

2017 CEDAR Workshop
MLT, Coupling, Instrumentation and Techniques Poster Session
Tuesday, June 20, 2017
(47 of 80 posters in competition)

COUP	Coupling of the Upper Atmosphere with Lower Altitudes (6 of 11 posters in competition)
IRRI	Irregularities of Ionosphere or Atmosphere (0 of 1 poster in competition) *Poster to be shown during MLT Poster Session*
ITIT	Instruments or Techniques for Ionospheric or Thermospheric Observation (17 of 25 posters in competition)
ITMA	Instruments or Techniques for Middle Atmosphere Observations (3 of 5 posters in competition)
LTVM	Long-Term Variations of the Mesosphere and Lower Thermosphere (1 of 2 posters in competition)
METR	Meteor Science other than Wind Observations (1 of 3 posters in competition)
MLTG	Mesosphere and Lower Thermosphere Gravity Waves (7 of 10 posters in competition)
MLTL	Mesosphere and Lower Thermosphere Lidar Studies (3 of 5 posters in competition)
MLTS	Mesosphere or Lower Thermosphere General Studies (3 of 10 posters in competition)
MLTT	Mesosphere and Lower Thermosphere Other Tidal, Planetary Waves, or Sudden Stratospheric Warmings (3 of 4 posters in competition)
SPRT	Sprites (1 of 2 posters in competition)
STRB	Stratosphere Studies and Below (2 of 2 posters in competition)

Coupling of the Upper Atmosphere with Lower Altitudes

- COUP-01**, Garima Malhotra, Student IN poster competition, Understanding the Non-linear Effects of Eddy Diffusion on the Ionosphere-Thermosphere System
- COUP-02**, Quan Gan, Non-student, Short-term variability in the ionosphere due to the nonlinear interaction between the 6-day wave and migrating tides
- COUP-03**, Minyang Chou, Student IN poster competition, Concentric traveling ionosphere disturbances triggered by Super Typhoon Meranti (2016)
- COUP-04**, Naomi Maruyama, Non-student, Transitioning a Coupling Whole Atmosphere (WAM) and Ionosphere-Plasmasphere-Electrodynamics (IPE) Model into Operations at NOAA
- COUP-05**, Pavel Inchin, Student IN poster competition, Investigation of ground level magnetic field disturbances after 2010 Chile 8.8M earthquake
- COUP-06**, Qian Wu, Non-student, Observations and simulations of ionosphere SAO
- COUP-07**, Tarique Siddiqui, Student IN poster competition, Longitude dependent lunar tidal modulation of the equatorial electrojet during stratospheric sudden warmings

- COUP-08**, Joe McInerney, Non-student, Using WACCM-X
- COUP-09**, Aysegul Moral, Student IN poster competition, Lower atmospheric gravity waves as sources of low-latitude traveling ionospheric disturbances as studied by an airglow imager, CHAMP satellite, and a general circulation model
- COUP-10**, Chen Wu, Student NOT in poster competition, Investigating the effect of eddy diffusion in mesosphere and lower thermosphere region with multiple data sets
- COUP-11**, Shih-Chi Chiu, Student IN poster competition, INSPIRESat-1 sampling and observation using the coupled whole atmosphere model and ionosphere model

Irregularities of Ionosphere or Atmosphere

- IRRI-15**, Ryan McGranaghan, Non-student, Finding multi-scale connectivity in our geospace observational system: Network analysis of total electron content *Poster to be shown during MLT Poster Session*

Instruments or Techniques for Ionospheric or Thermospheric Observation

- ITIT-01**, Loren Chang, Non-student, Expanding Ionospheric Observations with CubeSats: INSPIRESat-1 and IDEASSat
- ITIT-02**, Ya Chih Mao, Student NOT in poster competition, Recent Progress on Advanced Ionospheric Probe Onboard FORMOSAT-5 Satellite
- ITIT-03**, Nithin Sivadas, Student IN poster competition, 2-D Energy Flux Maps of Precipitating Electrons using Poker Flat Incoherent Scatter Radar
- ITIT-04**, Shantanab Debchoudhury, Student NOT in poster competition, Limiting SNR regimes for successful parameter estimation from Retarding Potential Analyzers
- ITIT-05**, Yi Duann, Student IN poster competition, Photochemical model for atomic oxygen ion retrieval from ground-based observations of airglow
- ITIT-06**, Bruce Fritz, Student IN in poster competition, ELF Whistler Dependence on a Sunlit Ionosphere
- ITIT-07**, Bruce Fritz, Student NOT poster competition, RENU 2 UV Measurement of Atomic Oxygen in the Cusp Region
- ITIT-08**, Brian Harding, Student NOT in poster competition, Errors in ground-based thermospheric wind and temperature measurements
- ITIT-09**, Huan Song, Student IN poster competition, Three-dimensional inversion technique for short distance oblique Dynasonde ionograms

