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ICES-2022-293	304	Microbial Characterization of Heat Melt Compaction for Treatment of Space Generated Solid Wastes	Mary Hummerick, Jason Fisher, Raymond Wheeler, Tra-My Justine Richardson, Michael Ewert, Jeffrey Lee and Lawrence Koss
ICES305: AIChE/ASME/TECS/AIAA LS&S - Environmental and Thermal Control of Commercial and Exploration Spacecraft			
ICES-2022-36	305	Design of a life support architecture for a reusable lunar habitat	Juliette Mollard, Marie-Christine Desjean, Alexis Paillet and Gregory Navarro
ICES-2022-196	305	Capabilities and Challenges to Enable Long-Duration-Mission Habitats Beyond Low Earth Orbit	David Howard, G. Richard Schunk, Christine Stanley, Paul Kessler and Tiffany Nickens
ICES-2022-282	305	Modeling and Separation Performance of the Condensate Separator for Microgravity Conditions (COSMIC)	Robert Jacobi, Kelly Stukbauer and Connor Joyce
ICES307: AIChE - Collaboration, Educational Outreach, and Public Engagement			
ICES-2022-39	307	U.S. Spacesuit Knowledge Capture – Creation, Curation, and Dissemination	Cinda Chullen, Vladenka Oliva, Gordon Andrews, Sarah Hargrove and Diana Rodgers
ICES-2022-382	307	Designing a hybrid approach for space analog missions in Brazil	Davi Souza, Julio Rezende and Luisa Santos
ICES-2022-391	307	Clothes Cleaning Research for Space Exploration	Michael Ewert, Evelyn Orndoff, Mark Sivik, Kristi Niehaus, William Shearouse, Jessica Zinna, Steven Patterson, Dean Muirhead and W.
ICES308: AIChE - Advanced Technologies for In-Situ Resource Utilization			
ICES-2022-65	308	Evaluation of Candidate Crop Plant Lactuca Sativa in Biologically Enhanced Martian Regolith	Jennifer Russell, Gary W. Stutte and Pablo De Leon
ICES-2022-105	308	Demonstration of Paragon's Water Purification Assembly for Lunar Water Processing	Jordan Holquist, Sean Gellenbeck, Connor Joyce, Robert Rivera, Chad Bower and Philipp Tewes
ICES-2022-140	308	ROXY - An economically viable process to produce oxygen and metals from regolith	Achim Seidel, Martin Altenburg, Emanuele Monchieri, Peter Quadbeck, Christian Redlich, Uday Pal and Florian Strigl
ICES-2022-207	308	Overcoming Technical Challenges to Advance the MOXIE Solid Oxide Electrolysis Stack from TRL 3 to 9, Early Challenges to Successful ISRU Oxygen Production on Mars	Jessica Elwell, Joseph Hartvigsen, S. Elango Elangovan, Dennis Larsen, Michele Hollist and Tyler Hafen
ICES-2022-208	308	In-Situ Electrochemical Generation and Utilization of Hydrogen Peroxide for Disinfection	Santosh Vijapur, Timothy Hall, E. Jennings Taylor, Santosh More, Jeffrey Sweterlitsch, Michael Ewert, Sarah L. Castro-Wallace, Vicky Byrne, et al
ICES-2022-211	308	Scale Up and Coupling of the MOXIE Solid Oxide Electrolyzer for Propellant Production on Mars	Joseph Hartvigsen, S. Elango Elangovan, Jessica Elwell, Michele Hollist, Dennis Larsen, Tyler Hafen, Don Claus, Skyler Valdez, et al
ICES-2022-275	308	Solid Oxide Electrolysis Based Lunar PSR Ice Processing System for Propellant Hydrogen and Oxygen Production	Michele Hollist, Joseph Hartvigsen, Jessica Elwell, S Elangovan, Abel Gomez, Don Claus, Merrill Wilson, Gregory Jackson, et al
