



Agenda

2016 CEDAR-GEM Joint Workshop

Sunday 19 June

Student workshop "Basic of CEDAR/GEM Science"

08:00 - 09:00	Student Registration <i>Eldorado, Anasazi</i>	Non-students welcome starting 1055 AM with the Faculty Tutorials
09:00 - 09:20	Introduction to GEM	
09:20 - 09:40	Introduction to CEDAR	
09:40 - 09:55	Student Tutorial: Magnetospheric Geography	
09:55 - 10:10	Student Tutorial: Ionospheric Geography	
10:10 - 10:25	<i>Ice Breaker Break</i>	
10:25 - 10:40	Student Tutorial: Storms and Substorms	
10:40 - 10:55	Student Tutorial: MI coupling	
10:55 - 11:25	Faculty Tutorial: Winds in the Thermosphere	Astrid Maute
11:25 - 11:55	Faculty Tutorial: Particle Acceleration	Christine Gabrielse
11:55 - 12:55	GEM Student Lunch, Eldorado, Zia CEDAR on your own	
12:55 - 13:25	Faculty Tutorial: Currents, Electrojets, and Instabilities	John Sahr
13:00	CSSC Lunch (13:00-18:00)	
13:25 - 13:55	Faculty Tutorial: Reconnection	Paul Cassak
13:55 - 14:25	Faculty Tutorial: Aurora and the Ionosphere	Jean-Pierre St-Maurice
14:25 - 14:45	<i>Break</i>	
14:45 - 15:15	Faculty Tutorial: Space Weather (plus HAARP)	Bill Bristow
15:15 - 15:30	Student Tutorial: CCMC Models and Other Tools	
15:30 - 16:00	Faculty Tutorial: Large Scale Modeling	Alex Glocer
16:00 - 16:30	Faculty Tutorial: Ground and Space Instruments to Study the Ionosphere	Anja Stromme
16:30 - 18:00	Annual STUDENT soccer match <i>Fort Marcy, Majers Field, 490 Bishops Lodge Rd</i>	
18:00 - 19:30	Joint CEDAR-GEM Students & Ice-Breaker Reception <i>Eldorado Grand Ballroom</i>	
19:00 - 21:00	GEM Committee meeting/dinner	

Monday 20 June 2016

08:15 - 09:15	Welcome <i>SFCC Sweeney E/F</i>	Josh Semeter (BU) and Mike Wiltberger (NCAR), Student Report, Student Institutions introduced, Therese Moretto NSF
09:15 - 10:00	Geospace Electrodynamics	Roger Varney (SRI)
10:00 - 10:30	<i>Break</i>	
10:30 - 11:30	How can we investigate global Magnetosphere-Ionosphere coupling?	Jesper Gjerloev (JHU APL)
11:30 - 12:00	Upcoming session info	
12:00 - 13:30	Lunch on your own	
13:30 - 15:30	Breakout 1 Joint Merged Modeling and Ionospheric Plasma (G FG10a) <i>SFCC Sweeney A</i>	Eccles/Giles/Zou
	Breakout 2 Joint Modeling Challenge (C24a , GEM FG12) <i>SFCC Sweeney B</i>	Shim/Kuznetsova/Garcia-Sage et al.
	Breakout 3 GEM Magnetic Reconnection (GEM FG3a) <i>SFCC Sweeney C</i>	Cassak/Runov/Liu/Walsh
	Breakout 4 Cancelled <i>Sweeney D</i>	
	Breakout 5 GEM Inner Magnetosphere FG4 & FG6 <i>SFCC O'Keefe/Milagro/Kearny</i>	Baker/Rouhoniemi/Sazykin et al.
	Breakout 6 Joint Particle precipitation (C15a) <i>SFCC Coronado/DeVargas</i>	Halford/Murphy/Jaynes/Varney/Kaeppeler
	Breakout 7 Cedar Gravity Waves (C11a) <i>SFCC Peralta/Lamy</i>	Bossert/Snively/Fritts
	Breakout 8 Joint Data integration (C29) <i>Eldorado, Zia</i>	Bhatt/Cosgrove/Sanchez/Erickson et al.

