



June 22 - June 26, Seattle
University of Washington



Agenda

2014 CEDAR Workshop

"CEDAR Grand Challenges"

(All Workshops to be held in Kane 130 unless otherwise noted)

Sunday 22 June

CEDAR Student Workshop (Non-students Welcome)

Theme - Aeronomy Instrumentation: Where Does the Data Come From?

Kane Hall Room 110

Co-Chairs: Timothy Duly and Leda Sox (CSSC Student Reps)

0800-0900	Breakfast/Registration/Sign Travel Vouchers	Kane Hall Roo
0900-0910	Student Welcome from NSF	Rich Behnke (NSF)
0910-0930	Student Welcome from CSSC	David Hysell, (CSSC chair, Cornell)
0930-0940	Agenda information and organizational details	Timothy Duly (U IL) and Leda Sox (Utah State) (CSSC Student Reps)
0940-1015	Measuring upper atmospheric winds and temperatures by optical Doppler spectroscopy with Fabry-Perot interferometers	Mark Conde (U AK)
1015-1030	<i>Break</i>	
1030-1105	MLT observations by Rayleigh and resonance lidar: Some insights	Michael Gerding (IAP)
1105-1140	Incoherent Scatter Radar: Remote Sensing of Earth's Upper Atmosphere	Phil Erickson (MIT)
1140-1315	Student Pizza Lunch	Cascade Ballroom, Haggett Hall
1315-1355	Instruments for NASA's Ionospheric Connection Explorer	Thomas Immel (UCB)
1355-1430	GNSS Multi-scale studies of the ionosphere and plasmaphere	Gary Bust (APL/JHU)
1430-1505	The Complementary Role of Modeling in Experimental and Observational Science	Jonathan Snively (ERAU)
1505-1520	<i>Break</i>	
1520-1600	Student MREFC (Major Research Equipment and Facilities Construction, an NSF award) Presentations	
1600	<i>Adjourn</i>	
1630-1730	Student Soccer Game	Denny Field
1830-2030	Dinner with Speaker Aaron Ridley on "Up, Up and Away! Adventures in Ballooning at UM!"	Cascade Ballroom, Haggett Hall

Monday 23 June

0715-0815	Breakfast and Registration	Kane Hall Lobby
0815-0830	Plenary: Welcome by CSSC, NSF, U WA	Dr David Hysell (Cornell, CSSC chair), Rich Behnke (NSF), Dean Michael Bragg (College of Engineering), Dean Lisa Graumlich (College of the Environment)
0830-0840	Report of Student Workshop	Leda Sox (USU, CSSC year 1 student representative)
0840-0845	Introduction of Students by Institution	Tim Duly (U IL, CSSC year 2 student representative)
0845-0930	CEDAR Prize #25: Atmosphere-Ionosphere Coupling by Tides and Planetary Waves	Jeffrey Forbes (U CO)
0930-0955	<i>Break</i>	
0955-1015	Science Highlight #1: Recent Science Results from AMPERE and Applications to Advancing our Understanding of Magnetosphere-Ionosphere-Thermosphere Coupling	Brian Anderson (JHU/APL)

