

DAY	TIME	ACTIVITY	Richelieu Room	Frontenac Room	Joliet Room	Chaudière Room	Capitale Room
Tues 17	08:15-08:30	Opening	Welcome				
	08:30-10:00	Plenary 1	Heads of Agencies - CSA and ESA - Presentations and Audience Q&A				
May	10:00-10:30	Networking	Coffee and conversation				
	10:30-12:00	Plenary 2	Canadian Space Agency Directors General - Presentations and Panel Discussion				
	12:15-14:00	Keynote 1	Luncheon - Keynote Presentation - European Space Agency Director General Johann-Dietrich Wörner				
	14:15-15:45	Session 1	Session 1A	Session 1B	Session 1C	Session 1D	Session 1E
			Martian Exploration	Space Property Rights: Space Act	Space Propulsion 1	Earth Observation and Remote Sensing 1	Education and Outreach
	15:45-16:00	Networking	Coffee and conversation				
	16:00-17:30	Session 2	Session 2A	Session 2B	Session 2C	Session 2D	Session 2E
		Planetary Atmospheres: from Earth to Mars	UN COPUOS: Keynote Presentation and Space Act Panel	Satellite Communications	Space-based Astronomy 1: JWST & WFIRST	Assembly, Integration & Test in Canada: Presentations & Panel	
18:00-19:30	Reception	Women in Astronautics Welcome Reception					
Wed 18	08:30-10:00	Plenary 3	Canadian Forces DG Space - Keynote and Panel Discussion - BGen Michel Lalumière				
	10:00-10:20	Networking	Coffee and conversation				
May	10:20-11:50	Session 3	Session 3A	Session 3B	Session 3C	Session 3D	Session 3E
			Mysterious Realms: Venus, Titan and Pluto	Space Situational Awareness 1: Systems and Findings	Space Propulsion 2	Earth Observation and Remote Sensing 2	Space Capability Demonstration 1
	12:00-13:50	Keynote 2	Luncheon - Keynote Presentations - NASA - Chief Scientist Dr. Ellen Stofan and Chief Technologist Dr. David Miller				
	14:00-15:30	Session 4	Session 4A	Session 4B	Session 4C	Session 4D	Session 4E
			Asteroid Exploration	Entrepreneurial Space: Business Models	Communications and Constellations	Space-Based Astronomy 2: Operational Missions	Space Capability Demonstration 2 - Presentations & Panel
	15:30-16:15	Poster Session	Interactive Poster Presentations				
16:15-17:45	Session 5	Session 5A	Session 5B	Session 5C	Session 5D	Session 5E	
		Micro- and Nanosatellites	Space Situational Awareness 2: Future Concepts	Robotics & Rover Systems	Space Instrumentation & Optics 1: Applications	Canadian Space Agency Programs and Plans	
18:30-22:30	Gala Dinner	Gala Reception and Dinner - CSA John H. Chapman Award Presentation					
Thu 19	08:30-10:00	Plenary 4	The Arctic - Earth Observation and Remote Sensing Issues and Opportunities - Panel Discussion				
	10:00-10:20	Networking	Coffee and conversation				
May	10:20-11:50	Session 6	Session 6A	Session 6B	Session 6C	Session 6D	Session 6E
			LEO to Lunar	International Cooperation	Advanced Technologies	Space Instrumentation & Optics 2: Technologies	Space Smörgåsbord: Selected Topics
	12:00-13:50	Keynote 3	Luncheon - CASI Turnbull Lecture - Dr. Michael Daly, York University				
	14:00	Departure	Farewell until ASTRO 2018 in Québec City!				

