

8<sup>th</sup> INTERNATIONAL MARS SOCIETY CONVENTION  
Coors Event Center



The Mars Society 8<sup>th</sup> International Convention is proudly co-sponsored by:

Optech  
The Moon Society  
Space News  
The Sally Ride Science Center

**8<sup>th</sup> INTERNATIONAL MARS SOCIETY CONVENTION**  
**Coors Event Center**  
**University of Colorado, Boulder**  
**August 11-14<sup>th</sup>, 2005**

**SCHEDULE OF EVENTS**

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**Optech ●**  
**The Moon Society**  
**Space News**  
**The Sally Ride Science Center**



**8<sup>th</sup> INTERNATIONAL MARS SOCIETY CONVENTION  
SCHEDULE OF EVENTS**

**Wednesday, August 10<sup>th</sup>, 2005**

Early Registration and Convention Check-In – 4:00 – 7:00 pm

**The Boulder Inn - 770 28th Street • Boulder, CO 80303**

**Thursday, August 11<sup>th</sup>, 2005**

**Registration, Displays and Plenary Sessions located at Folsom Field Club House Level**

8:00 am – Convention opens, registration, check-in and morning coffee

**Morning Plenary Presentations:**

9:00 – 10:00 am

Dr. Robert Zubrin, President, The Mars Society – Moon by 2012, Mars by 2016

10:00 – 11:00 am

William Farrand and the PanCam Team – The Colors of Mars as Viewed by PanCam

11:00 – 12:00 am

Dr. Scott Horowitz – The Safe, Simple and Soon Plan to Get Humans to Mars

**Breakout Rooms**

**Track 1 – Math 100**

**Track 2 – Club House**

**Track 3 – Duane GB30**

**Track 4 – Benson 180**

**Evening Activities:**

**Folsom Field Club House Level**

6:00 – 7:30 pm - **Reception**

7:30 – 8:30pm – **Larry Kuznetz – Last Place to Boil Away, First Place to Look**

8:30 – 11:00 pm - **Gerry Williams – Mars in the Movies, a Multi-media Presentation Covering 80 years of Mars in the Cinema**

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**Thursday, August 11th, 2005**

<b>Time</b>	<b>Track 1 Technologies for Mars</b>	<b>Track 2 Analogue Studies, Part I</b>	<b>Track 3 Mars and the Arts</b>	<b>Track 4 Life Support &amp; Biomedical Issues</b>
1:00 – 1:30	Integrated Mars In-situ Production System-Sam Booth	An Overview of the MDRS and FMARS Seasons – Tony Muscatello	Roving Eye Candy, Artistic Views of the Red Planet-Gus Frederick	Spatial Design Layouts for Long Duration Four-Person Spacecraft-Kent Nebergall
1:30 – 2:00	ISRU: Atmosphere Harvesting- Robert Dyck	Overview of Expedition Two to the Australian Outback- Shannon Rupert	Getting your Message Out, Opportunities and Pitfalls - B. Enke and T. Hill	The Remote Access Medical Suit Revisited-Tam Czarnik
2:00 – 2:30	Mars Aqueous Processing System-Mark Berggren	Comparison of Surface Water Sources at FMARS, MDRS and Mars OZ-E. Martinez & S. Rupert	1 hour discussion on publishing fiction	The Human Spaceflight Training Recommendations Against Weightlessness Project-R. Kobrick et al
2:30 – 3:00	Development Environments for ISRU Creation-Robert Terry	Geophysical and Chem. Characters of Water at Arkaroola, SA-E. Martinez et al	Another Look at PanCam-Ron Bennett	A Non-Invasive Metabolic Monitor- Angelo
3:00 – 3:30	Green Thumbs for the Red Planet-N. Farnsworth and D. Allred	The Leonardo and Mona Lisa Missions: MDRS Crews 39 and 40 – A. Pacros et al	The Leonard Bromberg Collection, Collecting, Cataloguing and Marketing plus an	Solar Radiation Warning Systems: Examining the Options-Tom Hill
3:30 – 4:00	Development of a Life Detection Instrument for Mars – Allison Skelley	The First Georgia Tech Crew at MDRS – E. Colvin	Overview of items- L. Bromberg, J. Lagarde and M. Zubrin (1 hr)	Space Colonization and the Settlement of Mars: Lifestyle Training vs Mission Training-James Schoenfelder
4:00 – 4:30	When Earthmover is a Misnomer- Kent Nebergall	The Mobile Agents Remote Science Team – Shannon Rupert	Adventure Rides and Theater Quality Video -Ron Bennett	Medical Care on the Moon and Mars- Richard Sylvan
4:30 – 5:00	Carbon Monoxide Silicate Reduction System-Stacy Carrera	Comparing MER Mission Operations with RST & MDRS: Crew 38 – Martin Sierhuis	PR/Marketing Task Force Panel Discussion-K. Sloan, L. Weisbach et all	An Intermediate Environment for Mars Exploration-Andrew Ning
5:00 – 5:30	Lord Of The Rings: The Cassini/Huygens Mission -Kevin Grazier	Continues – 1hr	continues	Health Concerns in the Human Colonization of Mars- Percival McCormack