- ITIT-10,** Nathaniel Frissell, Non-student, Ionospheric Simulations of the 2017 Solar Eclipse QSO Party
- ITIT-11,** Enrique Rojas Villalba, Student IN poster competition, Coherent scatter from radar aurora: Improvements and applications
- ITIT-13,** Ellen Robertson, Student IN poster competition, Simulation of Particle Flow in Neutral Wind Sensor
- ITIT-14,** Jim Spann, Non-student, The Scintillation Prediction Observations Research Task (SPORT): Anticipated Data Products
- ITIT-15,** Jonathan Parham, Student IN poster competition, Resolution Metrics for Auroral Multipoint Measurements with Satellite Swarms
- ITIT-16,** Joshua Katz, Student IN poster competition, Fitting Ionospheric Models Using Real-Time High Frequency Amateur Radio Observations
- ITIT-17,** George Geddes, Student IN poster competition, Preliminary Results from LITES and Model Comparison
- ITIT-18,** William Longley, Student IN poster competition, Particle-in-cell simulations of collisional ISR spectra
- ITIT-19,** Carl Andersen, Student IN poster competition, Thermospheric Measurements With Sounding Rocket Chemical Release Payloads
- ITIT-20,** Saurav Aryal, Student IN poster competition, Auroral energy and energy flux derivation using multi-spectral imaging
- ITIT-21,** John Elliott, Student IN poster competition, Geophysical Inversion of thermospheric winds at 250km altitude using higher order Tikhonov regularization on the Alaskan Allsky Fabry-Pert interferometry network for the night of Jan 31st, 2016
- ITIT-22,** Anthony Swenson, Student IN poster competition, The Design and Function of the Gridded Retarding Ion Distribution Sensor
- ITIT-23,** Margaret Gallant, Student IN poster competition, Investigating Near Space Interaction Regions: Developing a Remote Observatory
- ITIT-24,** Lindsay Goodwin, Student IN poster competition, Monte-Carlo simulations of ion velocity distributions and resulting incoherent radar spectra under strong ion frictional heating conditions
- ITIT-25,** Lee Kordella, Student IN poster competition, Development of a commercial off-the-shelf software defined radio ionosonde

Instruments or Techniques for Middle Atmosphere Observations

- ITMA-01**, Channing Philbrick, Student IN poster competition, Lower Atmosphere Ionosphere Coupling Experiment
- ITMA-02**, James Clemmons, Non-student, Toward a new capability for upper atmospheric research using atomic oxygen lidar
- ITMA-03**, Chad Renick, Student IN poster competition, LWPC Modeling of Ionospheric Perturbations Due to Lightning Induced Energetic Electron Precipitation Using Overlapping VLF Propagation Paths
- ITMA-04**, Richard Collins, Student NOT in poster competition, Detection and characterization of Turbulence with Incoherent Scatter Radar
- ITMA-05**, Jaime Aguilar Guerero, Student IN poster competition, Observability of Acoustic Waves in the MLT by Ground-Based and Airborne Synthetic Airglow Imagers

Long-Term Variations of the Mesosphere and Lower Thermosphere

- LTVM-01**, Anne Smith, Non-student, Zonal winds in the tropical middle atmosphere
- LTVM-02**, Cornelius Csar Jude Salinas, Student IN poster competition, Interannual Variations of SABER CO₂ and CO₂-based Eddy Diffusion Coefficients in the Mesosphere and Lower Thermosphere Region

Meteor Science other than wind observations

- METR-01**, Matthew Young, Student IN poster competition, A Simulation of Plasma Turbulence from Dust Gradients.
- METR-02**, Freddy Galindo, Student NOT in poster competition, Effect of Plasma Turbulence on the evolution of Specular Meteor Echoes
- METR-03**, Liane Tarnecki, Student NOT in poster competition, PIC Simulations of 3D Finite Meteor Trails

MLT Gravity Waves

- MLTG-01**, Yolian Amaro-Rivera, Student IN poster competition, Selection of an atmospheric reference model and branching ratios for numerical modeling of gravity wave-airglow interactions