	Breakout 9 Joint High latitude geospace system (C14a) SFCC Sweeney E/F	Semeter/Huang/Huang/Zettergren/Nicolls
15:30 - 16:00	<i>Break</i>	
	Breakout 1: Joint Merged Modeling and Ionospheric Plasma(GEM FG10b) Sweeney A	Eccles/Giles/Zou
	Breakout 2 Joint Modeling Challenge (C24b, G FG12) Sweeney B	Shim/Kuznetsova/Garcia-Sage et al.
	Breakout 3 GEM Reconnection/Substorm/Aurora & Polar Cap Dynamics GEM FG3 & FG8 Sweeney C	Cassak/Runov/Liu/Walsh/Murphy et al.
	Breakout 4 Joint Decadal Survey Missions and CEDAR/GEM (C27) Sweeney D	Paxton/Clemmons/Heelis/Pfaff/Rowland
16:00 - 18:00	Breakout 5 Joint Lidar workshop (C16a) SFCC O'Keefe/Milagro/Kearny	Chu/Xu/Yuan/Liu
	Breakout 6 Joint Exosphere/Impact (C17) SFCC Coronado/DeVargas	Krall/McDonald/Burns/Emmert/Sassi
	Breakout 7 Joint Python (C26a) SFCC Peralta/Lamy	Stoneback/Kenzing/Burell
	Breakout 8 GEM ULF waves (GEM FG 11a) Eldorado, Zia	Harteringer/Takahashi/Kress
	Breakout 9 Joint High Latitude Geospace System (C14a) SFCC Sweeney E/F	Semeter/Huang/Huang/Zettergren/Nicolls
18:30 - 21:00	Student dinner and career focus panel <i>Eldorado, Anasazi</i>	
Tuesday 21 June 2016		
08:15 - 09:15	Agency Updates	NSF, NASA, NOAA
	Science Highlight 1 A Summary of Results from Year 1 of the Magnetospheric Multiscale (MMS) Mission (15 min)	P. Cassak (WVU)
09:15 - 10:00	Science Highlight 2 Electrical Connections and Consequences Within the Earth System 2a. Project Overview (15min) 2b. A quasi-static Global Electric Circuit (GEC) Model in WACCM (15 min)	Forbes (CU Boulder) Thayer (CU Boulder)
10:00 - 10:30	<i>Break</i>	
10:30 - 11:30	Portfolio Review	Report, NSF, NRC, Quo Vadis
11:30 - 12:00	Upcoming session Info	
12:00 - 13:30	Lunch on your own CEDAR Student lunch with panel <i>Eldorado, Anasazi</i>	
	Breakout 1 CEDAR GC Coupling MLT (C25a) SFCC Sweeney A	Thayer/Gardner/Swenson/Liu/Liu
	Breakout 2 Joint Modeling Challenge (C24c, GEM FG12) SFCC Sweeney B	Shim/Kuznetsova/Garcia-Sage et al.
	Breakout 3 CEDAR Lightning/Thunderstorms (C19) SFCC Sweeney C	Marshall/Lay
	Breakout 4 Joint Crowd 2 Cloud (C10) SFCC Sweeney D	Miller/MacDonald/Frissell/Kaeppeler
13:30 - 15:30	Breakout 5 GEM Radiation Belt (GEM FG7a) SFCC O'Keefe/Milagro/Kearny	Albert/Li/Morley/Tu
	Breakout 6 GEM Magnetopause,Reconnection/Kinetic Processes GEM FG2 & FG3 & FG13 SFCC Coronado/DeVargas	Zhang/Zong/Ruohoniemi/Murr/Cassak et al
	Breakout 7 Joint Geospace Science (GEM FG5a) SFCC Peralta/Lamy	Borovsky/Lotko/Uritsky/Valdivia/Ridley/Semeter
	Breakout 8 Joint MIT coupling/drivers (C5a) Zia/Eldorado	Connor/Huang/Huang/Korth/Lu/Zhang.
	Breakout 9 Joint Quo Vadis? (C9) SFCC Sweeney E/F	Hysell/Thayer/McIntosh/Wiltberger/Semeter
	Breakout 10 Joint Grand Challenge Initiative-Cusp / Community Engagement Workshop Eldorado, Anasazi	Rowland/Moen/Blix
15:30 - 16:00	<i>Break</i>	
16:00 - 19:00	Poster Session <i>Eldorado Grand Ballroom</i>	
Wednesday 22 June 2016		
08:15 - 09:15 GEM	GEM tutorial 1 System Science Tutorial Eldorado, Anasazi	James P. Smith
08:15 - 09:15 CEDAR	CEDAR Tutorial 1: Impact! When Meteoroids and Satellites Collide SFCC Sweeney E/F	Sigrid Close (Stanford)
09:15 - 10:00 GEM	GEM tutorial 2: On aurora and ionosphere/thermosphere coupling	Marc Lessard
09:15 - 10:00 CEDAR	CEDAR Prize Lecture "Simulating the Ionosphere, one electron at a time" SFCC Sweeney E/F	Meers Oppenheim (BU)
10:00 - 10:30	<i>Break</i>	
10:30 - 11:30 GEM	GEM Tutorial 3: Student invited tutorial	Maria Usanov
10:30 - 11:30 CEDAR	CEDAR Tutorial 2 Expanded Understanding of Thermosphere-Ionosphere-Magnetosphere Processes Using MAVEN's Mars Discoveries	Joe Grebowsky (GSFC)
11:30 - 12:00 GEM	Upcoming session Info	
11:30 - 12:00 CEDAR	CEDAR Science Highlight 1 Capturing acoustic energy input into the upper atmosphere using free flying sensor arrays (15 min) Science Highlight 2c. Efficient Representation of Lightning and Other Transient Processes in the GEC (15 min)	Daniel Bowman Pasko (PSU)
12:00 - 13:30	Lunch on your own	
	Breakout 1 GEM Tail Environment/Modeling GEM FG9 & FG12 SFCC Sweeney D	Wang/Runov/Sibeck/Merkin/Lin et al.