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**Registration, Displays and Plenary Sessions located at Folsom Field Club House Level**

**Friday, August 12<sup>th</sup>, 2005**

8:00 am – Registration, check-in and morning coffee

**Morning Plenary Presentations:**

9:00 – 10:00 am

Robert Cataldo – Space Nuclear Power

10:00 – 11:00 am

Dr. Stanley K. Borowski, NASA Glenn Research Center – Exploring the Solar System with Nuclear Thermal Rockets

11:00 – 12:00 am

Dr. Chris McKay – Doing Astrobiology in the Field

12:00 – 1:00 pm lunch break

**Breakout Rooms**

**Track 1 – Club House**

**Track 2 – Math 100**

**Track 3 – Duane GB30**

**Track 4 – Benson 180**

**Evening Activities:**

**Boulder Inn**

5:30 – 7:30 pm

Political Action Task Force Reception

**Folsom Field Club House Level**

7:30 – 8:30 pm

**FMARS 2005 Greenleaf Crew**

8:30 – 10:00 pm

**The Mars Underground, a film documentary by Ocule**

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**Friday, August 12, 2005**

<b>Time</b>	<b>Track 1 Spacesuit Symposium</b>	<b>Track 2 Mars Homestead Project</b>	<b>Track 3 Commerical Spaceflight and the Cost Equation</b>	<b>Track 4 Political and Educational Outreach</b>
1:00 – 1:30	Suited for Mars, Advanced Spacesuit Symposium Overview-Chris Vancil	The Mars Homestead Project: Overview-B. Mackenzie and J. Palaia	The Challenge of Affordable Orbital Space Access: a Look at Physics, Economics and Reality-David Livingston	Political Action Task Force Seminar and Discussion with Congressional contact-Chris Carberry et al
1:30 – 2:00	The MarsSuit Project – Larry Kuznetz	The Architecture of the Mars Homestead Project- Georgi Petrov	Another Order of Magnitude Decrease-Brian Enke	Continues
2:00 – 2:30	Mechanical Counter Pressure Space Suits: Advantages, Limitations and Concepts -J. Waldie	Waste Recycling Systems-Gary Fisher	Circular Electromagnetic Mass Driver: Space Launch for under \$10/LB.- Richard Thieltges	Continues
2:30 – 3:00	A Different Kind of Spacesuit- Paul Webb	Electrical and Nuclear Power System-Joseph Palaia	Space Exp. Technology Dev. through Intellectual Property Analysis – William Hulsey III	Continues
3:00 – 3:30	Spoken Dialogue Systems Supporting Surface Exploration- J. Dowding & K. Clark	Bulk Gas Generation and Storage Systems-D. Ellender	Winning Support for Public Space Development Programs and Funding-David Livingston	MarsCamp- Georgia Mars Society
3:30 – 4:00	Characterization of the Radiation on the surface in View of Future Human Presence-Irene Schneider	Polymer Synthesis Manufacturing System-Frank Crossman	The ISDAC: How it Helps Mars Colonization- Declan O'Donnell	MarsMobile Project-Heather Rose
4:00 – 4:30	EVA Requirements for Exploration EVA's-B. Webbon	Metals Manufacturing Systems-D. Ellender	Patent Protection in Outerspace-B. Erickson & G. Fisher	Exploring Mars in 45 minutes-Mike Kretsch
4:30 – 5:00	Talking to a Computer on Mars – J. McGowan	Open Discussion on Mars Settlement Construction Chapter Projects	Open	A Broad-Based Effort to Expand the Scope of the Analog Research Station Program-P. Kokh
5:00 – 5:30	O2 Freedom – Rod Clark	The First Families on Mars-Bruce Mackenzie	open	Developing the Next Generation of Rocket Scientists- James Barnard