ICES-2022-280	308	Solid Oxide Electrolysis Cathode for Increased Robustness for ISRU Application	Tyler Hafen, Taylor Rane, Dennis Larsen, Jenna Pike, Joseph Hartvigsen, Jessica Elwell and S Elango Elangovan
ICES-2022-435	308	In situ Manufacturing derived from Bioregenerative Life Support Systems	Robert Morrow, John Wetzel and Sam Moffatt
ICES400: ASME - Extravehicular Activity: Space Suits			
ICES-2022-82	400	Development of a Mechanical-Loading Countermeasure Skinsuit to Mitigate Post-Spaceflight Sensorimotor Dysfunction	Braid MacRae, Ruth Bunford, James Waldie, Gordon Cable, Rajiv Padhye and Abby Rudakov
ICES-2022-111	400	Machine-learning Solution for Automatic Spacesuit Motion Recognition and Measurement from Conventional Video	Linh Vu, Han Kim, Alex Gordon and Sudhakar Rajulu
ICES-2022-122	400	IVA Space Suit Flight Qualification	Theodore Southern and Nikolay Moiseev

ICES-2022-144	400	Performance of the Shortened Liquid Cooling Warming Garment During Simulated MicroG EVA	Sophie Bielawski, Pablo de Leon and Gloria R. Leon
ICES-2022-151	400	Orthostatic Intolerance Garments for Spaceflight: Posture-Informed Design for Improving Garment Comfort	Ruth Bunford, Braid MacRae, James Waldie, Rajiv Padhye and Gordon Cable
ICES-2022-212	400	Advanced Nanocomposites for Exploration Extravehicular Mobility Unit (xEMU) Suits using STF-Armor™ for Lunar Regolith Dust Mitigation	Richard Dombrowski, Erik Hobbs, Shane Jacobs, Norman Wagner, Maria Katzarova and Richard Rhodes
ICES-2022-213	400	Shear Thickening Fluid Treated Space Suit Layups: MISSE-13 Low-Earth Orbit Studies	Erik Hobbs, Richard Dombrowski, Norman Wagner, Maria Katzarova and Miria Finckenor
ICES-2022-236	400	Improved Shear Thickening Fluid Treated Space Suit Layups: Terrestrial and ISS MISSE-10 Low-Earth Orbit Studies	Erin Hogan, Maria Katzarova, Elaine Stewart, Jacob Hewes, Norman Wagner, Richard Dombrowski, Erik Hobbs and Miria Finckenor
ICES-2022-253	400	NASA Advanced Space Suit Pressure Garment System Status and Development Priorities 2022	Shane McFarland, Richard Rhodes and Don Campbell
ICES-2022-257	400	NASA Advanced Space Suit xEMU Development Report – Liquid Cooling and Ventilation Garment	Shane McFarland and David Cox
ICES-2022-258	400	NASA Advanced Space Suit xEMU Development Report – Hard Upper Torso Assembly	Ian Meginnis, Richard Rhodes and Daniel Kim
ICES-2022-260	400	NASA Advanced Space Suit xEMU Development Report – Helmet and Extravehicular Visor Assembly (EVVA)	Kristine Davis and Tymon Kukla
ICES-2022-261	400	NASA Advanced Space Suit xEMU Development Report – Ancillary Hardware	Tymon Kukla
ICES-2022-262	400	NASA Advanced Space Suit xEMU Development Report – Waist Brief Hip	Kristine Davis, Jaren Grimes and Chanel Stephens
ICES-2022-263	400	NASA Advanced Space Suit xEMU Development Report – Lunar Boots	Shane McFarland and Zachary Fester
ICES-2022-264	400	NASA Advanced Space Suit xEMU Development Report – Integrated Communication System	Ian Meginnis and William Foster
ICES-2022-265	400	NASA Advanced Space Suit xEMU Development Report – Environmental Protection Garment	Maria Flores-Daley and Bobby Jones
