

	Name (Affiliation)	E-mail	Presentation Title
Tech Session I – Cislunar Marketplace & Space Solar Power – Creating Enabling Infrastructure: Gary P. Barnhard Session Chair			
1	Gary Barnhard (XISP-Inc)	barnhard@barnhard.com	Symposium Introduction
	John Mankins (Mankins Space Technologies)	john.c.mankins@gmail.com	
2	Dr. Paul Jaffe (NRL)	paul.jaffe@nrl.navy.mil	15 Critical Measurements for Power Beaming Links
3	Gary Barnhard (XISP-Inc)	barnhard@barnhard.com	Space Solar Power & ancillary services Beaming as enabling infrastructure
4	Chuck Finley (NASA/AFRL)	charles.finley.2@us.af.mil	Beamed power in the dark (... and without lawyers) & Hybrid High Ground Lunar/Cislunar Domain Awareness/Control
5	Dr. Hooman Kazemi (Raytheon)	Hooman.Kazemi@raytheon.com	Millimeter wave Wireless Power Transmission Technologies and Applications
6	James Schier (NASA/DoD)	james.schier-1@nasa.gov	Benefits of Open Interoperable Architecture for Space Communications
7	Dr. Christopher Morrison (U-Space)	c.morrison@usnc-space.com	Solar/Nuclear Combined Dynamic Brayton Systems
8	Dr. Paul Werbos (Independent Researcher)	paul.werbos@gmail.com	Heat to Electricity – Lessons from Earth Based Technology
9	Dr. Richard Madonna (CalTech)	rgmadonna.phd@gmail.com	Space Solar Power Initiative – Results & Paths Forward
10	Dr. Lewis Fraas (JX Crystals)	lfraas@jxcrystals.com	Space Solar Power, Thermo Photo Voltaic (TPV) Cells, & IR Power Beaming
11	Bert Murray (Lighthouse dev LLC)	hcm1955@gmail.com	Infrared Power Demo
	Tim Bullard (NG Balancing Technologies)	tbullard@ngbalancingtechnologies.com	
	Robert Winsor (Winsor Optics)	winsor.optics@gmail.com	
Tech Session II – Cislunar Marketplace & Space Solar Power – Meeting Customer Requirements: Gary P. Barnhard Session Chair			
12	Daniel Faber (Orbit-Fab)	daniel@orbitfab.space	OrbitFab Gas Stations in Space
13	Seth Potter (XISP-Inc)	sethpotter3@gmail.com	Co-orbiting/Formation Flying with ISS & other station customers
14	Gary Barnhard (XISP-Inc)	barnhard@barnhard.com	Surface-to-Surface customers
15	Brad Blair (MoonRise)	planetminer@gmail.com	ISRU/Water & Oxygen Extraction
16	John Mankins (Mankins Space Technologies)	john.c.mankins@gmail.com	Powering Space Delivering Affordable Energy for the Emerging cis-Lunar Economy
After hours reception, Presidential Suite, sponsored by XISP-Inc, Mankins Space Technologies, Inc. and Orbit-Fab			
Tech Session III -- Space Solar Perspectives End-to-End System of Systems Considerations: John C. Mankins Session Chair			
17	John Mankins (Mankins Space Technologies)	john.c.mankins@gmail.com	Solar Energy from Space: A Decadal Revisit to the First International Assessment of Opportunities, Issues and Potential Pathways Forward
18	Michaela Rabochova (Research Centre Rez Ltd.)	Michaela.Rabochova@cvrez.cz	Solar cells for space applications: gamma radiation resistance testing
19	Darel Preble (Space Solar Power Institute)	darel.preble@comcast.net	Space Solar Power and the Dying Electric Power Grid
20	John Mankins (Mankins Space Technologies)	john.c.mankins@gmail.com	Space Solar Power 100 Years
21	John Mankins (Mankins Space Technologies)	john.c.mankins@gmail.com	International Space Solar Power Perspectives Panel Discussion
22	Howard Bloom (Author)	howlbloom@aol.com	Lift Two Billion Poor Harvest Solar Energy in Space
Tech Session IV – 2019 International Space Solar Power Student Competition Presentations			
23	UMD -- Students: Tanner Christian, Scott Green Faculty Advisor: Paul Jaffe		
24	TAMU -- Students: Lewis Longbottom, Kristopher Lowry, Sean Davis Faculty Adviser: Dr. Pablo Rangel		
25	IUPUI -- Students: Sawyer Powell, Penghui Heng, Faculty Advisor: Dr. Peter Schubert		
26	TU Delft -- Students: Kasper De Smaele, Joshua Spaander, Dylan Kreyne, Chris Groen, Bart Kevers Faculty Advisor: Dr. Jian Guo (via video conference link)		
ISDC-2019 – Reception & Dinner – Jeffrey Manber, CEO NanoRacks			
After hours reception, Presidential Suite, sponsored by XISP-Inc, Mankins Space Technologies, Inc. and Orbit-Fab			