Monday

Time	Big Spring Ballroom B-D	Big Spring Ballroom A	Orion	Saturn V	Monte Sano Boardroom	Madison Boardroom
7:30	Registration Lobby					
8:00	Opening Remarks (15 min) Ballroom B-D					
8:30 9:00	**Speaker: Phillip Allen** Ballroom B-D 10 min break					
9:30	Heat Pipes Short Course- Calin Tarau (ACT)	Interdisciplinary-01 A Case Study of AI-assisted Creation of a Thermodynamics Model of Precipitation Formation During Rapid Depressurization of a Vented Container *Dr. Jedediah Storey*		Thermal Control and Protection-04 FROSTE: Thermal Design and Thermal Vacuum Testing of Cryogenic Stowage for Lunar Sample Return *Faiyaj Khan, Elijah Stewart, Claire Silaire, Kacy Vanden Bergh, and Erin Hayward*	Maya HTT Demo	Mathworks Hands On
10:00		Interdisciplinary-02 AI/ML Frameworks for Microgravity Flow Boiling: Identifying, Quantifying, and Generating Two-Phase Interfacial Features *V.S. Devahdhanush and Arkadeep Paul*	Thermal Control and Protection-01 Design & Thermal Analysis of Hyperion: The University of Tennessee's New 1 MW Continuous Arcjet Facility *Zachary Colovos, Damiano Baccarella, Killan Samuels, Mitchell Trotsky, and Christian Isaacs*	Thermal Control and Protection-05 Development and Testing of Additively Manufactured Phase Change Material Thermal Storage Units *Mike Pauken*		
10:30		Interdisciplinary-03 Techno-feasibility systems analysis of carbon dioxide and methane separation systems: From airborne carbon capture to ECLSS applications *Dr. Ashwin Ravichandran, Pooja Santhamoorthy, Stephen Summits, Emmanuel Skountzos, Joakim H. Stenlid, David Mebane, Lyndsey McMillon-Brown, and John Lawson* (VIRTUAL)	Thermal Control and Protection-02 Advanced and Efficient Thermal Model Correlation of a Satellite Electronics Box Using HEEDS and Thermal Desktop *Dr. John Pederson and Lina L. Maricic*		Redwire Demo	
11:00		Aerosciences-10 Euler-to-RANS Mapping of Shock-Interaction Regimes on Slender Biconic Forebodies at Mach 2–5 *Aneesh Kukreti* (VIRTUAL)	Thermal Control and Protection-03 Europa Clipper Thermal System Performance In-Flight vs. Predictions *Hared Ochoa*			
11:30 12:00 12:30	Lunch					
1:00	Survive the Lunar Night Panel		Thermal Control and Protection-06 Structural Performance Evaluation of Titanium-Water Heat Pipe – GFRC Radiators for Fission Surface Power *Sandeep Hatte, Zayed Ahmed, Mason Pratt, Calin Tarau, Jeffrey Diebold, Srujan Rokkam, Tyler Beach, and Jeffrey Hopkins*		Thermal Control and Protection-16 Thermal Design and Analysis of Green Propulsion Dual Mode CubeSat *Savanna Lyles and Clark Teems*	Maya HTT Hands On
1:30			Thermal Control and Protection-07 Fabrication and Testing of Additively Manufactured Titanium – Water Loop Heat Pipe for Space Applications *Sandeep Hatte, Calin Tarau, Jeff Diebold, Srujan Rokkam, Linda Yan, and Ying Sun*	Thermal Control and Protection-18 SRM Testbed for Thermal Testing of Internal Compnents *Robert Frederick*	Thermal Control and Protection-17 Variable Emittance Coating Systems Thermal Modeling for a 3U CubeSat *Sarah Stewart, Sam Keller, Sydney Taylor, and Ognjen Ilic*	
