceptual Space Programs from the Past. Matthew Monahan (Space History Buff)
- 3:00 pm ASTRAX Space Funeral Services. Tomoko Kasai, Misuzu Nakamura & Hidetaka Nakahodo (ASTRAX MEMORIAL, Inc.)
- 3:30 pm Green Launch, a Hydrogen Cannon for Delivering Satellites & Supplies to Space at \$100/lb. Dr. John Hunter & Donald Whitney (Green Launch, LLC)
- 4:00 pm Proposal for Production of Space Entertainment Content by Japanese Artists. Komei Okada (Candidisland, Inc.)
- 4:30 pm Virtual Reality Tools for Serious Space Research and Public Outreach. James Burk (The Mars Society)

Mars Exploration

- 2:00 pm Search for Martian Life Prior to Sending Humans: Why and How. Dr. Carol Stoker (NASA Ames Research Center)
- 2:30 pm NSS/NASA Ames Student Space Settlement Contest Presentation
- 2:40 pm JPL Mars Virtual Reality Project for Mission Operations. Lauren Wheelright (NASA Jet Propulsion Laboratory)
- 3:10 pm HP Mars Home Planet: Designing a Future Human Civilization on Mars in VR. Joanna Popper (HP)
- 3:40 pm NSS/NASA Ames Student Space Settlement Contest Presentation
- 3:50 pm Results of the Cal Poly Pomona NASA X-Hab Project (2017-2018). Marc Cohen, Michael Fox and Marc Schulitz (California State Polytechnic University, Pomona)
- 4:20 pm Inflatable Habitats Tested in North Dakota. Dr. Pablo de León (University of North Dakota)

Space Solar Power

- 2:00 pm Thin-film Sensors to Detect Debris Damage. Kenloy Morris (University of Maryland)
- 2:15 pm Development of an RFID System for SPS-ALPHA. Chukwuma Odigwe (University of Maryland)
- 2:30 pm Reflector Pointing Control for Optimal Power Generation. Hassan Nisar (University of Maryland)
- 2:45 pm LCOE Cost Analysis of Modular SPS. Jay Corbett (United States Naval Academy)
- 3:00 pm Optical Characteristics and Optimal Design for SPS-ALPHA. Xian-Long Meng (Harbin Institute of Technology, China)
- 3:15 pm Space Demonstration: SACULA Project. Tatsuya Yamagami (Hosei University, Japan)
- 3:45 pm Thick Panel Folding for Microwave-type Planar SSPS. Shinnosuke Hashimoto (Muroran Institute of Technology, Japan)
- 4:00 pm Announcement of Finalist
- 4:15 pm Summary Remarks. Gary Barnhard (Xtraordinary Innovative Space Partnerships, Inc.)
- 4:35 pm Summary Remarks. John C. Mankins (Mankins Space Technology)

Salon 210 (2nd floor)

Hermosa Room

Mars Exploration & Settlement

Laguna Room

International SSP Student Competition Presentations

As of 5-17-18

Friday, May 25

Space Transportation	Malibu Room
2:00 pm	Space Transportation - In Space The Exploration Upper Stage for the Space Launch System: Enabling Scientific and Human Exploration Missions. Ben Donahue (Boeing)
2:20 pm	The Advanced Cryogenic Evolved Stage - New Capabilities for Cislunar Space. Jonathan Barr (United Launch Alliance)
2:40 pm	From the Earth to the Moon and Mars. Danielle Richey, Dave Murrow and Timothy Cichan (Lockheed Martin)
3:00 pm	NSS/NASA Ames Student Space Settlement Contest Presentation
3:10 pm	From Earth Orbit to the Moon and All Points In Between. Dallas Bienhoff (Cis-lunar Space Development Company)
3:30 pm	Astrobotic, Making the Moon Accessible with Peregrine. Dan Hendrickson (Astrobotic)
3:50 pm	NSS/NASA Ames Student Space Settlement Contest Presentation
4:00 pm	Solar Electric Propulsion Concept for the Deep Space Gateway. Scott Tilley & Alfred Tadros (SSL)
4:20 pm	Space Tug Operational Comparisons: An Efficient Transport Architecture Utilising Pulsed Cathodic Arc Thrusters. Dr. Patrick Neumann (Neuman Space)
4:40 pm	Power and Propulsion Element: Developing the First Module for a Lunar Gateway. Dr. Michele Gates, Ron Ticker, Erin Mahone and Dr. Michael R. Barratt (NASA)
Student Program 3:30 pm - 5:00 pm	Grand Ballroom PROJECT KARMAN: The College Race to Space. Space Enterprise at Berkeley is endeavoring to be the first college team in history to launch a liquid fuel rocket into outer space.
Silent Auction 4:00 pm - 7:00 pm	Century Prefunction Space memorabilia and collectables can be yours for the highest bid.
Showcase Event 4:30 pm - 5:00 pm	Gateway Ballroom Expanding Space Settlement Infrastructure OffWorld
Showcase Event 5:00 pm - 6:00 pm	Gateway Ballroom Cas Anvar and <i>The Expanse</i> <i>The Expanse</i> (SyFy Network) is set in a future which finds the solar system is populated and prospering. The writing team on <i>The Expanse</i> works hard to keep special effects and concepts true to science and physics whenever possible. Cas Anvar, who plays starship pilot Alex Kamal, will join fellow cast members to discuss the science of the show.
Space Art Exhibition 5:00 pm - 8:00 pm	Gateway Prefunction The Art of Space - International Association of Astronomical Artists (IAAA)
Cocktail Reception 6:00 pm - 7:00 pm	Century Prefunction
Governors' Dinner 7:00 pm - 9:30 pm	Grand Ballroom "A Conversation with Jeff Bezos and Alan Boyle, GeekWire" Keynote Speaker: Jeff Bezos, CEO and Founder, Amazon and Founder, Blue Origin Presenting of NSS Gerard K. O'Neill Memorial Award for Space Settlement Advocacy to Jeff Bezos Presenting of NSS Heinlein Award to Freeman Dyson, Professor Emeritus, Mathematical Physics and Astrophysics, Institute for Advanced Study Presenting of NSS Chris Pancratz Activist of the Year Award Presenting of NSS Excellence Awards MC: Art Dula, Heinlein Prize Trust and National Space Society Board of Governors Dinner Sponsored by the Heinlein Prize Trust
NSS Meeting 9:30 pm - Till	tbd