ICES-2022-316	400	Utilizing Finite Element Analysis (FEA) to Predict Fit and Performance of an EVA Lower Arm Assembly Pressure Garment	Dillon Hall, Bonnie J. Dunbar and Darren J. Hartl
ICES-2022-347	400	Electrochromic Visors for Advanced Spacesuit Helmets	Avni Argun, Andrew Weber, David Markham, Kristine Davis and Tymon Kukla
ICES-2022-429	400	NASA Advanced Space Suit xEMU Development Report – Wired Heart Rate Monitor	Ian Meginnis, Christopher Woodbury, Jorge Rivera, Michael Jennings and Sree Sreedhar
ICES-2022-431	400	NASA Advanced Space Suit xEMU Development Report – Shoulder Assembly	Ian Meginnis, Shane McFarland, Richard Rhodes, Jeff Watters and David Cox
ICES401: ASME/AIAA LS&S - Extravehicular Activity: Systems			
ICES-2022-66	401	Development and Test of a Spacesuit Informatics System for Moon, Mars, and Further Deep-Space Exploration	Jake Rohrig, Ashley Himmelmann, Monica Torralba, Gregory Quinn, Pascal Lee, Sawan Dalal, Magnus Arveng, Moina Tamuly and Jostein Lyseberg
ICES-2022-79	401	A Cloud Computing Infrastructure to Support xEMUs and Future EVAs	John Manlucu, Najya Ahsan, Ruth Robinson, Michael Vandt, Kaitlyn Baker and Giovanni Vincenti
ICES-2022-334	401	An Overview of Augmented Reality Solutions for the Enhancement of Space Exploration and Operations	Kaitlyn Baker
ICES-2022-358	401	Development and Testing of the BioBot EVA Support System	Charles Hanner, Nicolas Bolatto, Joshua Martin, Daniil Gribok and David Akin
ICES-2022-361	401	Development of an Autonomous Umbilical Tending System for Rover-Supported Surface EVAs	Nicolas Bolatto, Robert Fink, Joshua Martin, Zachary Lachance, Rahul Vishnoi and David Akin
ICES402: ASME - Extravehicular Activity: PLSS Systems			
ICES-2022-18	402	Ultra-Pure, High Endurance Liquid Bladder with Volume Sensor for Space Applications	Marc Ramsey, Cinda Chullen and Raymundo Moreno
ICES-2022-285	402	SERFE Water Quality Results	David Westheimer, Colin Campbell, Alicia Contreras-Baker and John Steele
ICES-2022-290	402	SERFE Thermal Performance Results	David Westheimer, Colin Campbell, Alicia Contreras-Baker, Chane Sladek and Glen Waguespack
ICES-2022-295	402	SERFE Project Overview	David Westheimer, Colin Campbell, Alicia Contreras-Baker, Benjamin Greene, Adam Korona and Shonn Everett
ICES-2022-322	402	The Effect of Trace-Contaminant Sorbent Monolith Geometry on Sorbent Performance	Marek A. Wójtowicz, Joseph E. Cosgrove, Michael A. Serio, Andrew E. Carlson and Cinda Chullen
ICES-2022-386	402	Analysis on the Effect of Flow Interruption in the Oxygen Ventilation Loop on Inspired Carbon Dioxide	Noah Andersen
ICES-2022-425	402	Advanced Technology Infusion into a Spacesuit Portable Life Support System	Cinda Chullen
ICES403: ASME - Extravehicular Activity: Operations			
ICES-2022-209	403	Assessments of Physiology And Cognition in Hybrid-reality Environments (APACHE) – Physical Workload Approximation	Alex Baughman, Kyoung Jae Kim, Kadambari Suri and Andrew Abercromby
ICES-2022-335	403	Design of the Portable Offloading for Walking, Exercise, and Running (POWER) Device	Logan Kluis, Deanna Kennedy, James Hubbard and Ana Diaz-Artiles
ICES404: ASME - International Space Station ECLS: Systems			