2:00		Aerosciences-01 Towards Isentropic Design Using the Entropy Map Generated from 3-D CFD Results *Dr. Bijay Sultanian*	Thermal Control and Protection-09 Experimental Characterization of Additively Manufactured Nickel-Titanium Shape Memory Alloy Heat Pipes *William Sixel, Bilal Bomani, Tomé S. Guenkax, Christopher Greer, and Ryan Overdorff*	Interdisciplinary-21 Predicting Operational Performance of xEMU Boot at Lunar South Pole Temperatures using Thermal Desktop® *Emma Quick and Noah Andersen* (VIRTUAL)	Spacedesign Corporation Demo	
2:30		Aerosciences-03 Investigation of Peltier-based Environmental Control Systems for Low-cost/Attritable EO/IR Pods on Transonic Platforms *Mark Whittum*		Interdisciplinary-06 Designing tank outlets to prevent vortex formation and minimize liquid residuals *Mark Wollen*		
3:00	Break					Redwire Hands On
3:30	Thermal Control and Protection-10 Variable Heat Rejection System for Space Habitats *Dr. Calin Tarau, Ramy Abdelmaksoud, Jeff Diebold, Srujan Rokkam, William Johnson, and Justin Boyer*	Aerosciences-04 Comparative Assessment of Hypersonic Air-Breathing Inlet Architectures Under Common Freestream Conditions *Mookesh Dhanasar, Frederick Ferguson, Connor Ramaswamy, Leonard Uitenham, and Wisdom Calmday*	Thermal Control and Protection-20 Thermal Design and Thermal Vacuum Testing of the StarBurst Instrument *Stephanie Mauro*	Interdisciplinary-07 Moon Base Transportation – Deliveries to the Lunar Surface *Anthony Terracciano, Maxwell Martin, Charles J. Weyandt, John R. Campbell Jr., Jared Nardontonia, Richard Nederlander, Clyde O'Quinn, Ben Tutera, and Elaine Voll*	Radian Systems Demo	
4:00	Thermal Control and Protection-11 Multifunctional Pulsating Heat Pipes for Electric Motors *Jeff Diebold, Jacob Sonnek, Parag Bajaj, and Arijit Banerjee*	Aerosciences-05 Comparative Assessment of Inversely Designed Hypersonic Waverider Configurations *Mookesh Dhansar, Frederick Ferguson, Connor Ramaswamy, Ajit Kelkar, and Donovan Berry*	Thermal Control and Protection-21 Developmental and Cryogenic Thermal Vacuum Testing Lessons Learned *Mackenzie Byrnes and Heather Grimes*	Interdisciplinary-08 Thermal Analysis of the Advanced Modular Power Systems(AMPS) Power Electronic Modules *Hashmatullah Hasseeb and Firas G. Asfoor*		
4:30	Thermal Control and Protection-12 Recent Development of High-Temperature Alkali Metal Heat Pipes at ACT *Jeff Diebold, Calin Tarau, Sndeep Hatte, Roopesh Kumar Nathan Van Velson, and David-Paul Schulze*	Aerosciences-06 Three-dimensional, Multi-Phase Unsteady Flow of Water Undergoing Multiple Flow Regimes (free surface, droplet, and fluid film) *William Dziedzic*	Thermal Control and Protection-22 Thermal Performance of Flight Imagery Launch Monitoring Real-time System (FILMRS) and Enhance FILMRS (EFILMRS) camera systems for Artemis *Debby Hernandez*	Interdisciplinary-09 Contact Line Pinning in Microgravity *Joshua Whitehead, Lucas Hunt, and Ranga Narayanan*		
5:00 5:30	Social Hour at Hotel					
6:00 6:30 7:00 7:30	Campus 805 Social					

Tuesday

Time	Big Spring Ballroom B-D		Big Spring Ballroom A		Orion		Saturn V		Monte Sano Boardroom		Madison Boardroom
7:30	Registration Lobby										
8:00	Opening Remarks (15 min) Ballroom B-D										
8:30 9:00	**Speaker: Paul Gradl** Ballroom B-D 10 min break										
