
2023 CEDAR STUDENT POSTER CONTEST

Poster Awards

Participation

Tuesday (MLT + IT): 59 posters

Wednesday (IT): 54 posters

Acknowledgments (Tuesday)

MLT +IT Judges (*Titus Yuan, Tzu-Wei Fang*)

Garima Malhotra

Jiarong Zhang

Zishun Qiao

Jaime Guerrero

Ningchao Wang

Dominique Pautet

Yucheng Zhao

Komal Kumari

Jia Yue

Xuguang Cai

Pablo Reyes

Mack Jones

Mark Conde

Sharon Vadas

Pavel Inchin

Ed Mierkiewicz

Nick Pedatella

Brian Harding

Olu Jonah

Rafael Luiz Araujo de Mesquita

Chen Wu

Alex Chartier

Christopher Heale

Shunrong Zhang

Ercha Aa

Acknowledgments (Wednesday)

IT Judges (*Matt Zettergren, Endawoke Yizengaw*)

Shantanab Debchoudury

Matt Young

Daniel Billett

Meghan Burleigh

Federico Gasperini

Andreas Kvammen

Andres Spicher

Yu Hong

Lindsay Goodwin

Leslie Lamarche

Weijia Zhan

Nithin Sivadis

Esayas Shume

Sovit Khadka

Astrid Maute

Romina Nikoukar

Deepak Karan

Jeff Klenzing

Bruce Fritz

Bea Gallardo-Lacourt

Craig Heinselmann

Russell Cosgrove

!Thanks to *Liyang Qian* for helping
us organize and stay on track!

Evaluations

**CEDAR Workshop Student Poster Competition:
1st Round Score Sheet**

Judges grade the poster in 6 weighted categories from 1 (low) to 5 (high)

Student's Last Name _____ First Name _____ Institution _____ Poster # _____

Below Average 1	2	Average 3	4	Above Average 5	Weight	Points
1. Is the title well-chosen and informative? (max 25 points)						
The title is not clearly relevant to the content.		The title mostly conveys the content of the poster.		The title is clearly worded, succinct, and informative.	5	
2. Are the problem and objectives clearly stated, emphasizing the new or original aspects of the work? (max 75 points)						
The problem and motivations of the study are not clearly stated.		The problem and motivations are mostly conveyed, connections to prior work and implications for the science / community are mentioned.		The problem and motivations are clearly stated, with impressive connections to prior work and implications for the science / community.	15	
3. Are the methodology and results clearly presented, including clear figures, graphs, etc., as required? (max 125 points)						
Methodology and results are vague or absent; figures, graphs, etc., are not clear.		Methodology and results are mentioned, but some aspects are unclear or lack relevant information; figures, graphs, etc. are adequate.		Methodology and results are comprehensively and clearly demonstrated, using figures, graphs, etc., beneficially.	25	

Each question ranked 1-5; then a weight applied

Written comments are included at the end of the score sheet

Two rounds of scoring: one without student present, one with... followed by lots of deliberation :)

**Please pick up your evaluations at the
registration desk!**

Tuesday Awards (MILT + IT)