- MLTG-02**, Robert Bruntz, Non-student, Application of the Transfer Function Model (TFM) in gravity wave modeling
- MLTG-03**, Anthony Caton, Student IN poster competition, Measurements of phase differences between temperature and vertical wind perturbations associated with gravity waves in the mesopause region
- MLTG-04**, Katrina Bossert, Non-student, Multi-Scale Gravity Wave Environments and Influences on Gravity Wave Propagation
- MLTG-05**, Ross Dinsmore, Student IN poster competition, GPS TEC Detection of MSTIDs/LSTIDs and Source Determination
- MLTG-06**, Pattilyn McLaughlin, Student NOT in poster competition, Classifying mesospheric mountain wave characteristics over New Zealand during the 2014 DEEPWAVE campaign
- MLTG-07**, Ian Geraghty, Student IN poster competition, Multi-Year Survey of Short Period Gravity Wave Parameters in the Mesosphere and Lower Thermosphere at McMurdo (77.8°S, 166.7°E), Antarctica
- MLTG-08**, Matthew Grawe, Student IN poster competition, Automated estimation of dominant horizontal wave parameters appearing in airglow images
- MLTG-09**, Masaru Kogure, Student IN poster competition, Rayleigh/Raman lidar observations of gravity wave activity in the middle atmosphere over Syowa (69°S, 40°E), Antarctic
- MLTG-10**, Jian Zhao, Student IN poster competition, Coupling by gravity waves through the middle and upper atmosphere in Antarctica: Are dominant stratospheric gravity waves the direct source of persistent gravity waves in the MLT?

MLT Lidar Studies

- MLTL-01**, Xuguang Cai, Student IN poster competition, Investigation of Na layer by numeric simulation
- MLTL-02**, Toru Takahashi, Non-student, Depletion of mesospheric sodium during extended period of pulsating aurora: high speed sodium lidar observation
- MLTL-03**, Dongming Chang, Student IN poster competition, Simultaneous Lidar Measurements of Fe and Na layers, Temperatures, and Winds in the Mesosphere and Lower Thermosphere-Extended (MLT-X) at Boulder, Colorado
- MLTL-04**, Yafang Guo, Student NOT in poster competition, Na lidar measurements of turbulence heat flux, thermal diffusivity and energy dissipation rate in the mesopause region

MLTL-05, Shuai Qiao, Student IN poster competition, Initial Results of Na Lidar Measured Stratospheric Temperatures at Andes Lidar Observatory (30.3°S, 70.7°W)

Mesosphere or Lower Thermosphere General Studies

MLTS-01, Ashan Vitharana, Student IN poster competition, Statistical Characteristics of Short-term Tidal Variability for DW1 in eCMAM30 and SABER

MLTS-02, Erin Dawkins, Non-student, Validation of NASA TIMED/SABER v2.0 temperature data with ground-based lidars: first results.

MLTS-03, Benedict Pineyro, Student IN poster competition, Nonlinear acoustic wave effects on lower thermosphere composition

MLTS-04, Jeong-Han Kim, Non-student, Mesospheric temperatures during day and night estimated from meteor radar observation

MLTS-05, Nabil Nowak, Student IN poster competition, Seasonal Variation of Ozone in the Upper Mesosphere at High Latitudes

MLTS-06, Changsup Lee, Non-student, New method of estimating temperatures near the mesopause region using meteor radar observations

MLTS-07, Cissi Lin, Non-student, Comparison Between Thermospheric Nitric Oxide Emission Observations and the Global Ionosphere-Thermosphere Model (GITM) Simulations: Sensitivity Study to Solar and Geomagnetic Activities

MLTS-08, Dmitry Pokhotelov, Non-student, Simulations of MLT dynamics with global circulation models and their comparison with mid- and high-latitude ground-based radar observations

MLTS-09, Peter Panka, Student NOT in poster competition, New non-LTE model of OH(v) in the mesosphere/lower thermosphere

MLTS-10, Ludger Scherliess, Student NOT in poster competition, OPAL CubeSatellite Data Analysis Model

MLT Other Tidal, PWs, or SSWs

MLTT-01, Nirmal Nischal, Student IN poster competition, Seasonal and solar cycle variability of DE2 and DE3 in the CO₂ 15 μm cooling of the lower thermosphere

MLTT-02, Jeffrey Forbes, Student NOT in poster competition, Exploring Wave-Wave Interactions in a General Circulation Model

MLTT-03, Jack Wang, Student IN poster competition, The quasi 2 day wave response in TIME-GCM nudged with NOGAPS-ALPHA

MLTT-04, Komal Kumari, Student IN poster competition, A New Approach to Study Short-Term Nonmigrating Tidal Variability using Information Theory and Bayesian Statistics

Sprites

SPRT-01, Jacob Engle, Student IN poster competition, Numerical and analytical studies of corona discharge initiation in air & CO₂-rich environment

SPRT-02, Ningyu Liu, Non-student, Fractal properties of lightning from high-speed video observations

Stratosphere Studies and Below

STRB-01, Prasad Perumal, Student IN poster competition, Analysis of Black carbon emissions over a semi-urban station Vijayawada: Preliminary results

STRB-02, Yucheng Su, Student IN poster competition, Carbon dioxide in the polar stratosphere from AIM/SOFIE measurements