9:30	Thermal Technology Panel				Thermal Control and Protection-23	SR-1 Freedom Thermal Architecture Challenges *Scott Thomas*	Thermal Control and Protection-13	Architected Lattice Wicks for Monolithic Conformal Heat Pipes and Vapor Chambers—Characterization: Permeability, Capillary, Surface Area, Thermal, and Mechanical *Dr. Robin Pham* and Presented by Calin Tarau			Comsol Hands On
10:00			Cryogenics-01	A Scalable, Calibration-Free Multiphase Arbitrary Lagrangian Eulerian Solver for Sloshing Dynamics and Phase Change *Dr. Antonio Cantiani*	Thermal Control and Protection-24	Power and Propulsion Element Steerable High Gain Antenna Lunar Transit Thermal Analysis Tracking Methodology *Matthew Faykus*	Thermal Control and Protection-14	Passive Thermal Switching Using Freeze–Thaw Behavior in Heat Pipes for Lunar Night Survival (Lunar Outpost) *Joe Durante*	Aerosciences-09	High-Fidelity CFD Simulation of Liquid, Hybrid, and Solid Rocket Propulsion Systems *Dr. Xiao Ren*	
10:30			Cryogenics-02	CFD-assisted nodal modeling of sloshing in a cryogenic propellant tank *Dr. Alok Majumdar, Andre LeClair, Ramon L. Otero, and Jacob Brodnik*	Thermal Control and Protection-25	Thermal Design Considerations for Venus Orbiters: Lessons Learned from VenSAR *Tyler Schmidt*	Thermal Control and Protection-15	Topology-Driven Thermofluidic Modulation of Pulsating Heat Pipes *Dr. MdZishan Akhter and Philip R. Hart*	Aerosciences-11	SABRE: A Physics-Driven Framework For Satellite Re-Entry Demise Analysis *Suyash Tandon*	
11:00			Cryogenics-03	Cryogenic ullage pressure collapse via condensation and ullage heat loss *Dr. Samuel Darr*	Thermal Control and Protection-26	Thermal Design of a FALCON Cloud Radar Instrument Concept *Tyler Schmidt, Katarina Aguayo, and Rogelio Rosas*					
11:30 12:00 12:30	Lunch										
1:00	Cryogenics-04	Initial Computational Analysis of Helium Subsurface Pressurization *Jacob Brodnick and Jason Hartwig*	Form Factors, Grey Bodies, and Radiation Conductances Short Course - Steve Rickman (NESC/JSC)		Thermal Control and Protection-35	Spacecraft Radiator Protection from Ionizing Radiation, Dust, and Excessive Heat Loss *Vijay Devarakonda, Michael D. Hogue, and Darnell Cowan*	Thermal Control and Protection-27	Evaluation of AMSOIL®-ANT PGW Coolant Formula Change and Super Space AMSOIL Development *Scott Hansen, Woody Beringer, Toni Griego, Lauren Foley, David Brockett, and Garret Gibeau*	Thermal Control and Protection-31	An Overview of the PULSE Space Thermal Control Pump Development at the Jet Propulsion Laboratory *AJ Mastropietro, Michael R. Johnson, Warrick S. Leigh, Duval A. Johnson, Samuel G. Dupas, Talia R. Spitz, Dalia Raafat, Alejandro, Lopez Ortega, Allison Ayad, and Patrick Phelps*	GFSSP Hands On
1:30	Cryogenics-05	Modeling of Priming Events Using GFSSP in Liquid Propulsion Systems *Alak Bandyopadhyay, Alok K. Majumdar, and Andre C. Leclair*			Thermal Control and Protection-37	The Multi-Purpose Habitation Module (MPH): an overview of thermal modelling and lunar surface effects *Lorenzo Strappato, Salvatore Lauretta, Davide Perrone, Simone Illiano, Roverto Bertacin, and Marilena Amoroso*	Thermal Control and Protection-28	Orbit-Informed Thermal Modeling Workflow for Thermo-Mechanical Solder Fatigue Prediction of Electronics *Ian Pond, Josh Akman, and Mina Karimaghaei*	Thermal Control and Protection-32	Artemis II Mission Performance of the Orion Active Thermal Control System *Ellie Thurston, Michael Johnston, Thomas Chen, Eddi Uribe, Dongeun Lee, John Whitmore, Johnathan Hernandez, Maddie Haas, Matthew Gietzel, and Ian Anchondo*	