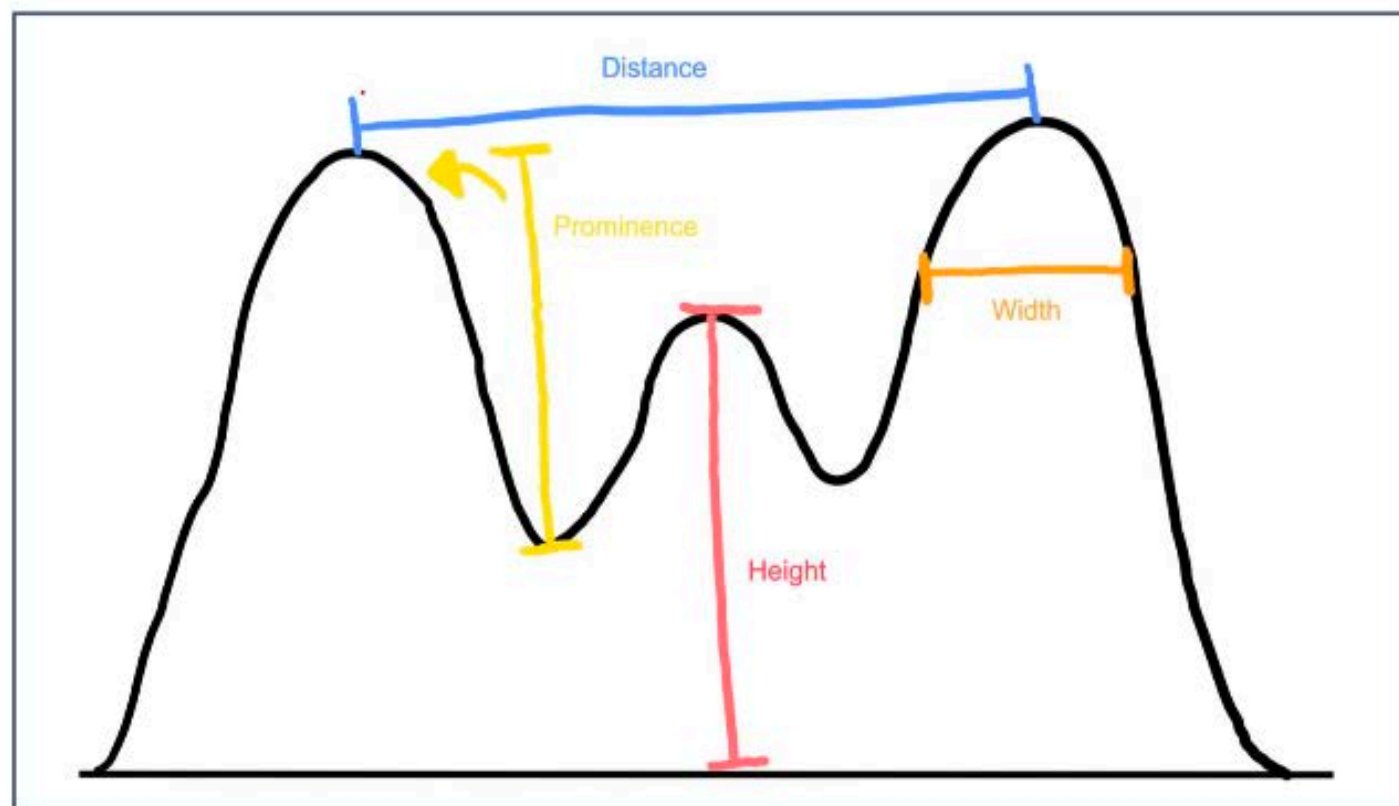
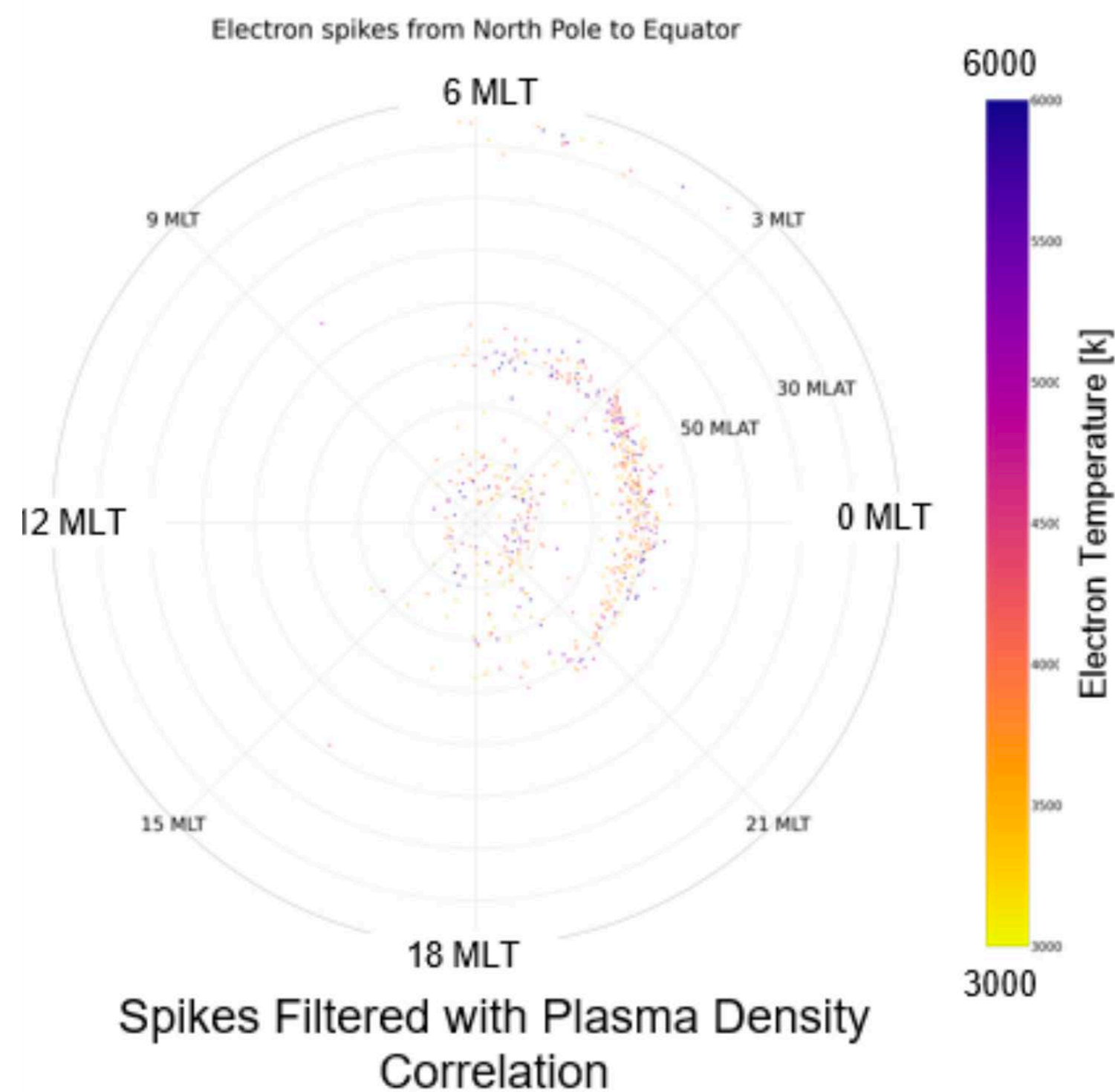


