



SPACE EXPLORATION SYMPOSIUM OCTOBER 5-6, 2015

OFFICIAL PROGRAM

Talks (Oct. 6th, ETLC Solarium)

2:00 PM: Opening remarks

2:05 PM: Reaching For Space: The Story of AlbertaSat and the Ex-Alta 1 Satellite

Chris Robson*, Charles D. A. Nokes, Tyler Hrynyk, Collin Cupido, Duncan G. Elliott, Ian R. Mann

2:25 PM: Open Source Cube Satellite Software and Hardware Systems

Stefan E. Damkjar*, Brendan Bruner, Brandon J. Borden, Alexander D. Hamilton, Collin Cupido, Atri Bhattacharyya, Neil Lamoureux, Tae Ho Kang, Peng Zhang, Charles D. A. Nokes, Ian R. Mann, David L. Sloan, Loren Wyard-Scott, Duncan G. Elliott

2:45 PM: Power Management on Ex-Alta 1

John P. Grey*, Albert Martino, Dallas Haugen, Charles D. A. Nokes, Theodore Chow, Michael D. Fleischauer, Duncan G. Elliott

**3:05 PM: Attitude Dynamics and Stability for the University of Alberta Cube Satellite Ex-
Alta 1**

M. Taylor Robertson*, Jacob S. MacFadyen, Graham Hornig, Dustin Nault, Charles D. A. Nokes, Collin Cupido, Loren W. Scott, Donald W. Raboud

3:25 PM Opportunities of micro/nanotechnology applied to cube satellite designs

Dan Sameoto*

3:45 PM Studying space weather from a sub-orbital sounding rocket

David Miles*

4:05 PM Space Weather - Huge Threat or Storm in a Teacup?

Ian Mann*

*Denotes speaker

4:30 PM Poster session (see Guide to Posters below)

5:00 PM KEYNOTE: Space Activities and Opportunities in Canada

Christian Sallaberger, Canadensys Aerospace Corporation

Guide to Posters

Novel materials for Space

Investigation of dry adhesive for space debris capture

D. Bareth, B. Sotannia, D. Sameoto

CubeSats and Sounding Rockets

Experimental Albertan 1 Satellite

Charles D. A. Nokes, Stefan Damkjar, Chris R. J. Robson, Collin Cupido, David M. Miles, David Barona, Dan Sameoto, Carlos F. Lange, Duncan G. Elliott, Ian R. Mann, AlbertaSat team

Open CubeSat Platform

Stefan E. Damkjar, Brendan Bruner, Brandon J. Borden, Charles D. A. Nokes, Ian R. Mann, David L. Sloan, Loren Wyard-Scott, Duncan G. Elliott

Performance Verification and Modelling of Cube Satellite Attitude Determination and Control System

Matthew T. Robertson, Jacob S. MacFadyen, Graham Hornig, Dustin Nault, Charles D. A. Nokes, Collin Cupido, Loren W. Scott, Donald W. Raboud

Kalman Inspired Filter (KIF)

Dallas M. Haugen, Albert J. Martino, John P. Grey, Charles D. A. Nokes, Micheal D. Fleischauer, Alexander D. Hamilton, Ian R. Mann, Duncan G. Elliott

3D Magnetic Field Generator for the Calibration of Magnetometers.

John Grey, David Miles, David Milling

Making CubeSats and Space Science More Accessible Through Educational Outreach

Ruth Ferrari, Ashley Hansen, Stefan Damkjar, Charles D. A. Nokes, Collin Cupido, Carlos F. Lange, Duncan G. Elliott, Ian R. Mann

A Fluxgate Magnetometer for the ICI-4 Sounding Rocket Campaign

D.M. Miles, J.R. Bennest, I.R. Mann, D.K. Milling

CaNoRock - The Canadian Norwegian Student Sounding Rocket Program

I. R. Mann, D. J. Knudsen, K. A. McWilliams, K. Dahle, J. Moen, E. V. Thrane, A. Hansen, K. Evans

Space Physics

Determining the Time Series Signature Responsible for Spectral Resonance Structures that Characterize the Ionospheric Alfvén Resonator

C. Nokes, I. R. Mann, M.E. Usanova, D. M. Miles, A. Kale, D. K. Milling, L. Ozeke

The 1, 2, 3 of the Van Allen Radiation Belts: Impacts of Dynamics Driven By Observed ULF Wave Power

I. R. Mann, L. G. Ozeke, K. R. Murphy, S. Claudepierre, D. Turner, I. J. Rae, D. K. Milling, A. Kale, J. Fennell, D. N. Baker

Balloon-borne Observations of Electron Precipitation

A. Hamilton, C. Cupido, I. R. Mann, D. K. Milling

Assessing the Impacts of Accurate Specification of the ULF Wave Power and the Outer Boundary Condition on Radiation Belt Models

L. G. Ozeke, I. R. Mann, K. R. Murphy, D. L. Turner

Development of an Autonomous Station for the CARISMA Magnetometer Array

A. Kale, D. K. Milling, I. R. Mann

Mars

Telltale Wind Sensor on the Phoenix Mars Lander

C.F. Lange and J.A. Davis

Meteorites

Volatile elements in Tissint shock melt glass: a remnant fingerprint of Martian secondary alteration preserved in the Tissint meteorite

C. R. Kuchka, C. D. K. Herd, E. L. Walton, Y. Chen, Y. Liu

ToF-SIMS analysis of prebiotic organics in meteorites: Gaining insight into formation mechanisms

D. N. Simkus, C. D. K. Herd, Y. S. Goreva, and T. J. McCoy

In Situ Analysis of Platinum Group Elements in Ordinary Chondrite Kamacite and Taenite

C. Gilmour and C.D.K. Herd

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