# Technical Session 1

Tuesday 17 May | 14:15 -15:45

Richelieu Room	Frontenac Room	Joliet Room	Chaudière Room	Capitale Room
Martian Exploration	Space Property Rights: Space Act	Space Propulsion 1	Earth Observation and Remote Sensing 1	Education and Outreach
Chair: John Moores	Chair: Chan Kuan-Wei	Chair: Johanne Heald	Chair: Ken Ashworth	Chair: Michael Unger
16-1A-01 Digital Terrain Model Assisted Line-of-Sight Extinction within Gale Crater, Mars  Casey A Moore York University	16-1B-01 Title IV of the U.S. Commercial Space Launch Competitiveness Act of 2015: A Critical Step Forward in Facilitating the Development of a Viable Space Infrastructure  Sagi Kfir Deep Space Industries	16-1C-01 Electro spray Thrusters to Limit Orbiting Debris Proliferation  Josué Zabeau PolyOrbite	16-1D-01 European and United States International Cooperation in Space Meteorological and Climate Services  Ken Ashworth KLAshworth Consulting	16-1E-01 The Canadian Satellite Design Challenge: Opportunities for Students  Lawrence Reeves CSDC Management Society
16-1A-02 Transmission Spectroscopy of Packed Simulated Mars Regolith  Casey A Moore York University	16-1B-02 US Space Act 2015 and its Implications for the Exploitation of Natural Resources in Outer Space  Iseoluwa Akintunde McGill University IASL	16-1C-02 Toward a Hybrid Electric Propulsion for Microsatellites and Nanosatellites  Manish Jugroot Royal Military College of Canada	16-1D-02 ISTEP: The Intelligent Satellite Tasking and Exploitation Platform  Alan Higginson ADGA Group Consultants Inc.	16-1E-02 Student Outreach through CanSat Canada Competition  Kirk Richardson Blackbriar Systems
16-1A-03 Geometric Shielding of Surface Rocks on Mars  Christina Smith York University	16-1B-03 Fostering the Commercial Use of Outer Space in Canada: A Legal Perspective  Rizkia Putri McGill University IASL	16-1C-03 Cylindrical Hall Thruster for Small Satellite Missions: Performance Results  Carl Pigeon UTIAS Space Flight Laboratory	16-1D-03 Greenhouse Gas Sensing from Orbit; Lessons Learned from the GOSAT Program  Frederic Grandmont ABB Canada	16-1E-03 Youth and Science  Benjamin Vermette Collège Garnier
16-1A-04 Validation of Martian Cloud Optical Depths Using LIDAR Measurements of Terrestrial Cirrus Clouds  Jacob Kloos York University	16-1B-04 Steps Toward a New International Understanding on Space Governance: from Planetary Protection to Planetary Resources  John Rummel SETI Institute & McGill University	16-1C-04 Development of a Nitrous Oxide-Based Monopropellant Propulsion System for Small Satellites  Vincent Tarantini UTIAS Space Flight Laboratory	16-1D-04 Bi-hourly Monitoring Wildfire from Space - A Canadian Solution to a Global Problem  Helena (Marleen) van Mierlo Canadian Space Agency	16-1E-04 The Planetary Society: Empowering the world's citizens to advance space science and exploration  Kate Howells The Planetary Society
16-1A-05 Hydrolyzed Polar Terrain Ice Aerobot (HYPATIA) Mission Platform  Eric Shear York University		16-1C-05 Characteristic Thickness of Shock-Turbulence Interaction  Francis Lacombe Polytechnique Montréal		16-1E-05 Kerbal Space Program as a Tool for Teaching Orbital Mechanics  Ilija Jovanovic Ryerson University