ICES-2022-206	404	for Lunar/Mars Surface Habitats: Trace Contaminant Control Subassembly Case Study	Gregory Gentry
ICES-2022-231	404	Investigation of the Anomalous Low Voltage Condition of the Oxygen Generation Assembly	Phillip Baker, Robert Roy, Alesha Ridley and Steve Van Keuren
ICES-2022-277	404	ASU SPK-U Toilet System Development and Operation Review and Its Upgrading Plans	Petr Andreychuk, Natalia Shamshina, Leonid Bobe and Alexander Pavlov
ICES405: ASME - Human/Robotics System Integration			
ICES-2022-153	405	Detection of task type through unobtrusive physiological monitoring	Katya Arquilla, Michael Zero, Kaitlyn Hauber, Mark Shelhamer, David Klaus and Christine Fanchiang
ICES-2022-239	405	Situational Cues for Continuous Trust Calibration in Automated Systems	Alexandra Forsey-Smerek, Katya Arquilla and Julie Shah
ICES406: ASME/AIChE - Spacecraft Water/Air Quality: Maintenance and Monitoring			
ICES-2022-60	406	Optimization of a Deionization Bed for an Oxygen Generator Assembly for Exploration Missions	Katherine Westhoff Lerner, Christopher McPhail and Cody Romero

ICES-2022-229	406	Controlled release silver coatings for antibacterial and anti-biofouling stainless steel surfaces	Ali Ansari, Rafiqul Islam, Francois Perreault, Yuqiang Bi, Kiarash Ranjbari, Afsana Munni and Fariya Sharif
ICES407: ASME - Extravehicular Activity: Emerging Space Suit Technologies			
ICES-2022-29	407	Photogrammetry for Deformation Mapping: 3D Strain Measurement for the Design of Mechanical Counterpressure Spacesuits	Theodore Macklin
ICES-2022-31	407	Computational Engineering Models for the Design of Mechanical Counterpressure Spacesuits	Theodore Macklin
ICES-2022-81	407	Feasibility of MCP and Hybrid GP/MCP Architectures for Martian EVA: A Trade Study Perspective	Abby Rudakov, Jonathan Clarke, Braid MacRae, James Waldie and Rajiv Padhye
ICES-2022-152	407	Variable Stiffness Soft Knee Exoskeleton for Advanced Space Suits and Planetary Exploration: Energetics Evaluation	Allison Porter, Katya Arquilla, Nicole McGaa, Alvin Harvey, Rachel Bellisle, Dava Newman and Aleksandra Stankovic
ICES-2022-191	407	High Performance Mechanical Counter Pressure Spacesuit Glove for Martian Surface Exploration	Gabriella Schauss, Rachel Bellisle, Akshay Kothakonda, Dava Newman and Allison Anderson
ICES-2022-249	407	Mechanical Counter-Pressure EVA Suits: NASA Outlook and Development Strategy in 2022	Shane McFarland
ICES-2022-266	407	Modeling of Fabrics and Pressurization for Actively Tensioned Mechanical Counter Pressure Spacesuit	Akshay Kothakonda and Dava Newman
ICES-2022-302	407	Effects of E-Textile Circuit Components on Signal Quality for Wearable Sensing Applications	Alireza Golgouneh, Brad Holschuh and Lucy Dunne
ICES500: AIAA LS&S/AICHe - Life Science/Life Support Research Technologies			
ICES-2022-11	500	Plant Water Management in Microgravity	Tyler Hatch, Marc Wasserman, John McQuillen and Mark Weislogel
ICES-2022-12	500	Plant Water Management Experiments: Hydroponics 3 & 4	Marc Wasserman, Mark Weislogel, Logan Torres, Tyler Hatch and John McQuillen
ICES-2022-13	500	The Plant Water Management Experiments on ISS: Soil	Marc Wasserman, Mark Weislogel, Rihana Mungin, Tyler Hatch and John McQuillen