2:00	Cryogenics-06	Validation of accurate cryogenic fluid vapor-liquid boundary conditions via molecular simulations *Daniel Vigil, Ashwin Ravichandran, and John Lawson* (VIRTUAL)					Thermal Control and Protection-29	ONYX-Thermal – A New Concept for General Purpose Heat Transfer Software *Dr. Dean Schrage*	Thermal Control and Protection-33	BubbleTrack: A Computer Vision-Based Framework for Bubble Detection and Tracking *Sara Youssoufi*	
2:30	Cryogenics-07	Behavior of Ullage Bubbles during Blowdown in Low-g Experiment (BUBBLE): Overview of a Cryogenic Tank Depressurization Test *Justin Pesich, Benjamin Nugent, and Steven Soriano*					Thermal Control and Protection-30	Intermediate temperature oscillating heat pipe radiators for space nuclear power *Alex Miller and Scott Hayden*	Thermal Control and Protection-34	Heat Transfer and Aerodynamic Losses Caused By additively Manufactured GRX-810 Turbine Blades Enhanced With Micor-Machining and Chemical Polishing *Phil Ligrani, Hallie Collopy, Mason Hancock, Jason Sheth, and Paul Gradl*	
3:00	Break				Break						
3:30 4:00 4:30	Posters in Ballroom B-D				Posters in Ballroom B-D						
5:00 5:30	Social Hour at Hotel										
6:00 6:30 7:00 7:30	Banquet Dinner At the US Space and Rocket Center										

Wednesday

Time	Big Spring Ballroom B-D	Big Spring Ballroom A		Orion		Saturn V		Monte Sano Boardroom	Madison Boardroom
7:30	Registration Lobby								
8:00	Opening Remarks (15 min) Ballroom B-D								
8:30 9:00	**Speaker: Leonardo Barreda** Ballroom B-D 10 min break								
9:30	MSFC Thermal Testing Lessons Learned Short Course -Deborah Hernandez, Mackenzie Byrnes, Heather Grimes, Stephanie Mauro, Elijah Stewart	Cryogenics-08	Recuperator and Heat Exchanger Development at NASA MSFC for Cryocooler Applications and Methane Liquefaction Demonstration *Benjamin Williams, Sophia Angele, Mark Antonison, Aron Griffin, Mark Antonison, William Sixel, and Lonnie Webb*	Thermal Control and Protection-40	Design of a Novel Radiant Heat Pump Thermal Control System for Space Conditioning of Lunar Surface Habitats *Dr. Ardeshir Moftakhri*			Mainstream Eng Corp Demo	Radian Systems Hands On
10:00		Cryogenics-09	Materials for Cryogenic Propellant Dewetting *Ethan Paulsen*	Thermal Control and Protection-41	Additively Manufactured Porous Radiator For Static Thermal Management *Kristen Ess and Rydge Mulford*	Thermal Control and Protection-39	Gravity-Independent Heat Exchangers and Oil-Free Compressors for Modular Refrigeration System *Cara Martin and Dennis Nasuta*		
10:30		Cryogenics-10	Cryogenic Far-Infrared Instrument Performance Supported by Spectrally Extended Black Coatings *Dr. Tamas Rev and Dina Katsir*	Thermal Control and Protection-42	Lunar Surface Crater Thermal Effects on Lander Radiator Performance *Will Grier, Lisa Erickson, William Birmingham, and Tai Valdes*	Thermal Control and Protection-38	Development and Initial Validation of a High-Vacuum Thermal Conductivity Testbed for Aerospace Thermal Interface Materials *Amy Chang and Deborah Hernandez*		