1015-1035	<i>Student MREFC (Major Research Equipment and Facilities Construction) reports</i>	Student MREFC reporters
1035-1105	<i>NSF reports #1,#2: TBD</i>	NSF
1105-1120	<i>"NASA Heliophysics in 2014 - and Beyond"</i>	Elsayed Talaat (NASA HQ) with Jeffrey Newmark
1120-1200	<i>Future NASA ITM Programs: GOLD, ICON, GDC, DYNAMIC</i>	moderator Aaron Ridley (U MI), Richard Eastes (UCF) for GOLD, Thomas Immel (UCB) for ICON, Rob Pfaff (GSFC) for GDC, Jeff Forbes (U CO) for DYNAMIC
1205-1330	Lunch	
1330-1530	Geospace system science during storms and substorms Kane 130	N Maruyama et al.
	Observations, Modeling, and Forecast of Equatorial Spread F Irregularities and Scintillation Kane 110	CS Huang et al.
	Case study of atmospheric-ionospheric effects caused by forcing from below and above Kane 210	A Maute et al.
	Synergistic investigations using in situ neutral and ion composition data from the NSF EXOCUBE mission Kane 220	L Waldrop et al.
1530-1600	<i>Break</i>	
1600-1800	Storm/substorm-time subauroral Geospace Kane 130	E Mishin et al.
	Thermospheric composition variations and their impact on the ionosphere Kane 110	Y Zhang et al.
	PINOT - The PFISR Ion-Neutral Observations in the Thermosphere Campaign Kane 210	W Bristow et al.
	Meteoroids and Space Debris Kane 220	S Close and J Urbina
1830-2100	CSSC Dinner (invitation only)	Hotel Deca, President's Room
Tuesday 24 June		
0715-0815	Breakfast and Registration	Kane Hall Lobby
0815-0915	GC Tutorial #1: "Challenges in high-latitude geospace science"	Herb Carlson (USU)
0915-0930	NSF Update #3 TBD	NSF
0930-1000	<i>Break</i>	
1000-1200	GC #1a The high latitude geospace system Kane 130	J Semeter et al.
	CEDAR-GEM Modeling Challenge Kane 110	JS Shim et al.
	Thermosphere-Ionosphere Climate Kane 210	J Emmert et al.
1200-1330	Lunch	
1330-1530	GC #1b The high latitude geospace system Kane 130	J Semeter et al.
	CubeSats: Lessons Learned Kane 110	G Earle
	Thermospheric wind variations and their interaction with the ionosphere Kane 210	W Wang et al.
	Coordinated ISR Observation Days for 2015 Kane 220	M McCready and I McCrea
1600-1900	Poster Session #1 for IT	Cascade Ballroom, Haggett Hall
Wednesday 25 June		
0715-0815	Breakfast and Registration	Kane Hall Lobby
0715-0815	Student Breakfast with NSF	120 Kane Hall (Walker Ames Room)
0815-0915	GC Tutorial #2: "Impact of lower atmosphere waves sources on the thermosphere and ionosphere"	Tim Fuller-Rowell (CIRES/NOAA)
0915-0935	Science Highlight #2: "Sun-to-Atmosphere, Sure, Yet Still One Link Short: Results from the NSF Frontiers of Earth System Dynamics 'Sun-to-Ice' Project"	Harlan Spence (U NH)
0935-1000	<i>Break</i>	
1000-1200	GC #2a Coupling and Transport Processes from the Upper Mesosphere through the Middle Thermosphere (80-200km) Kane 130	J Thayer et al.
	The Dynamic Polar Cap Kane 110	C Huang et al.
	Distributed instrumentation for ionospheric measurements over South America Kane 210	C Valladares et al.

	ITM Key Science Challenges during the Val Allen Probes / Great Observatory Era <i>Kane 220</i>	A Gerrard et al.
1200-1330	Lunch	
1200-1330	CSSC Lunch (invitation only)	120 Kane Hall (Walker Ames Room)
1330-1530	GC #2b Coupling and Transport Processes from the Upper Mesosphere through the Middle Thermosphere (80-200 km) <i>Kane 130</i>	J Thayer et al.
	Equatorial-PRIMO (Problems Related to Ionospheric Models and Observations) <i>Kane 110</i>	TW Fang and D Anderson
	<i>Using a new resource for CEDAR Science: SSUSI images of the ionosphere and aurora and GUVI spectrograph mode data</i> <i>Kane 210</i>	L Paxton et al.
1600-1900	Poster Session #2 for MLT	
Thursday 26 June		
0715-0815	Breakfast	Kane Hall Lobby
0815-0915	CEDAR Distinguished Lecture #4: "From Discovery to System Science"	Rod Heelis (UTD)
0915-0930	Programmatic #9: CEDAR Student Poster Prize Winners	Qian Wu and Greg Earle (CSSC)
0930-1000	<i>Break</i>	
1000-1200	MEGI - Multi-element Earth and Geospace Investigation <i>Kane 130</i>	L Paxton et al.
	Lidar Workshop: Neutral-Plasma Coupling and Dynamics with Lidar Technology Transformation <i>Kane 110</i>	X Chu et al.
	Data Assimilation and Inverse Problems for High-Latitude Electrodynamic <i>Kane 210</i>	T Matsuo et al.
	Exploring the Daytime Dynamo -- A new look at the Sq Current System and Mid- and Low-latitude Daytime Electrodynamic <i>Kane 220</i>	R Pfaff and S England
1200-1330	Lunch	
1330-1530	Addressing CEDAR Science goals with Combined Space and Ground-Based Observations <i>Kane 130</i>	T Immel et al.
	Magnetically conjugate studies of ionospheric processes from low to auroral latitudes <i>Kane 110</i>	C Martinis et al.
	Planning observing System Configurations for Answering Geospace System Science by Utilizing Simulation and Data Assimilation <i>Kane 210</i>	C Bust et al.
	Calibration and analysis techniques for passive optical and lidar observations <i>Kane 220</i>	S Nossal and D Hampton
1530-1600	<i>Break</i>	
1600-1800	Scientific discovery enabled by networked instrumentation; current state-of-the-art and future opportunities <i>Kane 130</i>	A Bhatt et al.
	Arecibo Initiative in Dynamics of the Atmosphere (AIDA 2) <i>Kane 110</i>	M Larsen et al.
	Severe Events During Non-SuperStorm Times <i>Kane 210</i>	M Mendillo and J Baumgardner
1800	<i>Adjourn</i>	