13:30 - 15:30 GEM	Breakout 2 GEM Radiation belt (GEM FG 7b) SFCC O'Keefe/Milagro/Kearny	Albert/Li/Morley/Tu
	Breakout 3 Joint Geospace Science (GEM FG 5b) SFCC Peralta/Lamy	Borovsky/Lotko/Uritsky/Valdivia/Ridley/Semeter
	Breakout 4 Joint MIT coupling/driver (C5b) Eldorado, Zia	Connor/Huang/Huang/Korth/Lu/Zhang
13:30 - 15:30 CEDAR	Breakout 5 GEM FG2 & FG11 & FG13 SFCC Sweeney E/F	Zhang/Zong/Ruohoniemi/Murr et al
	Breakout 1 CEDAR GC Coupling MLT (C25b) SFCC Sweeney A	Thayer/Gardner/Swenson/Liu/Liu
	Breakout 2 Joint SW observations/campaigns (C12) SFCC Sweeney B	Zhang/Zou
	Breakout 3 CEDAR TIEGCM (C30) SFCC Sweeney C	Solomon/Maute
	Breakout 4 Joint Particle precipitation (C15b) SFCC Coronado/DeVargas	Halford/Murphy/Jaynes/Varney/Kaeppeler
	Breakout 5 CEDAR Distributed Networks (C31) Eldorado, Anasazi	Valladares/Martinis/Bullett/Rodriguez
15:30 - 16:00	<i>Break</i>	
16:00 - 19:00	Poster Session <i>Eldorado Grand Ballroom</i>	
Thursday 23 June 2016		
08:15 - 09:15	Cold plasma effects	Phil Erickson (MIT)
09:15 - 10:00	Science Highlight 4 Van Allen Probe	S. Ukhorskiy (Dartmouth)
	Science Highlight 5 Reconnection	B. Walsh (BU)
10:00 - 10:30	Science Highlight 6 LWS TR&T	E. Zesta (NASA GSFC)
	<i>Break</i>	
10:30 - 11:30	Dynamic ionospheric convection: drivers and effects	Shasha Zou (U. Michigan)
11:30 - 12:00	GEM/CEDAR Poster Prize announcement Upcoming session Info	
12:00 - 13:30	Lunch on your own	
12:00 - 13:30	CSSC Lunch	
13:30 - 15:30	Breakout 1 Joint Substorm/Aurora/Polar Cap (GEM FG8a) SFCC Sweeney A	Murphy/Nishimura/Spanswick/Yang
	Breakout 2 CEDAR T-I Interaction (C3a) SFCC Sweeney B	Sassi/Liu/McDonald/Mannucci
	Breakout 3 Joint Superthermal particles (C20) SFCC Sweeney C	Mishin/Hakbari
	Breakout 4 Joint Data Assimilation for Space Weather (C4a) SFCC Sweeney D	Pilinski/Codrescu/Crowley
	Breakout 5 CEDAR Meteorological effects on TI (C23) SFCC O'Keefe/Milagro/Kearny	Goncharenko/Maute