ICES-2022-129	500	Design of a Jettison System For Space Transit Vehicles	Steve Sepka, Michael Ewert, Jeff Lee, Thomas Chen and Chandrakanth Venigalla
ICES-2022-186	500	Plasma Assisted Acid Leaching of Inedible Biomass for Nutrient Recovery	Kenneth Engeling, Ryan Gott, Griffin Lunn, Carolina Franco, Misle Tessema and Bruce Link
ICES-2022-197	500	Sustainable Life Support enabled by microalgae: focus on biomass harvesting and culture medium recycling	Marie Vandermiss, Dries Demey, Estelle Couallier and Jordan Tallec
ICES-2022-202	500	Design and operation of Photomembrane Bioreactor (PMBR) to balance nitrogen in high-ammonia wastewater treatment effluents	Daniella Saetta, Jason Fischer, Joshua Finn, Talon Bullard, Alexandra Smith, Lawrence Koss, Daniel Yeh, Oscar Monje and Luke Roberson
ICES-2022-267	500	The Microbiology of Microgreens Grown in Controlled Environment Chambers under ISS Conditions	Mary Hummerick, Aaron Curry, Jennifer Gooden, Cory Sperr, Lashelle Spencer, Matthew Romeyn and Jason Fischer
ICES-2022-339	500	Design and Build of HelmHoltz Coils to Generate Hypomagnetic Field for Low Cost Space Biology Experiments	Terry Trevino, Terry Rector, Nicholas Vasquez, Kolemman Lutz and Herve Cadiou
ICES501: AIAA LS&S - Life Support Systems Engineering and Analysis			
ICES-2022-71	501	A Guide for Evaluating Spacecraft Environmental Control & Life Support Systems (ECLSS) Technology Developments	Darnell Cowan, Morgan Abney, James Broyan, Jay Perry, Lance Delzeit, Marit Meyer, Orlando Melendez and David Williams
ICES-2022-90	501	Integrated Logistics and Supportability Challenges of Sustained Human Lunar Exploration	Andrew Owens, William Cirillo, Chel Stromgren, Jason Cho, Chase Lynch and Jon Vega
ICES-2022-170	501	A Cost Analysis of the use of In Situ Space Resources for Sustainable Habitation on the Moon and Mars	Hiroyuki Miyajima
ICES-2022-221	501	Modeling and Simulation of Component Degradation and Faults in the Carbon Dioxide Removal Assembly	Daniel Kaschubek and James Nabity
ICES-2022-303	501	A Diagnostics Model for Detecting Leak Severity in a Regenerable CO2 Removal System	Samuel Eshima, James Nabity, Ayush Mohany, Heraldo Rozas and Nagi Gebrael
ICES-2022-417	501	Trade Study Analysis of a Cryogenic Oxygen Architecture for Lunar Outpost Life Support	Thomas Chen and Jeffrey Sweterlitsch
ICES502: AIAA LS&S - Space Architecture			
ICES-2022-22	502	Habitability and the Golden Rule of Space Architecture	Sheryl Bishop, Sandra Haeuplik-Meusburger and James A. Wise
ICES-2022-38	502	Lunar Surface Cargo Offloading Concepts	Tracy Gill, Jaime De Jesus Gomez Jr., Don Pittman, Mark Lewis, Kara Beaton, Steven Chappell and Paul Kessler
ICES-2022-43	502	Surface Systems and Interface Standardization	Jaime Gomez, Don Pittman, Gabor Tamasy, Chad Caron, Michael Dupuis and Mark Lewis
ICES-2022-133	502	Human in the Loop Evaluations: Process and Mockup Fidelity	Jackelyne Silva-Martinez, Gordon Vos, Jennifer Boyer, Robert Durkin, William Foley, Sarah Margerum, Kritina Holden, Victoria Smith, Leah Beebe and Christopher Van Velson