Figure 2: Cartoon representation of parameters used in spike detection route



Undergraduate Award

Author: Harshit Panwar

Title: *Algorithmic Identification of STEVE-SAID Events in Swarm Data*

Institution: NJIT

Poster: MDIT-3



Honorable Mention

Author: Alexander Massoud

Title: Seasonal and solar flux variations in the occurrence of equatorial F-region UHF radar echoes observed by AMISR-14 at the Jicamarca Radio Observatory

Institution: UT Dallas

Poster: EQIT-25

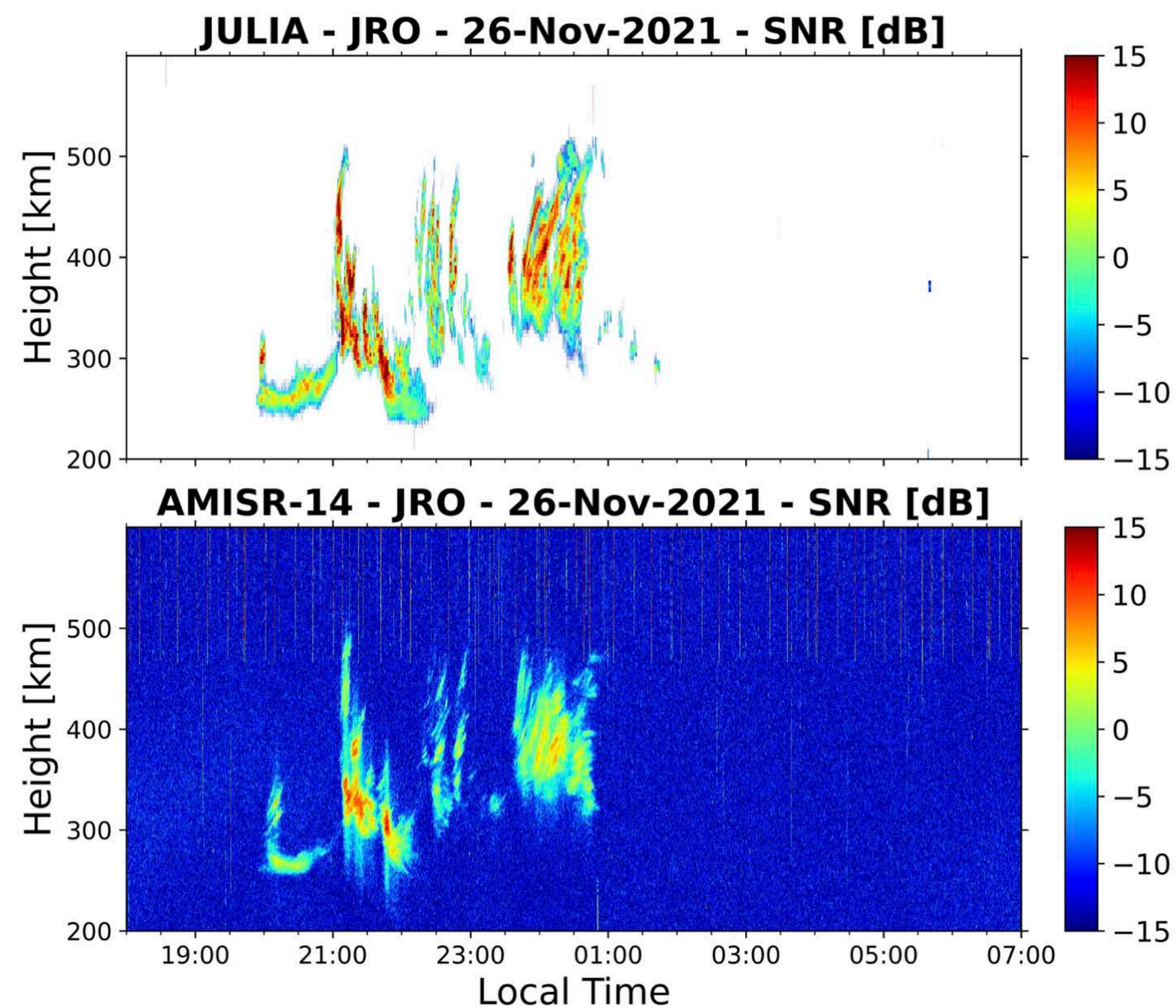


Figure 5. RTI maps for same-day JULIA (top) and AMISR-14 (beam 6, bottom) observations made on 26 November 2021.



