

## **CEDAR IT Poster Session – Tuesday, June 21, 2016**

(59 of 107 posters in competition)

<b>EQIT</b>	Equatorial Thermosphere or Ionosphere (9 of 14 posters in competition)
<b>IRRI</b>	Irregularities of Ionosphere or Atmosphere (8 of 15 posters in competition)
<b>DATA</b>	Data Assimilation (4 of 5 posters in competition)
<b>ITIT</b>	Instruments or Techniques for Ionospheric or Thermospheric Observation (21 of 30 posters in competition)
<b>LTVI</b>	Long Term Variations of the Ionosphere-Thermosphere (1 of 2 posters in competition)
<b>MDIT</b>	MidLatitude Thermosphere or Ionosphere (1 of 2 posters in competition)
<b>MITC</b>	Magnetosphere-Ionosphere-Thermosphere Coupling (10 of 19 posters in competition)
<b>PLAN</b>	Planetary Studies (1 of 5 posters in competition)
<b>POLA</b>	Polar Aeronomy (2 of 7 posters in competition)
<b>SOLA</b>	Solar Terrestrial Interactions in the Upper Atmosphere (1 of 8 posters in competition)

### **Equatorial Thermosphere or Ionosphere**

- EQIT-01**, Kassamba Abdel Aziz Diaby, Student IN poster competition, Estimating equatorial daytime vertical ExB drift velocities from magnetic field variations
- EQIT-02**, Jonathon Smith, Student IN poster competition, Global Distribution and Characteristics of Equatorial Plasma Bubbles
- EQIT-03**, Matthew Young, Student IN poster competition, Parametric Wave Growth in a Hybrid PIC/Fluid Simulation of the Equatorial E Region
- EQIT-04**, Tzu-Wei Fang, Non-student, Equatorial-PRIMO (Problems Related to Ionospheric Models and Observations)
- EQIT-05**, Tzu-Wei Fang, Non-student, Quantifying the sources of ionospheric Day-to-day variability
- EQIT-06**, Jiahao Zhong, Student IN poster competition, Long-duration depletion in the topside ionospheric total electron content during the recovery phase of the March 2015 strong storm
- EQIT-07**, Qingyu Zhu, Student IN poster competition, Simulations of vertical ion-drag effect on neutral winds and compositions at low and middle latitudes
- EQIT-08**, Arthur D. Richmond, Non-student, What drives the electrodynamics of the low-latitude evening ionosphere?
- EQIT-09**, Jong-Min Choi, Student NOT in poster competition, Periodicity in the occurrence of equatorial plasma bubbles
- EQIT-10**, Fasil Tesema Kebede, Student IN poster competition, Thermospheric wind and temperature measurements using Fabry-Perot Interferometers (FPI) at equatorial region of Ethiopia.
- EQIT-11**, Daniel J. Fisher, Student IN poster competition, Stormtime effects in the thermospheric neutral winds and temperatures over Brazil

- EQIT-12**, Pablo Reyes, Student NOT in poster competition, Probing the equatorial ionospheric valley region fluctuations with Jicamarca ISR and VIPIR ionosonde
- EQIT-13**, Dustin A. Hickey, Student IN poster competition, Airglow observations of the ionosphere from three imagers in South America
- EQIT-14**, Sovit Khadka, Student IN poster competition, Contribution of Neutral Wind and Electrojet to the Structural Dynamics of Equatorial Ionization Anomaly