ICES-2022-137	502	Study for a Rigid/Inflatable Greenhouse Module to Integrate Bio-regenerative Life Support Systems into Orbital Facilities and Deep Space Transfer Vehicles.	Paolo Caratelli, Maria Alessandra Misuri and Rowdha Begam Mohamed Hanifa
ICES-2022-150	502	Design Strategies of Greenhouse and Food Production/ Preparation Module for Long-Duration Human Exploration Missions	Mahsa Esfandabadi and Olga Bannova
ICES-2022-181	502	Human outpost creation using multiple data sets and computational design	Thomas Lagarde and Matko Brandic Lipinski
ICES-2022-220	502	Implementation of In-situ Resource Utilization for the Development of a Moon Village	Marlies Arnhof, Belinda Rich, Hanna Lakk, Advenit Makaya, Aidan Cowley, Georgi I. Petrov, Daniel Inocente and Colin Koop
ICES-2022-297	502	AMORE - Concept Study for a lunar research village	Michail Magkos, Anne Stadtmüller, Yassin Amara, Abhishek Anil, Souktik Bhattacharjee, Sisinio Dargent de Vicente, Patrick Haffmans, Nicolas Heinz,
ICES-2022-298	502	Lunar base design concept of DIANA - Dedicated Infrastructure and Architecture for Near-Earth Astronautics	Alma Kugic, Madison Diamond, Elizabeth Gutierrez, Denis Acker, Adrian Pippert, Nadine Barth, Prishit Modi, Javier Palacios Calatayud, et al
ICES-2022-300	502	Crew-Passenger Ratio Implications on Commercial Spaceflight Design & Survivability: A Discrete Event Simulation Framework	Victor Kitmanyen, Hisham Ghunaim, Kazuhiko Momose and Luis Otero
ICES-2022-336	502	Bringing it Home: Finding Synergies Between Earth and Space Construction and Design	Christina Ciardullo, Rebecca Pailles-Friedman, Michael Morris, Raymond Clinton, Jennifer Edmunson and Michael Fiske
ICES-2022-338	502	Architectural Design of a Human-Centered Lunar Geology Lab	Adam Oswald
ICES-2022-365	502	Model and Full-Scale Testing of Outfitting Approaches for Inflatable Habitats	Nicolas Bolatto, Colby Merrill, Ronak Chawla, Olivia Naylor, Elizabeth Myers and David Akin
ICES-2022-367	502	Experimental Investigation of Minimum Cabin Sizes at Varying Gravity Levels	Zachary Lachance, David Akin, Charles Hanner and Nicolas Bolatto

ICES503: AIAA LS&S - Radiation Issues for Space Flight

ICES-2022-19	503	Impact of Solar Cycle Duration on Astronaut Radiation Exposure during a Human Mars Mission	Ronald Turner
ICES-2022-80	503	CREW HaT: A Magnetic Shielding System for Space Habitats	Paolo Desiati and Elena D'Onghia
ICES-2022-244	503	The neutron component of the lunar radiation environment	Lawrence Heilbronn

ICES504: AIAA LS&S - Management of Air Quality in Sealed Environments

ICES-2022-2	504	History of NASA's Odor Assessment (Test 6)	Benjamin Greene, Vanessa Buchanan and Susana Tapia Harper
ICES-2022-14	504	Evaluation of monoethanolamine and ammonia adsorbents for atmosphere control	Charles Cummings and Edward Harris
ICES-2022-57	504	Effects of Ambient Alcohol Levels on the Real-time Monitoring of the Atmosphere of the International Space Station	William Wallace, Thomas Limerio, Kenneth Clark, Daniel Gazda and Edgar Hudson
ICES-2022-58	504	Quantitation of Trace Water in ISS Atmosphere Samples Recovered from CO₂ Removal Systems	Steven Beck, William King, Cristina Muko and Daniel Gazda
