# **CEDAR MLT Poster Session – Tuesday, 28 June 2011**

(34 of 65 posters in competition)

- **ITMA** Instruments and Techniques for the Middle Atmosphere (1 of 2 posters in competition)
- **METR** Meteor Science other than Wind Observations (5 of 6 posters in competition)
- MLTG Mesosphere and Lower Thermosphere Gravity Waves (10 of 17 posters in competition)
- **MLTL** Mesosphere and Lower Thermosphere Lidar Studies (4 of 9 posters in competition)
- MLTS Mesosphere or Lower Thermosphere General Studies (6 of 16 posters in competition)
- **MLTT** Mesosphere and Lower Thermosphere Other Tidal or Planetary Waves (2 of 6 posters in competition)
- **SPRT** Sprites (5 of 6 posters in competition)
- **STRB** Stratosphere Studies and Below (1 of 2 posters in competition)
- **IT-GPS** Global Positioning System (1 poster-not in competition)

# Instruments and Techniques for the Middle Atmosphere

**ITMA-01**, Cody Vaudrin, Student IN poster competition, University of Colorado Software Defined Multistatic Radar: System Development Update and Recent Results

ITMA-02, Steve Watchorn, Non-student, Spatial Heterodyne Spectroscopy to Determine [O] in the MLT Region

# **Meteor Science other than Wind Observations**

**METR-01**, Jongmin Choe, Student IN poster competition, Anisotropy of the meteor decay times measured by a meteor VHF radar at King Sejong Station 62S, 57W), Antarctica

METR-02, Elizabeth Bass, Student IN poster competition, Simultaneous Meteor Observations Using High-Power, Large-Aperture and Specular Radars

METR-03, Ryan Volz, Student IN poster competition, Improving Radar Observation of Meteors using Compressed Sensing

**METR-04,** Jeong-Han Kim, Non-student, Mesospheric temperature estimation from the meteor decay times observed at southern high latitude

**METR-05**, Alex McDonell, Student IN poster competition, Improved Meteor Deceleration and Mass Calculations Using Doppler Data from the ALTAIR HPLA Radar

METR-06, Elizabeth Ann McCubbin, Student IN poster competition, Classifying meteor trail echoes detected by the midlatitude Super Dual Auroral Radar Network

# Mesosphere and Lower Thermosphere Gravity Waves

MLTG-01, Steve Smith, Non-student, Gravity wave coupling between the mesosphere and thermosphere over New Zealand

**MLTG-02**, Thomas Boyd Martin, Student IN poster competition, Comparison of Long-period to Short-Period Gravity Waves Over Petrolina, Brazil and Halley, Antarctica

MLTG-03, Fabio Vargas, Non-student, Evidence of the influence of high frequency gravity waves on the meridional residual circulation

MLTG-04, Fabio Vargas, Non-student, Gravity wave parameter estimation using collocated airglow, wind and temperature data recorded at 23°S

MLTG-05, Uday Kanwar, Student IN poster competition, Estimation of the Vertical Wavelength of Atmospheric Gravity Waves from Airglow Imagery

**MLTG-06**, Edward Grabenhorst, Student IN poster competition, Infrared Measurements of Hydroxyl Airglow Emissions and Gravity Wave Perturbations over Daytona Beach, Florida

MLTG-07, Zhenhua Li, Student NOT in poster competition, An Investigation on Gravity Wave Characteristics Observed by Airglow Imager at Maui, HI

MLTG-08, Richard George, Student IN poster competition, The Effects of Gravity Waves On Airglow and Minor Species in The MLT Region

**MLTG-09,** Changsup Lee, Student IN poster competition, Seasonal variations of the gravity wave activity in the mesopause region at King Sejong Station (62.22°S, 58.78°W), Antarctica

MLTG-10, Igo Paulina, Student NOT in poster competition, Forward ray-tracing of medium-scale gravity waves in the MLT region over Brazil

MLTG-11, Jonathan Pugmire, Student IN poster competition, Mesospheric Temperature Variability Over The Andes Mountains

MLTG-12, Neal Criddle, Student IN poster competition, Seasonal Variability and Dynamics of Mesospheric Gravity Waves Over the Andes Mountains

MLTG-13, Kim Nielsen, Non-student, Airglow Imaging of Polar Atmospheric Gravity Waves over Poker Flat, Alaska MLTG-14, Kim Nielsen, Non-student, Fourier Ray Tracing of Atmospheric Gravity Waves Utilizing a Numerical Weather Prediction System

MLTG-15, Xian Lu, Student IN poster competition, Comparative studies on the tidal modulations of the GW variances in the MLT region using the meteor radar

MLTG-16, Laura Holt, Student IN poster competition, Gravity waves in WACCM with respect to transport of NOx created by energetic particle precipitation

MLTG-17, Chihoko Yamashita, Student IN poster competition, Physical Mechanisms of Gravity Wave Variations and Their Impacts on the MLT during the 2009 Stratospheric Sudden Warming

## **Mesosphere and Lower Thermosphere Lidar Studies**

MLTL-01, Xinzhao Chu, Non-student, First Results from McMurdo Lidar Campaign

**MLTL-02**, Weichun Fong, Student IN poster competition, Temperature Profiling from McMurdo, Antarctica with a Fe **MLTL-03**, Cao Chen, Student NOT in poster competition, Wave signatures in Fe temperature measurements over McMurdo **MLTL-04**, Wentao Huang, Non-student, Simultaneous and Common-Volume Lidar Observations of Mesospheric Na and Fe Layers at Boulder, Colorado (40N, 105W) in 2010

MLTL-05, Richard Collins, Non-student, Lidar Studies of the Arctic Atmosphere at Chatanika, Alaska