	Breakout 6 GEM Dayside Kinetic Processes/Modeling/Validation GEM FG12 & FG13 SFCC Coronado/DeVargas	Garcia-Sage/Liemohn/Rastaetter/Redmon et al.
	Breakout 7 Joint Empirical Models (C2a) SFCC Peralta/Lamy	Emmert/Weimer/Bilitza
	Breakout 8 CEDAR HAARP (C6) Eldorado, Zia	Bristow/Hysell
	Breakout 9 Joint GC Storms w/o Borders (C28a) SFCC Sweeney E/F	Maruyama/Baker/Sazykin/Mannucci et al.
15:30 - 16:00	<i>Break</i>	
16:00 - 18:00	Breakout 1 Joint Substorm/Aurora/Polar Cap (GEM FG8b) SFCC Sweeney A	Murphy/Nishimura/Spanswick/Yang
	Breakout 2 CEDAR Gravity Waves (C11b) SFCC Sweeney B	Bossert/Snively/Fritts
	Breakout 3 CEDAR Frontier equatorial aeronomy (C1a) SFCC Sweeney C	Hysell/Milla
	Breakout 4 GEM Tail Environment (GEM FG9a) SFCC Sweeney D	Wang/Runov/Sibeck/Merkin/Lin
	Breakout 5 Joint Data fusion & DA (C13) SFCC O'Keefe/Milagro/Kearny	Matsuo/Gjerloev/McGranaghan/Lotko/Zhang
	Breakout 6 GEM ULF Waves/Modeling/Validation GEM FG11 & FG12 SFCC Coronado/DeVargas	Harteringer/Takahashi/Kress/Garcia-Sage et al.
	Breakout 7 Joint EPP coupling (C18) SFCC Peralta/Lamy	Marshall/Bortnik
	Breakout 8 CEDAR Network instrument (C22) Eldorado, Zia	Bhatt/Kendall
	Breakout 9 Joint GC Storms w/o Borders (C28b) SFCC Sweeney E/F	Maruyama/Baker/Sazykin/Mannucci et al.
18:30 - 21:00	Banquet <i>Eldorado Grand Ballroom</i>	
Friday 24 June 2016		
08:15 - 09:10 GEM	GEM Tutorial 4: On ULF wave modeling	Bob Lysak
09:10 - 10:05 GEM	GEM Tutorial 5: On ULF wave observations	Mike Harteringer
08:00 - 10:00 CEDAR	Breakout 1 CEDAR Thermospheric heating/cooling (C7) SFCC Sweeney A	Zhang/Paxton/Mlynczak/Yuan
	Breakout 2 CEDAR TI-Interactions (C3b) SFCC Sweeney B	Sassi/Liu/McDonald/Mannucci
	Breakout 3 CEDAR Frontier equatorial Aeronomy (C1b) SFCC Sweeney C	Hysell/Milla
	Breakout 4 CEDAR Meteoroids & Debris (C8) SFCC Sweeney D	Urbina/Close
	Breakout 5 CEDAR ISR World Day Planing (C32) SFCC O'Keefe/Milagro/Kearny	McCrea/Spanswick/McCready