ICES-2022-113	504	Culture-Independent Microbial Air Profiling using a Spaceflight-Compatible Nanopore Sequencing Method	Brandon Dunbar, Hang Nguyen, Sarah Stahl-Rommel, G. Marie Sharp, Christian Castro and Sarah Castro-Wallace
ICES-2022-230	504	Preparations for 2nd US Navy Submarine Sea Trial Utilizing NASA and US Navy Analyzers	Joshua Manney, Jay Smith, Paul Mudgett, Jeffrey Pilgrim and Joshua Bowman

ICES506: AIAA LS&S - Human Exploration Beyond Low Earth Orbit: Missions and Technologies

ICES-2022-59	506	Influence of ECLSS Performance on Spacecraft Habitability	James Nability, Kathleen Laughton and Christine Escobar
ICES-2022-120	506	Functionally Aligning Emergent Technologies for Self-Sufficient Deep Space Smart Habitats	David Klaus, Sophia Zaccarine, Patrick Pischult and Annika Rollock
ICES-2022-156	506	Roadmap of a Lunar Base Using the Lunar Lava Tubes and Their Vertical Skylights	Masato Sakurai, Asuka Shima, Isao Kawano, Yasufumi Wakabayashi, Junichi Haruyama, Takuya Goto, Mitsuhiro Ohta, Ken Shoji and Hiroyuki Miyajima
ICES-2022-188	506	DIANA - Dedicated Infrastructure and Architecture for Near-Earth Astronautics	Denis Acker, Elizabeth Gutierrez, Adrian Pippert, Nadine Barth, Julienne Böttger, Madison Diamond, Alma Kugic, Javier Palacios Calatayud, et al
ICES-2022-274	506	The COSPAR Planetary Protection Knowledge Gaps Workshop Series – An Agency Perspective	J Andy Spry, Bette Siegel, Elaine Seasley and J Nick Benardini
ICES-2022-281	506	NASA Environmental Control and Life Support Technology Development for Exploration: 2021 to 2022 Overview	James Broyan, Melissa McKinley, Imelda Stambaugh, Gary Ruff and Andrew Owens
ICES-2022-299	506	NASA Crew Health & Performance Capability Development for Exploration: 2021 to 2022 Overview	Andrew Abercromby, Grace Douglas, Kent Kalogera, Jeffrey Somers, Rahul Suresh, Moriah Thompson, Scott Wood, Emma Hwang, et al
ICES-2022-310	506	International Space Station as a Testbed for Exploration Environmental Control and Life Support Systems – 2022 Status	Alesha Ridley, Laura Beachy, Christopher Brown, Paul Caradec, John Garr, Lynda Gavin, David Hornyak, Christopher Matty, et al
ICES-2022-332	506	ECLSS Architecture and Breakeven Analysis for Mission-Flexible LIFE™ Habitat	Elizabeth Marandola, Sam Moffatt and Laura Kelsey
ICES-2022-388	506	A Review of Baseline Assumptions and Ersatz Waste Streams for Partial Gravity Habitats and Orbiting Microgravity Habitats	Dean Muirhead, Stacey Moller, Niklas Adam and Michael Callahan
ICES-2022-398	506	Inflatable Habitat Structural Health Monitoring via Embedded Fiber Optic Sensors	Osgar John Ohanian III, Susan M. Pope, Bret Heasley, Grant Woods, Matthew Morgan, James Kirwan, Joseph Welch, Thomas Carno Jones et al

ICES509: AIAA LS&S - Fire Safety in Spacecraft and Enclosed Habitats

ICES-2022-4	509	Flame Retardant Polyamide Fibers for Space Crew Clothing	Krishnaswamy Rangan and Tirumalai Sudarshan
ICES-2022-100	509	Limiting Oxygen Concentration of Burning PMMA Cylinders under External Radiant Heating and Subatmospheric Pressures	Charles Scudiere, Christina Liveretou, Carlos Fernandez-Pello, Michael Gollner, Sandra Olson and Paul Ferkul