11:00		Cryogenics-11	Technology Integration Analysis of H2/N2 Gas Generator Use in Repressurization Systems for Human Lunar Landing Spacecraft *Sydney Therien, Elaine Hatfield Tumlin, Adrian Soler, and Jonathan A. Bentley*	Thermal Control and Protection-43	Ground Slope Effects on Lander Radiator Performance *Lisa Erickson*	Thermal Control and Protection-44	*Thermal-Fluid Analysis of a Liquid-Cooled Battery Module for Electrified Aircraft* *Jarred Wilhite and Erik Stalcup*		
11:30 12:00 12:30	Lunch								
1:00	Ansys Demo	Cryogenics-12	Advanced Thermodynamic Modeling and Thermophysical Property Prediction of Cryogenic Fluids for Clean Energy Infrastructure *Dr. Arash Pakravesh* (VIRTUAL)			Interdisciplinary-10	SCIFLI Artemis II Launch Observation Overview *Richard Schwartz, Jennifer Inman, Kyle Denny, Rufer Shann, Matt Boyda, Meaghan McCleary, and Carey Scott*	TDT Meeting Invite Only	Meshed Lunar Terrain Thermal Model Building Short Course - Will Birmingham (MSFC), Lisa Erikson (JSC), and Will Grier (LARC)
1:30		Cryogenics-13	Additive Manufacturing for Cryogenic Fluid Management (AM4CFM) –Test Design for Liquid Acquisition Devices (LADs) *Jack Parr*	Thermal Control and Protection-46	Thermal Performance of a Lunar Rover RESS *Konrad Brown, Trisha matthews, Peter Andruskiewicz, and Derek Lahr*	Interdisciplinary-12	SCIFLI Artemis II Reentry Airborne Operations *Arianna Haven and Robert A. Conn*		
2:00		Cryogenics-14	Additive Manufacturing for Cryogenic Fluid Management (AM4CFM) – Experimental Investigation for Liquid Acquisition Device Usage *Dylan Foster*	Thermal Control and Protection-47	Passive Thermal Runaway Propagation Prevention to Improve Safety of Li ion Batteries *Vijay Devarakonda, Tanvi Gupta, Ranadip Saha, and Partha Mukherjee*				
2:30		Cryogenics-15	Development of Argon Loop Heat Pipe with Large Area Heat Collection *Nathan Van Velson, Roopesh Kumar, and Calin Tarau*	Thermal Control and Protection-48	Geometric Optimization of a Passive Ram-Airflow Cooling Duct for Li-ion Battery Thermal Management in Electric Semi-Truck Vehicles *Rohan Jain and Bhargav Narayanan*	CUI-06	SCIFLI Artemis II Orion Reentry Observation Summary *Carey Scott Jr., Matthey T. Boyda, Kylel D. Scott, Arianna Haven, Meaghan M. McCleary, Shann J. Rufer, Alireza Mazaheri, Chris Johnston, and Andrew C. McCrea*		
3:00	Break					Quantum Qool Demo			
3:30	Cryogenic Fluid Management Panel	Thermal Control and Protection-49	The ATA Technolgoy: Advanced Active Thermal Control for Space Applications *Dr. Lucas Anderson, Charles Swenson, Miguel Nunes, and Robert Wright*	Thermal Control and Protection-52	Parametric-Based Heat Rejection Trade Study for Lunar and Martian Surface Operations *Noah Andersen and Thomas Chen*				
4:00		Thermal Control and Protection-50	A 2026 Update on the Active Mechanical Pumped Fluid Loop (MPFL) Projects at the Jet Propulsion Laboratory (JPL) *Hared Ochoa*	Thermal Control and Protection-53	In-Situ Heat Rejection to the Martian Atmosphere *Richard Schunk*				