## Technical Session 2

Tuesday 17 May | 16:00 - 17:30

Richelieu Room	Frontenac Room	Joliet Room	Chaudière Room	Capitale Room
<b>Planetary Atmospheres: from Earth to Mars</b>	<b>UN COPUOS: Keynote Presentation and Space Act panel</b>	<b>Satellite Communications</b>	<b>Space-based Astronomy 1: JWST &amp; WFIRST</b>	<b>Assembly, Integration &amp; Test Availability in Canada - Brief Presentations &amp; Panel</b>
<b>Chair: Vicky Hipkin</b>	<b>Chair: Christian Lange</b>	<b>Chair: Ryan Anderson</b>	<b>Chair: Neil Rowlands</b>	<b>Chair: Alex Jablonski</b>
16-2A-01 CSA Planetary Atmospheres Topical Team  John Moores York University	16-2B-01 UN COPUOS - Current Challenges and Future Directions (30 minutes) <b>Keynote Presentation</b> by David Kendall, incoming chair of the UN Office for Outer Space Affairs  David Kendall Canadian Space Agency	16-2C-01 Erbium Doped Fiber Amplifiers for Optical Space Communications Systems  Emile Haddad MPB Communications Inc.	16-2D-01 JWST and WFIRST - Astronomy's Next Flagship Missions <b>Extended presentation</b>  Jason Kalirai Space Telescope Science Institute	16-2E-01 MDA Corporation: AIT Capability  S. Mooney MDA
16-2A-02 "TICFIRE" Mission: Observing Thin Ice Clouds Using the Far-Infrared  Shawn Mason COM DEV	16-2B-02 <b>Panel Discussion</b> Moderator - David Kendall Panellists from Session 1B Additional panellist: Ken Ashworth	16-2C-02 Low Cost Phased Array Antenna System for Ka-Band Mobile Satellite Communication  Wael Abde-Wahab C-COM Satellite Systems Inc.	16-2D-02	16-2E-02 Small Satellite Mission Assembly, Integration, Test at the Space Flight Laboratory  R. E. Zee UTIAS Space Flight Laboratory
16-2A-03 Ionospheric TEC Estimation Using Radio Frequency Beacon Signals From Preexisting Networks  Alex Cushley Royal Military College of Canada		16-2C-03 The Cascade Communications Technology Demonstration Payload on CASSIOPE: In-Flight Operation  Gregory Enno University of Calgary	16-2D-03 JWST Fine Guidance Sensor Final Performance Testing  Neil Rowlands Honeywell Aerospace	16-2E-03 Present Space Optics AIT Capabilities of ABB and Perspective on the Future  Jacques Giroux ABB Canada
16-2A-04 Overview of Radio Scientific Results from Cassiope/ePOP  Gordon James Retired		16-2C-04 Telstar 12 Vantage  Ryan Anderson Telesat	16-2D-04 Canadian Technologies for WFIRST Coronagraph; the Next US Astronomy Flagship Mission  Jean-Francois Lavigne ABB Canada	16-2E-04 AI&T at Magellan Aerospace, Winnipeg  E. Choi Magellan Aerospace, Winnipeg
16-2A-05 Scientific Results from the Cassiope Enhanced Polar Outflow Probe (e-POP)  Andrew Yau University of Calgary		16-2C-05	16-2D-05 Potential Canadian Contributions to NASA's WFIRST Mission: Relative Calibraton System & Guider  Neil Rowlands Honeywell Aerospace	16-2E-05 The GOCO Option for Canada's DFL Test Facility: Pros and Cons  Chris Dodd Airbus Defense and Space Canada
				16-2E-06 Acoustic Test Facility for the Development and Qualification for Future Spacecraft  Viresh Wickramasinghe NRC