Honorable Mention

Author: Diana Swanson

**Title: Density Profiles from
endurance sounding rocket
mission**

Institution: UNH

Poster: POLA-7

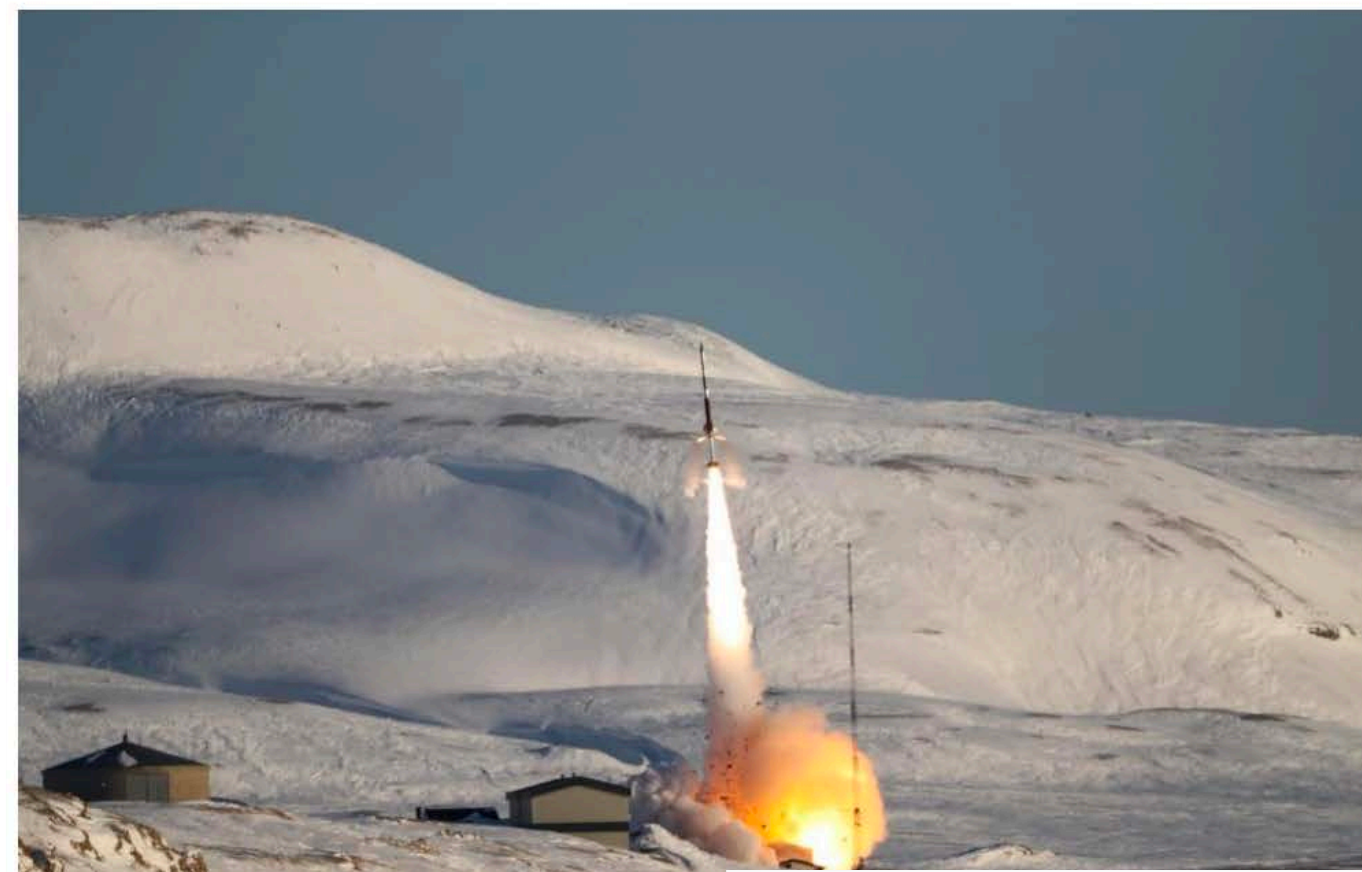
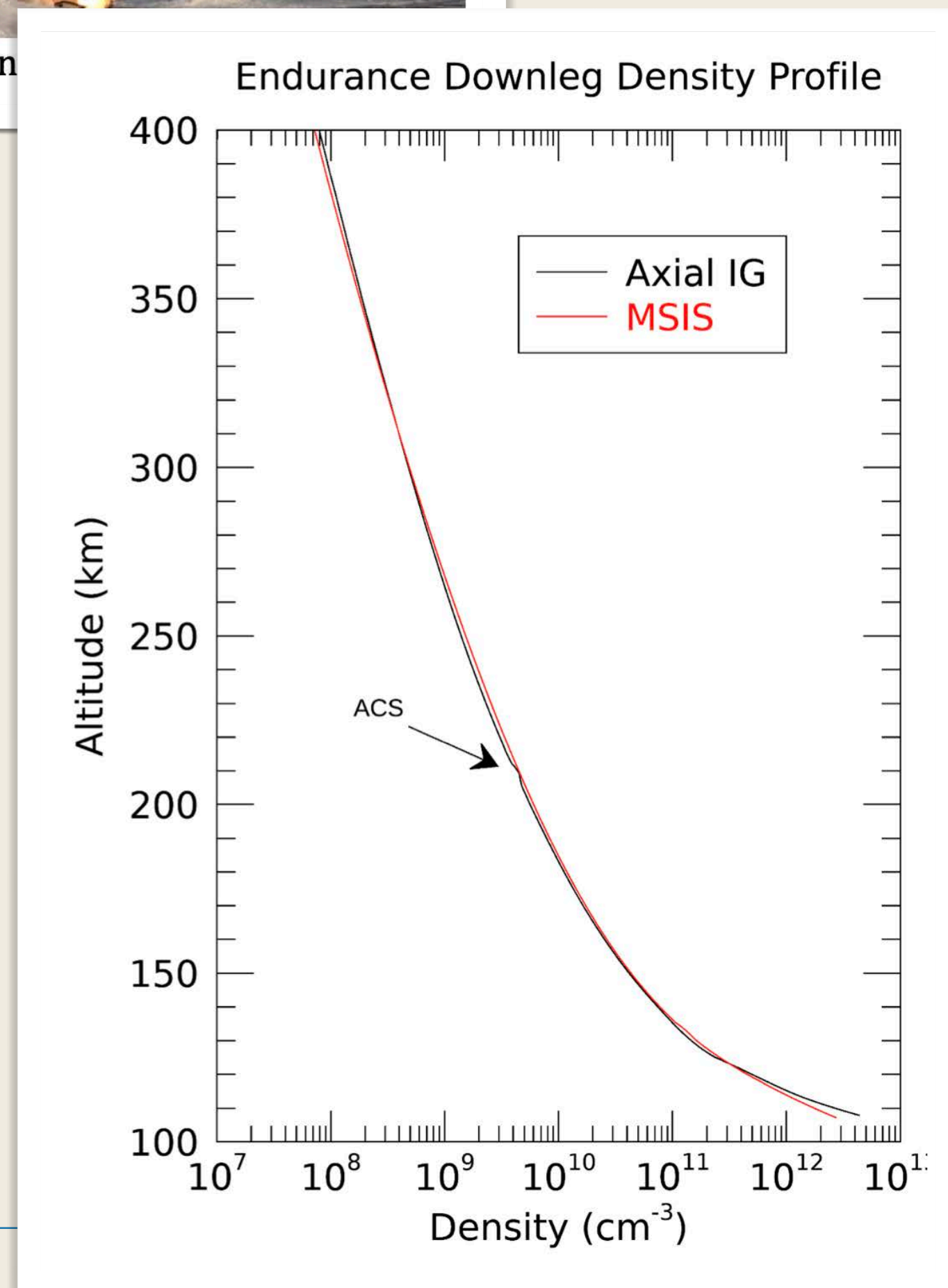


