

COLAGE XI - Scientific Program

• Keynote Speakers

- **Monday 16 - 10:30-11:15:** - Juan Roederer (University of Alaska Fairbanks and University of Colorado), *60 Years of Radiation Belt Physics*
- **Tuesday 17 - 9:00-9:45:** - William Matthaeus (University of Delaware), *How do weakly collisional plasmas dissipate?*
- **Thursday 19 - 14:15-15:00:** - Stephen White (Air Force Research Laboratory, USA), *Solar science with the Atacama Large Millimeter/submillimeter Array*

• Session 1. Solar Physics. Monday 16 - 11:15-12:30 / 14:00-16:00

Conveners: *Cristina Mandrini, Jean Pierre Raulin, Santiago Vargas*

Invited talks

- Ward Manchester (University of Michigan), *State-of-the-art Simulation of the Solar Wind and CMEs*
- Paulo Simoes (University of Glasgow), *Chromospheric flares: recent observations and modelling*
- Enrico Landi (University of Michigan), *Diagnostics of solar and heliospheric phenomena in the Solar Orbiter and Parker Solar Probe era*

Oral contributions

- M. Cesere, *Moreton waves: numerical simulations and their comparison with observations*
- M. V. Sieyra, *Do sunspots bubble?*
- D. B. Berdichevsky, *A thermodynamics interpretation of electron and temperature description in the Sun's corona*
- F. A. Nuevo, *Three dimensional reconstruction and temporal evolution of plasma parameters along AR loops*
- J. F. Valle Silva, *Spectral Signature of Solar Active Regions in Submillimeter Wavelengths*
- A. Valio, *Polarised millimeter observations of solar flares*
- M. Rojas-Quesada, *A Comparative Study of Oscillations of a Sunspot and a Filament and the Associated Dynamic Evolution of Filament*

• Session 2. Solar Wind. Monday 16 - 16:30-18:45

Conveners: *Allison Dal Lago, Ernesto Aguilar-Rodriguez, Hebe Cremades*

Invited talks

- Mario Bisi (Rutherford Appleton Lab)
- Teresa Nieves Chinchilla (NASA GSFC), *Modeling Heliospheric Flux-ropes*

Oral contributions

- N. P. Janitzek, *Kinetic Properties of Solar Wind Heavy Ions measured with SOHO/CELIAS/CTOF and ACE/SWICS*
- S. Dasso, *Interplanetary flux ropes: importance and limitations to determine its orientation from in situ observations*
- E. Sanchez-Garcia, *Geoeffectiveness generated by the geometry of the stream interface associated to the SIRs*
- J. Mejia-Ambriz, *Study of small-scale solar wind irregularities in the inner heliosphere from interplanetary scintillation*
- B. Schmieder, *Geoeffective events through the solar cycles*

• Session 3. Planetary Magnetospheres. Tuesday 17 - 11:15-12:30 / 14:00-15:15

Conveners: *Walter Gonzalez, Xochitl Blanco, Cesar Bertucci*

Invited talks

- Frances Bagenal (University of Colorado), *NASA's Juno Mission to Jupiter: What is Inside the Giant Planet?*
- Ramon Lopez (University of Texas at Arlington), *The Bow Shock and External Chapman-Ferraro Current Systems*

Oral contributions

- N. Romanova, *Global ULF Response to the Sudden Changes of the Electric Field and Pressure in the Solar Wind*
- C. Villareal, *Probing radio emission in exoplanets*
- C. Bertucci, *The Solar Wind interaction with Titan*
- D. Gomez, *Numerical modelling of collisionless perpendicular shocks*
- C. A. Gonzalez, *Plasma turbulence at sub-proton scales: Two-fluid and full-kinetic plasma description*

• Session 4. Cosmic Rays. Tuesday 17 - 15:15-16:00 / 16:45-18:45

Conveners: *Hernan Asorey, Jose Valdes-Galicia, Carlos Navia*

Invited talks

- J. J. Masias-Meza (IAFE/UBA-CONICET), *Determination of spatial diffusion coefficients of Galactic Cosmic Rays in the inner heliosphere*
- D. Ruffolo (Mahidol University), *Anisotropy of Cosmic Rays during the Forbush Decrease Starting 2013 April 13*

Oral contributions

- A. M. Gulisano, *Antarctic node of the Latin American Giant Observatory for cosmic rays observations*
- J. F. Valdes-Galicia, *Simultaneous observation of solar neutrons at the International Space Station and high mountain Observatories in association with a flare on July 8, 2014*

- L.X. Gonzalez, *Detection efficiency of the Solar Neutron Telescopes installed at high altitudes in Japan, China, Bolivia and Mexico*
- I. Sidelnik, *Neutron detection capabilities of Water Cherenkov Detectors*
- D. Cazar, *Development of a water cherenkov detector for the LAGO Collaboration*
- H. Asorey, *Cosmic Rays and inner structure Colombian Volcanoes*
- J. P. Raulin, *Effects of solar flares and solar energetic particle events on the atmospheric electric field*
- M. Suarez-Duran, *Assessing the Geomagnetic Field contribution during three Forbush Decreases: May 2005, December 2006 and September 2017 at the Pierre Auger Observatory*