## Technical Session 3

Wednesday 18 May | 10:20 - 11:50

Richelieu Room	Frontenac Room	Joliet Room	Chaudière Room	Capitale Room
Mysterious Realms: Venus, Titan and Pluto	Space Situational Awareness 1: Systems and Findings	Space Propulsion 2	Earth Observation and Remote Sensing 2	Space Capability Demonstration 1
Chair: Vicky Hipkin	Chair: Lauchie Scott	Chair: Ryan Anderson	Chair: Daniel De Lisle	Chair: Wanping Zheng
<p>16-3A-01 New Horizons Extended Mission Phase: Journey to the Heart of the Kuiper Belt.</p> <p style="text-align: right;">JJ Kavelaars NRC</p>	<p>16-3B-01 Enhanced Operational Collision Risk Assessment and Mitigation for Canadian Space Assets</p> <p style="text-align: right;">Viqar Abbasi Canadian Space Agency</p>	<p>16-3C-01 Inertial Navigation for Low-Thrust Spacecraft</p> <p style="text-align: right;">Kieran A. Carroll Gedex Systems Inc.</p>	<p>16-3D-01 Space Technologies Helping Food &amp; Water Security</p> <p style="text-align: right;">Bradley Farquhar International Space University</p>	<p>16-3E-01 Pre-space Validation of a Canadian Wildland Fire Monitoring System Via Airborne Fire Observations</p> <p style="text-align: right;">Joshua M. Johnston National Resources Canada</p>
<p>16-3A-02 Possible Titan Ground Fog Detection from SLI Imagery</p> <p style="text-align: right;">Christina Smith York University</p>	<p>16-3B-02 The Evolution Of Sapphire: Trends and System Adaptations for an Operational SSA Sensor</p> <p style="text-align: right;">Robert Leitch MDA</p>	<p>16-3C-02 Propellantless Spacecraft Propulsion Based on the Gravity Gradient: Design Considerations</p> <p style="text-align: right;">Brian Lynch Queen's University</p>	<p>16-3D-02 Development of the Radarsat Constellation Mission Buses</p> <p style="text-align: right;">Dario Schor Magellan Aerospace</p>	<p>16-3E-02 Flight Qualification of Payload Control and Flight Recorder Electronics for Stratospheric Balloons</p> <p style="text-align: right;">Eric Edwards Xiphos Systems Corporation</p>
<p>16-3A-03 Penitentes on Pluto?</p> <p style="text-align: right;">John Moores York University</p>	<p>16-3B-03 Canadian GEO Object Tracking Using Combined NEOSSat and Ground-Based Observations</p> <p style="text-align: right;">Robert (Lauchie) Scott DRDC Ottawa</p>	<p>16-3C-03 Hybrid Paraffin-N2O Based Sounding Rocket Development</p> <p style="text-align: right;">Carl Pigeon U of Toronto Aerospace Team</p>	<p>16-3D-03 RCM Data Utilization &amp; Application Plan (DUAP)</p> <p style="text-align: right;">Daniel De Lisle Canadian Space Agency</p>	<p>16-3E-03 Small Payload Ballooning - Adapting New Technologies to an Established Research Tool</p> <p style="text-align: right;">Arny Sokoloff Continuum Aerospace Inc.</p>
<p>16-3A-04 Sinuous Rilles and Canali in the Phoebe Regio and Dzerassa Planitia Areas</p> <p style="text-align: right;">Zachary Zeghouane Carleton University</p>	<p>16-3B-04 Space-Based Photometry of Active Geostationary Satellites using NEOSSat</p> <p style="text-align: right;">Kevin Bernard DRDC Ottawa</p>	<p>16-3C-04 Stability Control of S Deorbit by Flexible Bare Electrodynamic Tethers Considering Elastic-Thermal-Electrical Coupling</p> <p style="text-align: right;">Gangqiang Li York University</p>	<p>16-3D-04 TerraSAR Next Generation: overview of the Mission "HRWS" (High Resolution Wide-Swath)</p> <p style="text-align: right;">Pierre-Alexis Jomel Airbus Defence and Space</p>	<p>16-3E-04 Development of an Air-bearing Inclined Turntable for Space Tether Deployment Test</p> <p style="text-align: right;">Udai Bindra York University</p>
<p>16-3A-05 Pit Chains Associated with Giant Radiating Dyke Swarms of Perchta Corona and Yuna-Mana Mons, Venus</p> <p style="text-align: right;">Lux Kirupakaran Carleton University</p>	<p>16-3B-05 An Analysis of the Long Term Broadband Photometry Of Inactive Box-Wing GEO Satellites</p> <p style="text-align: right;">Michael Earl Royal Military College of Canada</p>	<p>16-3C-05 Multiple Revolution Earth-Orbit Escape using Solar Sails</p> <p style="text-align: right;">Armen Meras UTIAS</p>	<p>16-3D-05 Development of a Far Infrared Radiometer (FIRR) for Sensing of Thin Ice Clouds</p> <p style="text-align: right;">Christian Proulx Institut National d'Optique</p>	<p>16-3E-05 Development of a Planer Air-Bearing Microgravity Ground Testbed</p> <p style="text-align: right;">Zheng Hong Zhu York University</p>