	Breakout 6 Joint Optical & Lidar observations (C21b) SFCC Coronado/DeVargas	Nossal/Baumgardner
10:00 - 10:30	<i>Break</i>	
10:30 - 11:30 GEM	GEM Tutorial 6: On SWMI	Hui Zhang
10:30 - 11:30 CEDAR	CEDAR Science Highlight 2 First results from two new Fabry-Perot instruments for mapping thermospheric winds above Antarctica (20 min)	M. Conde (UoA, Fairbanks)
	CEDAR Science Highlight 3 GNSS for Remote Sensing of Ionosphere (20 min)	J. Morton (CSU)
	CEDAR Science Highlight 4 Future of the HAARP facility (20 min)	Bob McCoy (U. of Alaska)
11:30 - 12:00 GEM	Upcoming session Info	
11:30 - 12:00 CEDAR	CEDAR Science Highlight 5 Opportunities created for the CEDAR community by the 3 upcoming science missions - ICON, GOLD and COSMIC-2 and discussion	S. England (Berkeley)
12:00 - 13:30 GEM	<i>GEM Lunch on your own</i>	
12:00	<i>CEDAR is Adjourned</i>	
13:30 - 15:30 GEM	Breakout 1 GEM Merged Modeling and Ionospheric Plasma (GEM FG10c) SFCC Sweeney A	Eccles/Giles/Zou
	Breakout 2 GEM Radiation Belt/ULF Waves GEM FG7 & FG11 SFCC Sweeney B	Albert/Li/Morley/Tu/Harteringer et al.
	Breakout 3 GEM Inner Magnetosphere (GEM FG6) SFCC Sweeney C	Yu/Lemon/Liemohn/Zhang
	Breakout 4 GEM Tail-Inner-Magnetosphere (GEM FG1) SFCC Sweeney D	Angelopoulos/Brandt/Lyon/Toffoletto
	Breakout 5 GEM Magnetic Reconnection (GEM FG3) SFCC O'Keefe/Milagro/Kearny	Cassak/Runov/Liu/Walsh
	Breakout 6 GEM SPEDAS Tutorials MMS data SFCC Coronado/DeVargas	Lewis/Angelopoulos
15:30 - 16:00	<i>Break</i>	
16:00 - 18:00 GEM	Breakout 1 GEM Merged Modeling and Ionospheric Plasma(GEM FG10d) SFCC Sweeney A	Eccles/Giles/Zou
	Breakout 2 GEM Radiation Belt (GEM FG7) SFCC Sweeney B	Albert/Li/Morley/Tu
	Breakout 3 GEM Inner Magnetosphere (GEM FG6) SFCC Sweeney C	Yu/Lemon/Liemohn/Zhang
	Breakout 4 GEM Substorm/Aurora/Polar Cap (GEM FG8c) SFCC Sweeney D	Murphy/Nishimura/Spanswick/Yang
	Breakout 5 GEM Magnetopause/Bow Shock/Dayside Kinetic Processes GEM FG2 & FG13 SFCC O'Keefe/Milagro/Kearny	Zhang/Zong/Ruohoniemi/Murr
	Breakout 6 GEM SPEDAS Tutorial updates SFCC Coronado/DeVargas	Lewis/Angelopoulos
18:00 - 19:00	TBD	