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**Registration, Displays and Plenary Sessions located at Folsom Field Club House Level**

**Saturday, August 13th, 2005**

8:00 am – Registration, check-in and morning coffee

**Morning Plenary Presentations:**

9:00 – 10:00 am

Bill Clancey – The Mobile Agents 2005 Field Test at MDRS: Planning for Exploration

10:00 – 11:00 am

Chris Shank, Special Assistant to Mike Griffin – NASA's New Plan

11:00 – 12:00 am

Jeroen Lapre' – Visualizing Planetary Exploration through Special Effects

**Breakout Rooms**

**Track 1 – Duane GB30**

**Track 2 – Duane GB20**

**Track 3 – Math 100**

**Track 4 – Benson 180**

**Steering Committee Meeting – Benson 185**

**Evening Activities:**

**Folsom Field Club House Level**

6:00 – 11:00 pm

Mars Society Annual Banquet

**8th INTERNATIONAL MARS SOCIETY CONVENTION**  
**SCHEDULE OF EVENTS**  
**Saturday, August 13, 2005**

<b>Time</b>	<b>Track 1 Getting There – New Launch and Propulsion Technologies</b>	<b>Track 2 Mars Society Chapter and Task Force Activities</b>	<b>Track 3 Public Policy for Space Law and Governance</b>	<b>Track 4 Analog Studies Part II</b>	<b>Steering Committee Meeting</b>
<b>1:00 – 1:30</b>	Future Options for Heavy Lift Launch Vehicles – Eric Boethin	How to Have a Great Mars Society Chapter! – The San Diego Chapter	Population Growth and the Settlement of Space – Brad Jarvis	Student Research Opportunities at MDRS-Kevin Sloan	1:00 pm – 5:00 pm
<b>1:30 – 2:00</b>	Mars Orbit Rendezvous – Robert Dyck	continues	To Risk the Next Mountain - D. Schuman	A Day in the Life of the MDRS Webster - Gus Frederick	
<b>2:00 – 2:30</b>	Progress on the MET – J. Brandenburg	Large, Eye-catching Portable Models for Outreach Events – Tom Hill	Public Policy for Mars Exploration <b>CANCELLED</b> Zabala-Aliberto	Formation of Martian gullies under Martian Environmental Conditions –J. Heldman	
<b>2:30 – 3:00</b>	Phoenix Mars Lander 2007: Canada's Contribution- Robert Richards	Outreach Workshop – Kevin Sloan	How Weaponizing Space Could Impact First Human Mission – M. Lupisella	MDRS Refit Engineering Team Report-MOD2-Paul Graham et al	
<b>3:00 – 3:30</b>	Mars X: A Low Cost Mars Mission with Moon-Mars Synergism – J. Brandenburg	continues	Terrorism Problems in Mars Colonization – D. O'Donnell D. O'Donnell II	MDRS Refit report continues	
<b>3:30 – 4:00</b>	Alternate Propellant Thermal Rocket–Emily Bostwick-White	The Case for Aurora (Space Lobbying Efforts in Europe) – Jerry Stone	Elements of a National Law for Real Property Rights in Outerspace – Wayne White	Care and Feeding of MDRS, How to Use the New Hab-Paul Graham et al	
<b>4:00 – 4:30</b>	Piloted Missions to Mars – R. J. Pfammatter	Operation President 2008 – Chris Carberry	New Code of Ethics for Off-Earth Commerce & Space Development – David Livingston	1 ½ hour educational seminar	
<b>4:30 – 5:00</b>	The Laithwaite Gyroscopic Weight Loss – B. Solomon (1 hour)	continues	Political Philosophy and the Exploration of Mars – Carl Mitcham		