**MLTL-06**, Britta Irving, Student IN poster competition, Mesospheric inversion layers seen by Rayleigh lidar and their relationship to planetary wave structure in the Arctic middle atmosphere

MLTL-07, Leda Sox, Student IN poster competition, The World's Most Sensitive Rayleigh-Scatter Lidar

MLTL-08, Tony Mangognia, Student NOT in poster competition, Resonance Fluorescence He LIDAR

MLTL-09, Robert Andrew Stillwell, Student IN poster competition, Accounting for nonlinear sensor behavior in laser remote sensing applications

#### Mesosphere or Lower Thermosphere General Studies

MLTS-01, Rachel Ward, Student IN poster competition, With My Head in the Clouds: Helping to Understand the Boundary Between Earth and Space

**MLTS-02**, Justin Carstens, Student IN poster competition, Analysis of the PMC Parameter Retrieval from a CIPS Scattering Profile: High Sensitivity to Uncertainties and Methods Used to Account for this

MLTS-03, Brentha Thurairajah, Non-student, AIM/CIPS observation and NOGAPS-ALPHA analysis of polar mesospheric cloud structures

**MLTS-04**, Cissi Ying-tsen Lin, Student IN poster competition, Solar Energy and Nitric Oxide in the Lower Thermosphere: Observations by the Remote Atmospheric Ionospheric Detection System (RAIDS) and the Solar Dynamic Observatory (SDO) **MLTS-05**, Karthik Venkataramani, Student IN poster competition, Simulating Nitric Oxide in the lower Thermosphere using a 3D model

**MLTS-06**, Justin Yonker, Student IN poster competition, The Role of N2(A) in Production of Lower Thermospheric Nitric Oxide (NO)

MLTS-07, Bo Tan, Student IN poster competition, Tele connection pattern of different altitudes and different hemispheres derived from SABER and WACCM

**MLTS-08**, Martin Langowski, Student NOT in poster competition, Investigation of metal and metal ion density profiles in the MLT by satellite remote sensing using data from SCIAMACHY

MLTS-09, Deepali Vimal Saran, Non-student, Iron Oxide Emission in the Mesosphere

**MLTS-10**, Deepali Vimal Saran, Non-student, Relaxation of O2(v = 1) by Atomic Oxygen and Carbon Dioxide

**MLTS-11**, Jerome Thiebaud, Non-student, Vibrational Relaxation of OH(v = 7) with O, O2, and N2, presented by Konstantinos Kalogerakis

MLTS-12, Victor Pasko, Non-student, Finite-difference time-domain modeling of infrasonic waves generated by supersonic auroral arcs

**MLTS-13**, Kishore Kumar Grandhi, Non-student, Simultaneous observations of meteor echoes with different frequencies (32.55 MHz and 53.5 MHz)

MLTS-14, Wayne Hocking, Non-student, Long term behaviour of the MLT quasi-7-day wave at two radar-sites at northern polar latitudes, presented by Kishore Kumar Grandhi

MLTS-15, Fontenla Juan, Non-student, Solar Spectral Irradiance effects on the heating and chemistry of the stratosphere and mesosphere

MLTS-16, Chad Fish, Student NOT in poster competition, Long-term Observations of Winds and Waves over Bear Lake Observatory

# Mesosphere and Lower Thermosphere Other Tidal or Planetary Waves

**MLTT-01**, Ana Roberta Paulina, Student NOT in poster competition, A possible effect of the 2006 Sudden Stratospheric Warming in the lunar semidiurnal tide

MLTT-02, Irfan Azeem, Non-student, Dynamical Response in the Mesosphere and Lower Thermosphere to a Sudden Stratospheric Warming Event in the Southern Hemisphere During 2010

**MLTT-03**, Frederico Estante, Student NOT in poster competition, Short-term variability of the s=1 nonmigrating semidiurnal tide over the South Pole due to coupling with Northern Hemisphere wave activity

MLTT-04, Jia Yue, Non-student, Quasi-two-day waves in the lower thermosphere

MLTT-05, Gong Yun, Student IN poster competition, Incoherent scatter radar study of the terdiurnal tide in the E- and F-region heights at Arecibo

**MLTT-06,** Katelynn Greer, Student IN poster competition, Planetary Wave Disturbances of the Wintertime Polar Upper Stratosphere and Lower Mesosphere: A Summary of Observed Characteristics

# **Sprites**

**SPRT-01**, Burcu Kosar, Student IN poster competition, Sprite Streamer Formation in Under-Voltage Conditions **SPRT-02**, Samaneh Sadighi, Student IN poster competition, Streamer Discharges From Isolated Hydrometeors in Thunderclouds

**SPRT-03**, Jianqi Qin, Student NOT in poster competition, Impact of mesospheric ion conductivity variations on the initiation of long-delayed sprites

**SPRT-04**, Caitano Luiz da Silva, Student IN poster competition, Influence of the charge moment change on sprite initiation altitude

**SPRT-05**, Wei Xu, Student IN poster competition, Monte Carlo Simulation of Terrestrial Gamma-ray **SPRT-06**, Sotirios Mallios, Student IN poster competition, Charge transfer to the ionosphere and to the ground during thunderstorms

## **Stratosphere Studies and Below**

**STRB-01**, Aman Chandran, Non-student, An analysis of SSW & elevated stratopauses generated in WACCM **STRB-02**, Chao-Hsin Chen, Student IN poster competition, An Investigation of Gamma Drop Size Distribution aloft using the Chung-Li VHF Radar

# **Global Positioning System**

IT-GPS-01, Justin Gyllen, Student NOT in poster competition, Possibilities for Calibrating GPS TEC with ISR Data