4:30		Thermal Control and Protection-51	RANS-based assessment of transpiration cooling effectiveness in a curved porous nozzle wall exposed to high-enthalpy supersonic flow *Dr. Ram Adhikari*	Thermal Control and Protection-54	An Update on Making Ultrasonic Additive Manufacturing (UAM) of Liquid Cold Plate Heat Exchangers a Reality for NASA and Aerospace Thermal Management Applications *AJ Mastropietro, Gordy Cucullu, Nicholas Keyawa, Teri Juarez, Scott Innes, Scott Roberts, Jason Riley, Luke Walker, Lucas Anderson, and Charles Swenson*				
5:00 5:30	Social Hour at Hotel								
6:00 6:30 7:00 7:30	Trash Panda Game								

Thursday

Time	Big Spring Ballroom B-D	Big Spring Ballroom A		Orion		Saturn V		Monte Sano Boardroom		Madison Boardroom
7:30	Registration Lobby									
8:00	Opening Remarks (15 min) Ballroom B-D									
8:30 9:00	**Speaker: Kurt Polzin** Ballroom B-D 10 min break									
9:30	Nuclear Propulsion Panel	Interdisciplinary-14	Participating Media Calculations in Ansys Thermal Desktop *Douglas Bell*	Thermal Control and Protection-55	Coupled Thermal–Mechanical Modeling of a Deployable Radiator with Partial PCM Transformation and Runtime Radiation Articulation *Joshua Taylor, Anthony Lococo, Franklin L. Robinson, Asher Leff, Darin Sharar, Rydge B. Mulford, and Brian D. Iverson*	CUI-02	Development of Self-Regulating Heater Prototype for Space Applications *Dr. Jianjian Wang*	Interdisciplinary-17	Machine-Learning Coupled Phase Change Closure Model Based on Interfacial Heat Flux Discontinuity *Dr. Sunjae Kim and Yusin Jeong*	Kairo Suites Hands On
10:00		Interdisciplinary-16	Thermal Modeling Philosophy for the Dragonfly Lander: Integrating Thermal Desktop and CFD for Titan Surface Operations *Dr. Hui Liu, Evan Cosentino, Kurt Gonter, and Jane He*	Thermal Control and Protection-56	Development of a Thermal Radiator Optimization Tool with Alternate Coolants *Richard Schunk*	CUI-03	Heat Pipe Thermal Management for High-Density Hall Thrusters *Calin Tarau and Brett Leitherer*	Interdisciplinary-18	Physics-Based Postprocessing of 3-D CFD Results *Dr. Bijay Sultanian*	
10:30		Aerosciences-08	Space Launch System Artemis II Post-Flight Ascent Aerothermal Environments Summary *Brandon Mobley and Samantha Summers*	Thermal Control and Protection-57	ASHRAE Climatic Design Methodology Applied to Diurnal Thermal Simulation *Daniel Dannelley, Christopher Henry, and Vitaly Meyzler*	CUI-04	ISS Battery Charging System Thermal Design and Development *Dr. Siraj Jalali*	Interdisciplinary-19	Closed-Cycle Transpiration-Cooled Flash Combustor with Cryogenically-Coupled Water Recovery for Thrust Augmentation in Pre-Cooled Airbreathing Vehicles *Steven Schryba*	Spacedesign Corporation Hands On
11:00				Thermal Control and Protection-58	Hot Moon: Designing a 20 kg Rover to Survive the Heat of Equatorial Lunar Noon (Lunar Outpost) *Izzy Golemme*	CUI-05	Space Launch System Core Stage Base Aerothermodynamics Post-Flight Reconstruction for Artemis II *Dr. Manish Mehta*	Interdisciplinary-20	Improved post-processing workflow for space thermal design insight *Joel Gagnon and Jean-Frederic Ruel*	
11:30 12:00 12:30	Lunch									
1:00 1:30 2:00 2:30 3:00 3:30 4:00 4:30	Tours							Breakout Meeting		Ansys Hands On
5:00 5:30	Social Hour at Hotel							TFAWS Delegates Meeting Invite Only		
6:00 6:30 7:00 7:30	Art Museum									

	Friday	
Time		
7:30		
8:00	Tours	Breakout Meeting
8:30		
9:00		
9:30		
10:00		
10:30		
11:00		
11:30		
12:00		
12:30		