## Technical Session 4

Wednesday 18 May | 14:00 - 15:30

Richelieu Room	Frontenac Room	Joliet Room	Chaudière Room	Capitale Room
Asteroid Exploration	Entrepreneurial Space: Business Models	Communications and Constellations	Space-Based Astronomy 2: Operational Missions	Space Capability Demonstration 2: Presentations and Panel
Chair: John Moores	Chair: Chris Dodd	Chair: Emile Haddad	Chair: Neil Rowland	Chair: Wanping Zheng
16-4A-01 The Asteroid Redirect Mission  Paul Abell NASA Johnson Space Center	16-4B-01 Expanding the Canadian Space Program: Lessons from Silicon Valley and NASA Headquarters  Alexander MacDonald NASA Headquarters	16-4C-01 Constellations, Clusters, and Communication Technology: Expanding Small Satellite Access to Space  Buddy Walls Southwest Research Institute	16-4D-01 Canadian Space Agency Astronomy Missions Overview  Denis Laurin Canadian Space Agency	16-4E-01 CSA Pre-space Demonstration Activities & Outlook  Wanping Zheng Canadian Space Agency
16-4A-02 An Asteroid Lander/Rover for Asteroid Surface Gravity Surveying  Kieran A. Carroll Gedex Systems Inc.	16-4B-02 Distributed Cluster Approaches to Public-Private Investment in Canadian Space Enterprise  Chad English NRC - IRAP	16-4C-02 The OneWeb Non-Geostationary Satellite System: Extending the Internet Everywhere in Canada  Marc Dupuis OneWeb	16-4D-02 Three Stellar Years (and Counting) of Precision Differential Photometry by the BRiGht Target Explorer (BRITE) Astronomy Constellation  Karan Sarda UTIAS Space Flight Laboratory	16-4E-02 Research and Demonstration of Space Technology at York University  Zheng Hong Zhu York University
16-4A-03 SCRAMBLE: Cheap Quick Looks at Asteroids  Henry Spencer SP Systems	16-4B-03 Canada's Role in Space Mining  Dale Boucher Deltion Innovations	16-4C-03 Changing Landscape of the Satellite Industry  Chris Stott ManSat	16-4D-03 The Highly Successful BRITE-Constellation Nanosatellite Mission  Gregg Wade Royal Military College of Canada	16-4E-03 Planetary Analogues and Analogue Mission - A Valuable Precursor to Planetary Missions and the Role of Canada  Edward Cloutis University of Winnipeg
16-4A-04 Evolution of Orbits around Asteroids Using a New Approach for the Mass Concentrations Shape Model  Flaviane Venditti McGill University	16-4B-04 Shared Problem Open Innovation Model for Space and Earth: Fueling Innovation  Nicole Buckley Canadian Space Agency	16-4C-04 Panel: HTS, MEO, LEO and the future of Satcom  C. Stott, M. Dupuis, B. Walls	16-4D-04 Performance of the UltraViolet Imaging Telescopes aboard the Astrosat Observatory  Joseph Postma University of Calgary	16-4E-04 Tech Demo on ISS  Johanne Heald Canadian Space Agency
16-4A-05 The OSIRIS-REx Laser Altimeter (OLA)  Michael Daly York University			16-4D-05 Canadian Astro-H Metrology System: Pre-flight Qualification, Calibration and Tests  Stephane Gagnon Neptec Design Group	

**Interactive Poster Session**  
**Wednesday 18 May | 15:30 - 16:15**

<b>Chair: Ryan Anderson</b>				
<p>16-IP-01  New Insights into Venusian Coronae through the Characterization of Circumferential Graben-Fissure Systems on Venus and Comparison with Giant Circumferential Dyke Swarms on Earth</p> <p style="text-align: right;">Erin Bethell  Carleton University</p>	<p>16-IP-02  Passive Optical Polarimetric Characterization of Spacecraft Materials for Space Situational Awareness</p> <p style="text-align: right;">Carl Clancy  Royal Military College of Canada</p>	<p>16-IP-03  Activities at the University of Winnipeg in Support of the NASA-CSA New Frontiers OSIRIS-Rex Asteroid Sample Return Mission</p> <p style="text-align: right;">Edward Cloutis  University of Winnipeg</p>	<p>16-IP-04  Canadian Activities in Support of the 2016 ExoMars Trace Gas Orbiter Nomad Spectrometer</p> <p style="text-align: right;">Edward Cloutis  University of Winnipeg</p>	<p>16-IP-05  Drone-Assisted Atmospheric Investigations to Enhance Planetary Exploration of Titan and Mars</p> <p style="text-align: right;">Brittney Cooper  York University</p>
<p>16-IP-06  Relationship Between Rifting And Coronae Along Parga Chasma Within The BAT Region On Venus</p> <p style="text-align: right;">Jamie Graff  Carleton University</p>	<p>16-IP-07  Instrumentation of the Kapvik Space Exploration Micro-rover with a Potassium Magnetometer</p> <p style="text-align: right;">Andrew Hay  Carleton University</p>	<p>16-IP-08  Clustering a Nearby Galaxy</p> <p style="text-align: right;">Alexander Kiar  University of Western Ontario</p>	<p>16-IP-09  Student Competitions to Spur Space Sector Growth</p> <p style="text-align: right;">Kaizad Raimalwala  SEDS Canada</p>	<p>16-IP-10  The Study on Effect of Neurons in Space Flight and Conditions on Brain/Neuronal Plasticity and Connectivity Cells.</p> <p style="text-align: right;">Sandya Rao  Notion Robotics Lab</p>
<p>16-IP-11  Digital Frequency Domain Multiplexing Readout Electronics for Future Space Based Cosmic Microwave Background Telescopes</p> <p style="text-align: right;">Neil Rowlands  COM DEV International</p>	<p>16-IP-12  NUV Performance of e2v Large BICMOS Array for CASTOR</p> <p style="text-align: right;">Alan Scott  COM DEV International</p>	<p>16-IP-13  Development of a reconfigurable toolkit for long distance path-planning</p> <p style="text-align: right;">Kajendra Seevananthan  York University</p>	<p>16-IP-14  Analysis of the Effects of the Space Environment on Geostationary Satellites using Colour Photometry</p> <p style="text-align: right;">Jason Shaw  Royal Military College of Canada</p>	