### **Irregularities of Ionosphere or Atmosphere**

- IRRI-01**, Victoriya V. Forsythe, Student NOT in poster competition, Asymmetries in the phase velocity of the E-region plasma irregularities at high southern latitudes
- IRRI-02**, Bea Gallardo-Lacourt, Student NOT in poster competition, Influence of auroral streamers on rapid evolution of SAPS flows
- IRRI-03**, Leslie J Lamarche, Student NOT in poster competition, Asymmetry in plasma irregularity growth near large-scale gradient reversals
- IRRI-04**, Tae-Yong Yang, Student NOT in poster competition, First report of the afternoon E-region plasma density irregularities in middle latitude
- IRRI-05**, Brian Breitsch, Student IN poster competition, Adaptive-Mesh Imaging of the Ionosphere
- IRRI-06**, YenChieh Lin, Student IN poster competition, Numerical modeling of metallic ion species Fe<sup>+</sup>, Mg<sup>+</sup>, and Na<sup>+</sup> and studies of the layer structures in mid-latitude ionosphere.
- IRRI-07**, Goderdzi G. Didebulidze, Non-student, Formation and behavior sporadic E under the influence of atmospheric gravity waves
- IRRI-08**, Goderdzi G. Didebulidze, Non-student, Some properties of the TIDs and TADs by observation the oxygen red 630 nm line nightglow intensities from Abastumani
- IRRI-09**, Pei-yun Chiu, Student IN poster competition, Spatial and Temporal Variation of the FORMOSAT-3/COSMIC S4 scintillation index using Tidal Analysis
- IRRI-10**, Andrew Kiene, Student IN poster competition, Numerical modeling of equatorial spread F using observed neutral wind profiles
- IRRI-11**, James Spann, Non-student, The Scintillation Prediction Observations Research Task (SPORT): A Pathfinder Mission
- IRRI-12**, Diana Loucks, Student IN poster competition, High-latitude GPS Scintillation from E Region Electron Density Gradients during the December 20, 2015 Geomagnetic Storm
- IRRI-13**, Yu Jiao, Student IN poster competition, Equatorial Amplitude Scintillation Spectrum Analysis and Fading Characteristics on GPS Signals
- IRRI-14**, Brandone Ernest Lance, Student IN poster competition, Meso-scale Flow Bursts in the High-Latitude Ionospheric Convection Pattern
- IRRI-15**, Weijia Zhan, Student IN poster competition, On the spectral features of atypical F-region echoes

### **Data Assimilation or Management**

- DATA-01**, Stefan Codrescu, Student IN poster competition, Developing An Ensemble Kalman Filter for Data Assimilation in CTIPE
- DATA-02**, Michelle Salzano, Student IN poster competition, The Antarctic Geospace Data Portal
- DATA-03**, Chih-Ting Hsu, Student IN poster competition, ionospheric specification and forecast by ensemble assimilation of FORMOSAT-7/COSMIC-2 slant total electron content to a coupled model of thermosphere, ionosphere, and plasmasphere
- DATA-04**, Ryan M. McGranaghan, Student IN poster competition, Reconstruction of three-dimensional auroral ionospheric conductivities via an assimilative technique
- DATA-05**, Marcin Pilinski, Non-student, A New Assimilative Tool for Specifying Satellite Drag and Orbital Space Weather Conditions

### **Instruments or Techniques for Ionospheric or Thermospheric Observation**

- ITIT-01**, Geoff Crowley, Non-student, From DICE to DIME: An Evolution of CubeSat Based E-field Instrumentation
- ITIT-02**, Patrick Dandenaui, Student IN poster competition, Comparison of modeled meridional neutral winds using changes in hmF2 with neutral wind observations and other models
- ITIT-03**, Harrison W Bourne, Student NOT in poster competition, Improved Gradient Based TEC & Receiver Bias Estimation Using the Code Noise & Multipath Correction
- ITIT-04**, Magdalena Louise Moses, Student IN poster competition, Experiment Design to Assess Ionospheric Perturbations During the 2017 Total Solar Eclipse
- ITIT-05**, Marc A. Higginson-Rollins, Student IN poster competition, Diurnal Variation of LF Transmitter Signals at Many Locations
- ITIT-06**, Enrique Luis Alfonso Rojas Villalba, Student IN poster competition, Stochastic modeling of nonlinear dynamics in Farley-Buneman waves
- ITIT-07**, Anthony J. Mannucci, Non-student, Scientific inference in geophysics and implications for using numerical simulations in scientific investigations
- ITIT-08**, John Swboda, Student IN poster competition, Improvement of Resolution of Incoherent Scatter Radar Using Electronically Scanned Arrays and Inverse Theory
- ITIT-09**, Salih Mehmed Bostan, Student NOT in poster competition, Preliminary Results of an HF Software Defined Radar System to study D-Region Modification
- ITIT-10**, Jun Wang, Student IN poster competition, Ionosphere Remote Sensing Using Closely Spaced GNSS Arrays
- ITIT-11**, Shantanab Debchoudhury, Student NOT in poster competition, Effects of Additive Noise on Orbital Retarding Potential Analyzers
- ITIT-12**, Gareth Perry, Non-student, Broadband radio physics experiments at HF with e-POP RRI
- ITIT-13**, Kenneth Zia, Student IN poster competition, OPAL CubeSatellite Flight, Line of Sight Integration, and Atmospheric Modeling

