Colorado Space Grant Consortium
Undergraduate Space Research Symposium

April 25, 2026
Red Rocks Community College, Lakewood Campus
Lakewood, CO

Time	Activity	Location
8:00am - 9:15am	Check-in / Registration / Poster set-up Network Tabling Planetarium Show (8:45-9:15 AM)	Main Entrance Room 2671
9:30 am	Welcome and Opening Remarks	Community Room
9:50 am	Move to sessions rooms A-Greys B-Torreys C-The Den D-1690 E-1692	
10:00 - 10:20am 10:25 - 10:45am	Research Paper Presentation 1 Research Paper Presentation 2	Session Rooms
10:45am	Break	
10:55 - 11:15am 11:20 - 11:40am	Research Paper Presentation 3 Research Paper Presentation 4	Session Rooms
11:45am	Lunch Planetarium Show (12:00-12:30 PM)	Community Room Room 2671
12:45pm	Keynote Panel	Community Room
1:35pm	Research Poster Session	Great Hall / Bridge
2:45pm	Networking Hour Planetarium Show (2:45 – 3:00 PM)	Main Entrance Room 2671
3:45pm	Award Ceremony	Community Room
5:00pm	Event Adjourns	

Paper Sessions

Paper Presentations are limited to 15 minutes, followed by 5 minutes of Q & A

Session A **Room: Greys**

10:00	The Climate Adaptation and Resilience Monitoring Alliance: New Technologies for Ecological Monitoring in a Rapidly Changing Environment – *M. Thomas, K. Gill, A. Anderson, C. Koch, K. Pena, U. Mandavilli, C. Dwyer, N. Quirk, and T. Pachuda*	CUB
10:25	Measuring the Ratio of Water to other Atmospheric Gas Concentration at Different Altitudes – *A. Diener, L. Libelo, and A. Levin*	CUB
10:55	From Ethical Frameworks to Engineering Practice: Student-Driven Aerospace Systems in the Emerging Space Economy – *E. Herzog*	CUB
11:20	Your Orthopedic Dynamic Alignment – *A. Anand, C. Bowen, M. Gutke, J. Hickman, and L. Toth*	CUB

Session B **Room: Torreys**

10:00	Development of Autonomous Octopod Programming – *M. Troyer*	PCC
10:25	Integrated Rover–HDM–LunaSat Testing in a Lunar Regolith Analog Environment – *E. Herzog, J. Leites, E. Taylor, N. Starkey, S. Donthula, A. Shalev Merin*	CUB
10:55	Rover on The Red Horizon – *E. Callahan, J. Bossert, C. Auer, J. Taylor, and M. Schnese*	UCCS
11:20	Use of Spine Articulation in Aerospace Robotics with Monocular SLAM Navigation – *M. Stembridge, D. Thornton, R. Sauzameda-Carbajal, B. Carpenter, and L. Tarpey*	PCC

Session C **Room: The Den**

10:00	2nd Eye in the Sky – *T. Hartzell, and A. Peruzzi*	PPSC
10:25	Atmospheric Impact on Solar Cell Efficiency – *J. Lee, I. Thyer, G. Yannotta, M. Avdyunin, and C. Somayajula*	CUB
10:55	DemoSat: Team Hot Air – *A. Church, S. Weatherby, and N. Jacobs*	PPSC
11:20	SPARC: Space Particle and Radiation Counter – *S. Barrionuevo, M. Olson, S. Santosh, and L. Tisher*	CUB

Session D **Room : 1690**

10:00	Engineering Analysis of Diffusion-Dominated Osmotic Transport in a Passive RhFET-01 Microgravity Germination System – *J. Johnson, S. Ritchie, D. W. Elmore, and K. Lowerre*	UCCS
10:25	Space Fried Rice 2025-26: Monitoring Rice Growth in Lunar Regolith – *W. Taylor, G. Dreeszen, G. Perez-Soler, A. Garza, F. Champlin, S. Selph, N. Smith, M. Telford, M. Heng, and R. Axtell-Aretz*	RRCC
10:55	Optimizing Buoyant Airborne Turbines for Maximum Performance in Limited Space – *C. Gagliano, K. Karges, J. Knott, O. Knott, and M. Lott*	FRCC

11:20	The Efficacy of Reclaimed Water on Spinach Growth in Lunar Regolith – *M. Osborne, M. Angell, P. M. Matthews, and G. Hutauruk*	CUB

Session E **Room : 1692**

10:00	Balancing Motion and Biology: Payload Stabilization and Blood Integrity in Near-Space Flight Sirius – *R. Buffington, J. David, M. Zubrod, B. Schick, and O. Mackenzie*	FRCC
10:25	Development of a Six-Legged Autonomous Robot for Rough Terrain Navigation – *R. Ganey, A. Garcia, and S. Rangel*	FRCC
10:55	Cold Welding and Data Protection in Suborbital Flight – *K. Shirley, A. Zollinger, D. Baker, M. Morgan, C. Foland, E. Eastman, A. Zeller, X. Lees, A. Castaneda, S. Kennett, and Y. Mehta*	RRCC / ACC

Poster Sessions:

Paper Presentations are limited to 5 minutes followed by 5 minutes of Q&A

Group 1:

1:35	P-01: SpectroSat Using a NASA STELLA spectrometer to determine the relationship between the concentration of water vapor and other gases in the lower atmosphere - *A. Diener, L. Libelo, and A. Levin*	CUB
1:47	P-02: Development of a Head Impact Telemetry System for mTBI/CTE Research - *A. Silberman, T. Connelly, E. Batdorj, and R. McHale*	ACC
1:59	P-03: Monitoring Dynamic Posture Changes Through Inertial Measurement Units - *A. Anand, C. Bowen, M. Gutke, J. Hickman, and L. Toth*	CUB
2:11	P-04: Solarpunk Parasol: A Sustainable Wearable Platform for Energy Harvesting and Passive Environmental Sensing – *M. Haseeb, S. Johnston, R. King, R. Motheral, A. Nakarmi, and M. E. West*	Longmont HS

Group 2:

1:35	P-05: Investigating the Dynamical Nature of Unipedal Balance - *K. Villarreal, M. Semak, and A. Ferris*	UNC
1:47	P-06: Two Men and a Marschine - *T. Tatum, and T. Hartzell*	PPSC
1:59	P-07: Mechanical and Electrical Design of an Octopod - *M. Troyer*	PCC
2:11	P-08: Dune Crawler – *F. Camplin, C. Travis, L. Crossett, B. Andrie, L. Winfrey, E. DeWeese, J. Myers, R.B.T. Jenkins, F. Ridgeway, T. Micciche-Hall, N. Aguilera, N. Orndoff, and G.A.P. Soler*	RRCC

Group 3:

1:35	P-09: Optimizing Buoyant Airborne Turbines for Maximum Performance in Limited Space – *C. Gagliano, J. Knott, K. Karges, M. Lott, and O. Knott*	FRCC
1:47	P-10: Effect of near-space conditions on the survival rate of Juvenile and mature C.elegans - *S. BC, A.C. Rodriguez, Q. Dixon, T. Fuller, L. Giardello, A. Ruiz, and B. Wisener*	RU
1:59	P-11: Exploration of High-Altitude Chemistry using an Ozonesonde, Turbine, and UV-Degradable Polymers – *K. Dickson, M. Telford, A.*	RRCC

	Martin, J. Baldwin, D. Benson, J. Ferrell, C. Holman, H. Ozaslan, L. Coto, F. Champlin, and T. Micciche-Hall	
2:11	P-12: Stratospheric Observation of Light And Renewables – *J. Lee, I. Thyer, G. Yannotta, M. Ardyunin, and C. Somayajula*	CUB
2:23	P-13: JAKE NOT FOUND – *D. Ghilia, L. Flannery, A. Jannamon, and J. Coppom*	Longmont HS

Group 4:

1:35	P-14: "Martians and Moon Bugs:" Progress Report on Extracting DNA from Lunar and Martian Regolith – *V. Pinto, E. Vencer, R. Axtell-Aretz, M. Telford, A. Martin, A. Garza, W. Taylor, L. Albert, and T. Williams*	RRCC
1:47	P-15: The Great Lunar Expedition for Everyone (GLEE): Distributed Lunar Surface Science – *D. Kroneberger, E. Levin, V. Pathi, A. Joshi, K. Stathopulos, and the GLEE team*	CUB
1:59	P-16: Mission SCOUT: Satellite Collision Observation & Unified Tracking – *L. Berger, Z. Dyre, L. Leal De Ibarra, W. Jolley, M. Pahade, R. Patel, S. Redhorse, F. Sharman, T. Suxe, and L. Ward*	CUB
2:11	P-17: Winds of Change: Investigating Variability in Quasars with Outflows – *M. Carrasco, and M. Lazarova*	UNC

Group 5:

1:35	P-18: Housing and Deployment Module Redesign for Distributed Lunar Sensor Deployment in the GLEE Mission – *P. Mertens, S. Donthula, F. Garza Cancino, M. Alperovich, G. Smith, and E. Letendre*	CUB
1:47	P-19: Cold Welding in Suborbital Flight – *M. Morgan, E. Eastman, C. Foland, K. Shirley, D. Baker, A. Zeller, X. Lees, A. Zollinger, S. Kennett, Y. Mehta, and A. Castaneda*	ACC / RRCC
1:59	P-20: PULSAR: Suborbital Flight Validation of LunaSat V8 and Deployment Systems for Distributed Lunar Science Missions – *L. Bassett, M. Menzies, F. Radebaugh, J. Gabbard, J. Doyle, J. Diamond, C. Preedom, and the GLEE Team*	CUB

Group 6:

1:35	P-21: Rapid Prototyping and Additive Manufacturing for the Functional Implementation of Expanding Wheel Suspension – *Betelhem, TJ, Ayo, Chava, Lai, Jesus, Marco, Jessica*	CCA
1:47	P-22: Development of a Six-Legged Autonomous Robot for Rough Terrain Navigation – *R. Ganey, A. Garcia, and S. Rangel*	FRCC
1:59	P-23: HARP Robotics Project - *S. Garrett, D. Morales, A. Bachtiar, J. Lerch, J. Swain, O. Banks, C. Randolph, and L. Naden*	CUB

Group 7:

1:35	P-24: Team Hot Air – *A. Church, S. Weatherby, N. Jacobs*	PPSC
1:47	P-25: RRCC Astrobio Investigates Chlorophyll Production in Different Growth Factors - *Red Rocks Community College Astrobio team*	RRCC
1:59	P-26: Balancing Motion and Biology – *J. David, O. Mackenzie, R. Buffington, M. Zubrod, and B. Schick*	FRCC
2:11	P-27: Glowing Tardigrades – *L. Albert, J. Andrews Garcia, and N. Thibodaux*	RRCC