• Session 5. Ionosphere and the Upper Atmosphere. Thursday 19 - 9:00-10:30 / 11:00-12:30 / 15:00-15:15

Conveners: *Marco Milla, Maria Sergeeva, Inez Batista*

Invited talks

- Maksim Klimenko (Russian Academy of Sciences), *Upper atmosphere response to 2015 St. Patrick geomagnetic storm*
- Fabiano Rodrigues (University of Texas at Dallas), *Radar imaging equatorial spread F events*
- Carlos Martinis (Boston University), *Ionospheric studies using the Boston University network of all-sky imagers from equatorial to sub-auroral latitudes*

Oral contributions

- D. Janches, *The Southern Argentina Agile Meteor Radar (SAAMER): 6 years survey of the meteoroid environment*
- S. Chakrabarty, *The LITES Experiment aboard the ISS: Remote Sensing of the Upper Atmosphere and the Ionosphere in the Extreme and Far Ultraviolet*
- M. Sergeeva, *Peculiarities of TEC distribution over the American sector in both hemispheres*
- D. H. W. Peters, *Towards the long-term variability of the mesosphere using low frequency radio waves observation over latest 5 solar cycles*
- F. Azpilicueta, *A global study of ionospheric winter anomaly rate of occurrence using GPS-TEC from the last two solar cycles*
- E. Pacheco, *TEC measurements over the Peruvian sector using Low Earth Orbit satellite beacons and software-defined radio receivers for ionospheric studies*
- A. Pacini, *Impacts of the next southern Total Solar Eclipses (2019 and 2020) on the conjugate point: coordinated scientific efforts*
- M. Milla, *F-region incoherent scatter medium power radar observations at the Jicamarca radio observatory*
- I. Paulino, *Semimonthly oscillations observed in the start time of equatorial spread-F*

• **Session 6. Plasma Physics and Nonlinear Processes in Space Geophysics. Friday 20 - 9:00-10:30 / 11:15-12:00**

Conveners: *Abraham Chian, Alejandro Valdivia, Daniel Gomez*

Invited talks

- Rodrigo Miranda (University of Brasilia), *Multifractal analysis of interplanetary and ionospheric turbulence*
- David Ruffolo (Mahidol University), *Field Line Random Walk and Energetic Particle Transport in Magnetic Turbulence*
- Fouad Sahraoui (Ecole Polytechnique, France), *Compressible MHD and kinetic scale turbulence in the terrestrial magnetosheath: recent results from the Cluster and Themis spacecraft*

Oral contributions

- J. A. Valdivia, *The universality of the thermally induced electromagnetic fluctuations in quasi-stable plasmas*
- P. S. Moya, *How collisionless are solar wind electrons? The role of non-thermal skewed anisotropic kappa distributions*
- N. Andres, *Interplay between Alfvén and magnetosonic waves in compressible magnetohydrodynamics turbulence*
- P. Muralikrishna, *A new compact and low cost Langmuir Probe and associated onboard data handling system for CubeSat*
- J. J. Gonzalez-Aviles, *Development of a Magnetohydrodynamic (MHD) model in Non-Local Thermodynamic Equilibrium (NLTE) to study the upper solar atmosphere*

• **Session 7. Space Weather. Friday 20 - 14:00-16:00 / 16:30-17:45**

Conveners: *Joaquim Rezende Costa, Sergio Dasso, Americo Gonzalez-Esparza*

Invited talks

- Yaireska Collado-Vega (NASA), *Space Weather and the Community Coordinated Modeling Center*
- Larisa Trichtchenko (NRCAN-RNCAN), *Influence of geophysical parameters on the geomagnetically induced currents in power grids and pipelines*
- Clezio De Nardini (INPE), *Review on Space Weather in Latin America*

Oral contributions

- Gonzalez-Esparza, *Mexican Space Weather Service (SCiESMEX)*
- V. Lanabere, *Operative products offered by LAMP (Laboratorio Argentino de Meteorología del espacio) in Argentina*
- J. P. Raulin, *Space Weather Research Activities performed at CRAAM, São Paulo, Brazil*
- M. G. Molina, *Space Weather observations at Tucumán Low Latitude Observatory for Upper Atmosphere*
- B. Mendoza, *Solar activity cloudiness effect on NH warming for 1980-2095*
- F. L. Poblet, *The Semiannual Variation in the Van-Allen probes data*

- P. F. Barbosa Neto, *First steps for deriving DIX Maps over South America*
- G. Yang, *The International Space Weather Meridian Circle Program and The development of China-Brazil Joint Laboratory for Space Weather*