- ITIT-14**, Bo Han, Student NOT in poster competition, Performance Evaluation of Radio Occultation Data Processing Software in Southeast Asia
- ITIT-15**, Robert Albarran, Student IN poster competition, Kinetic Model of the Auroral Ion Outflow as Observed by the VISIONS Sounding Rocket
- ITIT-16**, Carl Andersen, Student IN poster competition, Measuring Neutral Winds, Turbulence and Diffusion in the Lower Thermosphere with Multi-Point, Chemical-Release Sounding Rocket Payloads
- ITIT-17**, Kang-Hung Wu, Non-student, Reconstruction of the FORMOSAT-3/COSMIC electron density using empirical orthogonal function
- ITIT-18**, Yi Duann, Student IN poster competition, Photochemical model for atomic oxygen ion retrieval from ground-based observations of airglow
- ITIT-19**, Ting-Han Lin, Student IN poster competition, Improved Calibration Method for System Phase Bias of Chung-Li VHF Radar
- ITIT-20**, John Elliott, Student IN poster competition, Using a Geophysical Inversion with Tristatic Scanning Doppler Imagers
- ITIT-21**, Brian Harding, Student IN poster competition, Ground-based Thermospheric Wind Measurements: Sensitivity to Tropospheric Scattering
- ITIT-22**, Lee Joseph Kordella, Student IN poster competition, A new neutral wind sensor for nano-satellite platforms
- ITIT-23**, Jesse Kane McTernan, Student IN poster competition, A Space-based System for Investigating the Response of Stimulated Ionosphere
- ITIT-24**, Lindsay Victoria Goodwin, Student IN poster competition, Investigating the ion thermodynamics of the F region ionosphere
- ITIT-25**, Meghan Harrington, Student IN poster competition, Initial Results from the RENU2 Sounding Rocket
- ITIT-26**, Dev Raj Joshi, Student IN poster competition, Investigation of the Gravitational Rayleigh Taylor Instability (GRTI) growth rate factors of equatorial plasma bubble irregularities with oblique HF links
- ITIT-27**, Siddharth Krishnamoorthy, Student IN poster competition, Spacecraft communication through high density plasma in the D-region of the Ionosphere during reentry
- ITIT-28**, Julio Alberto Oscanoa, Student IN poster competition, MLT wind estimations obtained from specular and non-specular meteor trails at Jicamarca
- ITIT-29**, Charles Bussy-Virat, Student NOT in poster competition, Relationship between the drag parameters uncertainties and the orbital position uncertainties for LEO satellites
- ITIT-30**, Jonathan Parham, Student IN poster competition, ANDESITE: Multipoint Measurements of Small Scale Aurora Phenomena with CubSat Formations

### **Long Term Variations of the Ionosphere-Thermosphere**

- LTVI-01**, Eunsol Kim, Non-student, Tomographic reconstruction of plasmaspheric electron density using JASON-1 plasmaspheric TEC measurements

**LTVI-02**, Steven Brown, Student IN poster competition, Investigation of Ionosonde-Based Indices for a Better Representation of Solar Cycle Variations in IRI

### **MidLatitude Thermosphere or Ionosphere**

**MDIT-01**, Vicki Hsu, Student NOT in poster competition, Impact of Drag Effects on the Wind and Temperature Structure of the Upper Thermosphere

**MDIT-02**, Chih-Te Hsu, Student IN poster competition, Daytime Ion and Electron Temperatures in the Topside Ionosphere at Middle Latitudes

### **Magnetosphere-Ionosphere-Thermosphere Coupling**

**MITC-01**, Yangyang Shen, Student IN poster competition, Statistical investigation of anisotropic ion temperature enhancements observed by the CASSIOPE/e-POP satellite

**MITC-02**, Yining Shi, Student IN poster competition, Using AMPERE data to understand and verify dayside neutral wind

**MITC-03**, Yun-Ju Chen, Student NOT in poster competition, Plasma and Convection Reversal Boundary Motions in the High Latitude Ionosphere

**MITC-04**, Nithin Sivadas, Student IN poster competition, On the source of energetic electron precipitation during auroral substorms

**MITC-05**, Austin Sousa, Student IN poster competition, Global and Seasonal Assessments of Magnetosphere / Ionosphere Coupling via Lightning-Induced Electron Precipitation

**MITC-06**, Mariangel Fedrizzi, Non-student, Initial Storm Validation of the Ionosphere-Plasmasphere-Electrodynamics (IPE) Model

**MITC-07**, Boyi Wang, Student IN poster competition, Response of dayside aurora on closed field lines to solar wind driving

**MITC-08**, Jiashu Wu, Student IN poster competition, Field-aligned currents associated with multiple arc systems

**MITC-09**, Spencer Hatch, Student NOT in poster competition, IMF control of dayside Alfvénic activity in the magnetosphere-ionosphere transition region: FAST observations

**MITC-10**, Lucas David Hurd, Student IN poster competition, Effects of measurement resolution and the E-region neutral wind on estimating Joule heating rates in the high-latitude ionosphere/thermosphere

**MITC-11**, Joseph Jensen, Student IN poster competition, Can Particle Precipitation in the Ionosphere Affect the Magnetic Reconnection Rate?