ICES-2022-128	509	Competition Between Pyrolysis Kinetics and Surface Radiation in Opposed-Flow Flame Spread in a Microgravity Environment	Subrata Bhattacharjee and Michael Delichatsios
ICES-2022-192	509	Fire Characterization and Gas Analysis of Lithium-Ion Batteries During Thermal Runaway	Byoungchul Kwon, Wohan Cui, Pushkal Kannan, Cole Compton, Ya-Ting Liao, Fumiaki Takahashi, Judy Jeevarajan, Daniel Juarez-Robles et al
ICES-2022-219	509	Opposed-flow spreading flames: Effect of sub-atmospheric pressure on spread and burning rates	Luca Carmignani, Priya Garg, Maria Thomsen, Michael Gollner, Carlos Fernandez-Pello, David Urban and Gary Ruff
ICES-2022-224	509	A Numerical Study of Liquid Fuel Wick Flames in Artificial Partial Gravity in a Centrifuge Facility	Arland Zatania Lojo, Ankit Sharma, Ya-Ting Liao, Michael Johnston and Paul Ferkul
ICES-2022-278	509	Model Development of Large-Scale Spacecraft Fires during the Saffire-IV Experiments	John Brooker and Justin Niehaus

ICES510: AIAA LS&S - Planetary and Spacecraft Dust Properties and Mitigation Technologies

ICES-2022-41	510	Modal Optimized Vibration dust Eliminator (MOVE): An Active/Passive Dust Mitigation Technology for Spaceflight Exploration	Connor Joyce and Ryan Kobrick
ICES-2022-160	510	Demonstration of the International Space Station Particle Database Website	Nathalie Tuya, Wenyan Li, Luz Calle, Marit Meyer, Meytar Sorek-Hamer and Irina Hallinan
ICES-2022-214	510	Electrostatic charging of the lunar surface	James R. Phillips III, Adrienne R. Dove, Charles R. Buhler, Michael R. Johansen and Carlos I. Calle
ICES-2022-232	510	Feasibility of using Low-Cost COTS Sensors for Particulate Monitoring in Space Missions	Marit Meyer, Nima Afshar-Mohajer, Eben Cross and Paul Mudgett
ICES-2022-254	510	HEPA Filter Performance for Lunar Dust Removal in Extreme Conditions	Andrew Walcker, Ryan Kobrick and Juan Agui
ICES-2022-288	510	Presence of Metal Aerosols on the International Space Station	Amanda Rodell, Wenyan Li, Luz Calle and Marit Meyer
ICES-2022-307	510	Proposed protocols for defining requirements and sizing of media-based filters for spacecraft and planetary lander applications	Robert Green, Rajagopal Vijayakumar, Juan Agui, Gordon Berger and Matthew Johnson
ICES-2022-311	510	Lessons Learned from the Airborne Particulate Monitor ISS Payload	Marit Meyer and Bettylynn Ulrich
ICES-2022-328	510	Assessing Dust Migration Through Pressurized Habitable Volumes	Elizabeth Marandola and William O'Hara
ICES-2022-393	510	Providing Experimental Data for Dust Transport Models Using Novel Technology Aboard a Suborbital Lunar-g Test Flight	Benjamin Sumlin and Marit Meyer
ICES-2022-420	510	in-Situ Individual Particle Sizer (iSPS) apparatus	Daniel Cantin, Ovidiu Pancrati, Denis Panneton, Jean-Francois Cormier, Sebastien Roy, Simon Turbide, Nafiseh Sang-Nourpour and Jason Olfert

ICES513: AIAA LS&S - Human Health and Performance Analysis

ICES-2022-27	513	A Rao-Blackwellized Particle Filter for Modeling Neurovestibular Adaptation to Altered Gravity	Victoria Kravets, Nisar Ahmed and Torin Clark
ICES-2022-268	513	Validation of a Human Thermal Model for Assessing Crew-Induced Loads in Spacecraft	Timofey Golubev, Mark Hepokoski, Mark Klein, Allen Curran and Hee Jong Song