## Technical Session 5

Wednesday 18 May | 16:15 - 17:45

Richelieu Room	Frontenac Room	Joliet Room	Chaudière Room	Capitale Room
Micro- and Nanosatellites	Space Situational Awareness 2: Future Concepts	Robotics & Rover Systems	Space Instrumentation & Optics 1: Applications	Canadian Space Agency Programs and Plans
Chair: Kieran Carroll	Chair: Lauchie Scott	Chair: Christopher Herd	Chair: Eric Choi	Chair: Christian Lange
16-5A-01 Landmark-based Optical Navigation Using Nanosatellite Star Trackers  Harry Zhang Ryerson University	16-5B-01 CanCurve – Light Curve Simulation Utility  Alexander Willison Royal Military College of Canada	16-5C-01 Development and Commercialization of Extreme Terrain Amphibious Rovers from Lunar Rover Prototypes  Perry Edmundson Ontario Drive & Gear Ltd.	16-5D-01 Raman Spectroscopy for the Planetary Sciences  Michael Daly York University	16-5E-01 The Canadian Space Agency's Space Technology Development Program (STDP): An Update  Walter Peruzzini Canadian Space Agency
16-5A-02 CLAIRE: A Canadian Small Satellite Mission for Measurement of Greenhouse Gases  Stephane Germain GHGSat Inc.	16-5B-02 Innovative Space Surveillance Mission Options  Alan Scott COM DEV	16-5C-02 Optimal Lunar Rover Hardware Placement to Minimize Required Power Input for Hibernation Survival  Ryan Pitre Queen's University	16-5D-02 Compact LIRS LIBS and Raman System for Planetary and Asteroid Mineralogy, In-situ Resources and Bioindicators  Roman Kruzelecky MPB Communications Inc	16-5E-02 Capacity Building in the Space Sector through Academic Development  Myriam Dubé Canadian Space Agency
16-5A-03 The Canadian Wildland Fire Monitoring System Microsatellite Mission Concept  Jean-Francois Hamel NGC Aerospace Ltd	16-5B-03 Monitoring Small Debris in Space with Fiber Sensors and Self-Repairing Materials  Emile Haddad MPB Communications Inc.	16-5C-03 Toward a Mission-Ready GNC System for Exploration Rovers  Joseph Nsasi Bakambu MDA	16-5D-03 CrIS; the Canadian Hyperspectral Technology behind Future Weather Satellites  Frederic Grandmont ABB Canada	16-5E-03 Status of the Canadian Space Agency Planetary Exploration Program  Victoria Hipkin Canadian Space Agency
16-5A-04 Flight Results from the CanX-4 and CanX-5 Formation Flying Mission  Niels Roth UTIAS Space Flight Laboratory	16-5B-04 Efficiency of Conventional Shielding Systems for MMOD Protection of Unmanned Spacecraft  Aleksandr Cherniaev University of Manitoba	16-5C-04 Mixed Path-Planning and Reactive Control for Autonomous Prospecting on the Moon  Brian Lynch Queen's University	16-5D-04 Integrated Tuneable F-P Imaging Spectrometer for the O2 A-Band  Roman Kruzelecky MPB Communications Inc	16-5E-04 Canadian Utilization of the International Space Station  Martin Richard Canadian Space Agency
16-5A-05 Nanosatellite Aircraft Tracking: Simulation and Design of the CanX-7 ADS-B Receiver  Ian Bennett UTIAS Space Flight Laboratory			16-5D-05 The Canadian Atmospheric Tomography System (CATS)  Craig Haley COM DEV International	