**MITC-12**, Su-In Kim, Non-student, THEMIS, Van Allen Probes, and Super DARN observations of magnetospheric and ionospheric responses to the Sudden Commencement on Feb 16, 2013

**MITC-13**, Nicholas Perlongo, Student IN poster competition, Ring Current-Ionosphere Coupling: Self-consistent Aurora Validation

- MITC-14**, Jason Ahrns, Student NOT in poster competition, Characteristics of Equatorward Edge Auroral Waves
- MITC-15**, Hassan Akbari, Non-student, High Ion Temperature Events Observed by RISR: a Case Study
- MITC-16**, Xinzhao Chu, Non-student, Antarctic neutral Fe layers at thermospheric altitudes up to ~200 km and their correlations to geomagnetic storms and convection electric fields
- MITC-17**, Ying Zou, Non-student, Localized Field-aligned Currents in the Polar Cap Associated with Airglow Patches
- MITC-18**, Yang Lu, Student IN poster competition, Observations of Poynting flux in the dayside cusp region at different altitudes
- MITC-19**, Juha Vierinen, Non-student, High temporal resolution observations of auroral electron density using superthermal electron enhancement of Langmuir waves

### **Planetary Studies**

- PLAN-01**, Chuanfei Dong, Student NOT in poster competition, Multifluid MHD study of the solar wind interaction with Mars' upper atmosphere during the 2015 March 8th ICME event
- PLAN-02**, Lynsey Schroeder, Student IN poster competition, Infrasonic Acoustic Wave Propagation in Terrestrial Planetary Atmospheres
- PLAN-03**, Liang Wang, Student NOT in poster competition, Multi-fluid moment simulation of Ganymede
- PLAN-04**, Jared Bell, Non-student, Examining the Magnetosphere-Ionosphere coupling processes in the thermospheres of Earth and Jupiter
- PLAN-05**, Jeremy Rioussset, Non-student, Electrodynamics of the Martian dynamo region near magnetic cusps and loops

### **Polar Aeronomy**

- POLA-01**, Changsup Lee, Non-student, Polar thermospheric winds and temperature observed by Fabry-Perot Interferometer at Jang Bogo Station, Antarctica
- POLA-02**, Meghan Burleigh, Student IN poster competition, Anisotropic fluid modeling of the VISIONS sounding rocket campaign
- POLA-03**, Burcu Kosar, Non-student, Analysis of near real-time citizen science observations to validate model predictions of auroral visibility
- POLA-04**, Riley Troyer, Student IN poster competition, High Altitude Antarctic Winds
- POLA-05**, Maimaitirebike Maimaiti, Student NOT in poster competition, Dynamics of Ionospheric Plasma Convection Under Extreme Northward IMF Conditions
- POLA-06**, Manbharat Singh Dhadly, Non-student, Seasonal dependence of high latitude upper atmospheric winds: A climatological study based on ground and space based instruments

**POLA-07**, Jeong-Young Ji, Non-student, General-moment-equation approach to the Coulomb-Milne problem

### **Solar Terrestrial Interactions in the Upper Atmosphere**

**SOLA-01**, Andrea Hughes, Student IN poster competition, Variability of the F-region ionosphere with solar activity

**SOLA-02**, Eun-Young Ji, Non-student, Comparison of IRI-2012 with JASON-1 TEC and incoherent scatter radar observations during the 2008-2009 solar minimum period

**SOLA-03**, Susan M. Nossal, Non-student, Observed increase in the Wisconsin northern hemisphere hydrogen emission data set

**SOLA-04**, Nuri Emrahoglu, Non-student, Geocoronal Balmer-alpha hydrogen emission observations made with the Turkish Dual Etalon Fabry-Perot Spectrometer (DEFPOS)

**SOLA-05**, Justin Yonker, Student NOT in poster competition, Improving Simulations of Odd Nitrogen in the Upper Atmosphere

**SOLA-06**, Ji-Hee Lee, Non-student, The relationship between high-speed solar wind streams and NO concentration in the upper mesosphere and thermosphere

**SOLA-07**, Derek Gardner, Student NOT in poster competition, Geocoronal fine-structure cascade excitation constraints for ground-based observations

**SOLA-08**, Liam Kilcommons, Student NOT in poster competition, Unifying DMSP Space Weather Observations: Field-Aligned Currents (FACs) and Electron Energy Flux organized with respect to IMF orientation and the Central Plasma Sheet Aurora