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**Sunday, August 14th, 2005**

8:00 am – Registration, check-in and morning coffee

**Morning Plenary Presentations:**

9:00 – 10:00 am

Jerry Stone – EuroMars

10:00 – 11:00 am

Peter Smith – The Phoenix Mission to the North Pole of Mars

11:00 – 12:00 am

Penny Boston – Extremophile Life Forms as an Analog for Martian Microbes

12:00 – 1:00 pm – Lunch Break

**Breakout Rooms**

**Track 1 – Club House**

**Track 2 – Math 100**

**Track 3 – Duane GB20**

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**5:00 pm Closing Plenary and Announcements**

**6:00 pm Conference is closed**

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**Sunday, August 14th, 2005**

<b>Time</b>	<b>Track 1 Long Range Mobility on Mars</b>	<b>Track 2 Analog Studies Part III</b>	<b>Track 3 Terraforming and Environmental Studies</b>	<b>Track 4 Theological and Philosophical Considerations</b>
<b>1:00 – 1:30</b>	The Mars Rocket Plane – Robert Zubrin	Project M.A.S.T.: a Virtual Reality Simulator of MDRS and FMARS – H. Gregory	Geo-engineering as a Precursor to Terraforming – Angelo Grubisic	Who's Afraid of Giordano Bruno? Implications of Life on Mars for a Christian Worldview – Rev. J. Heiser
<b>1:30 – 2:00</b>	The Mars Airplane: a Tool for Human Exploration – James French	The Search for Life on Mars: Results of Analog Investigations – Veronica Zabala-Aliberto	Control Global Warming Using Mars/Venus Terraforming Methods – Brian Hanley	Some Thoughts on the Social Characteristics of an Early Martian Colony – Kurt Chankaya
<b>2:00 – 2:30</b>	Space Inflatables – Robert Dyck	How to Do FMARS or MDRS Mission Support – Tony Muscatello	Visysphere Mars: Integration and Adaptation of Technologies – Erik Clacey	Faith, Culture and Community in a Future Martian Civilization – Rev. James Heiser
<b>2:30 – 3:00</b>	Asteroid Mining – Robert Dyck	F.L.A.M.E. – Family Living Analysis – Veronica Zabala-Aliberto	Visysphere Mars: Actively Adapting Life to Fit Earthlike Conditions– Erik Clacey	Space Exploration and the Humanist – Mark Bullock
<b>3:00 – 3:30</b>	Robotic Support Serving Onsite Human Mars Exploration – Ned Chapin	The Biosphere Observation Experiment – Hüseyin Sarper	A High Fidelity Laboratory Test Bed for Dynamic Simulation of Planetary Surface Conditions – P. Todd et al	Designed for Discovery: Is Space Exploration Part of Humanity's Destiny? – Rev. James Heiser
<b>3:30 – 4:00</b>	E.L.D.S.R.R.: Improved Nuclear Power Plant for Mars – H. Gregory	MODS 3 – the Work Continues – MDRS Refit Team	Early Results of Ecopoesis Experiments in the Shot Martian Environment Simulator – D. Thomas et al	Open
<b>4:00 – 4:30</b>	NOPS: The Nitrous Oxide Propulsion System-Tony Muscatello	Mars Edison and Other Connections – Homer Tilton	Visysphere Mars: Ethical Considerations from Blurring the Lines Between Life and Technology – Erik Clacey	Open
<b>4:30 – 5:00</b>	open	open	open	Open