## Technical Session 6

Thursday 19 May | 10:20 - 11:50

Richelieu Room	Frontenac Room	Joliet Room	Chaudière Room	Capitale Room
LEO to Lunar	International Cooperation	Advanced Technologies	Space Instrumentation & Optics 2: Technologies	Space Smörgåsbord - Selected Topics
Chair: John Moores	Chair: Christian Lange	Chair: Johanne Heald	Chair: Eric Choi	Chair: Denis Laurin
16-6A-01 Science Objectives of AUDI's Mission to the Moon  Karsten Becker PTSScientists GmbH	16-6B-01 International Cooperation in Disaster Management through the Use of Space Applications  Maria Manoli McGill University IASL	16-6C-01 Autonomous Robotic Capture of Non-Cooperative Target in Active Space Debris Removal by Visual Servo Control  Gangqi Dong York University	16-6D-01 Towards satellite-based quantum communication: field testing the QEYSSAT payload  Sarah Kaiser University of Waterloo	16-6E-01 Cosmic Perspective as a Spin-off: How Space can Inspire and Foster a New Mindset based on Interconnectedness  Maria Lucas Rhimbassen HEC Montreal
16-6A-02 Lunar Surface Gravity Geophysics Mission Opportunities  Kieran A. Carroll Gedex Systems Inc.	16-6B-02 Global Earth Observation System of Systems (GEOSS) and the Group on Earth Observation (GEO) – An International Standard of Cooperation  Ken Ashworth KLAshworth Consulting	16-6C-02 A Simulation Tool for the Deployment and Capture Dynamics of Nets for Space Debris Removal  Eleonora Botta McGill University	16-6D-02 A Fine Pointing System Suitable for Quantum Communications on a Satellite  Christopher Pugh Institute for Quantum Computing/ University of Waterloo	16-6E-02 Balloon-borne Imaging Fabry-Perot Spectrometer for Remote Sensing of Aerosols and Surface Pressure  Christopher Sioris York University
16-6A-03 An Overview of Technical requirements for Lunar Systems  Imthiaz Syed University of Waterloo	16-6B-03 Contemporary Chinese Practice Regarding International Cooperation in Space Activities: Opportunities and Challenges for Canadian Actors  Eytan Tepper McGill University IASL	16-6C-03 Fiber Sensors Systems for Space Applications  Emile Haddad MPB Communications Inc.	16-6D-03 High Performance Carbon Fiber Optical Bench for Microsatellite Payload  Nichola Desnoyers Institut national d'optique	16-6E-03 Non-physical Disruption of a Satellite or its Functions: A Threat to Sovereignty and Territorial Integrity of a State  Bayar Goswami McGill University IASL
16-6A-04 Taking Advantage of Opportunities for Research Experiments on the International Space Station  Pat Greene MDA	16-6B-04 Canada-ESA Cooperation Agreement: A Long-Lasting Collaboration with Proven Benefits  Myriam Dubé Canadian Space Agency	16-6C-04 Looking Sharp: A Few Words on a Low Cost Alternative to Communication Satellites  Rénaud Fortier Canada Aviation & Space Museum	16-6D-04 High Performance APDs in Aerospace Applications  Eric Desfonds Excelitas Canada Inc.	16-6E-04 Determining a LEO Satellite's Orbit from Images Obtained at the Local Zenith  Michael Earl Royal Military College of Canada
16-6A-05 Small Missions and Big Challenges for New Canadian Exploration  Nadeem Ghafoor Canadensys Aerospace Corporation			16-6D-05 Spatial-Heterodyne-on-a-Chip: Design of an Advanced Microspectrometer for Detection of Atmospheric Methane  Hugh Podmore York University	