Fig. 1 Enduran



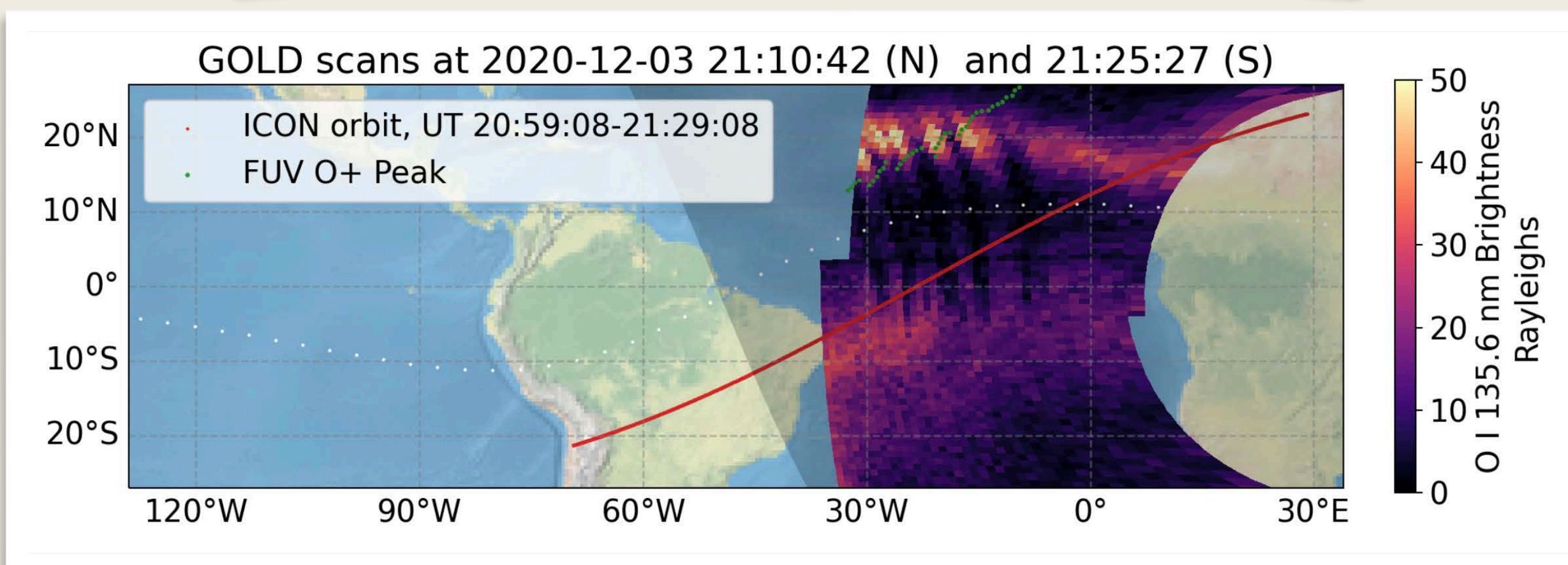
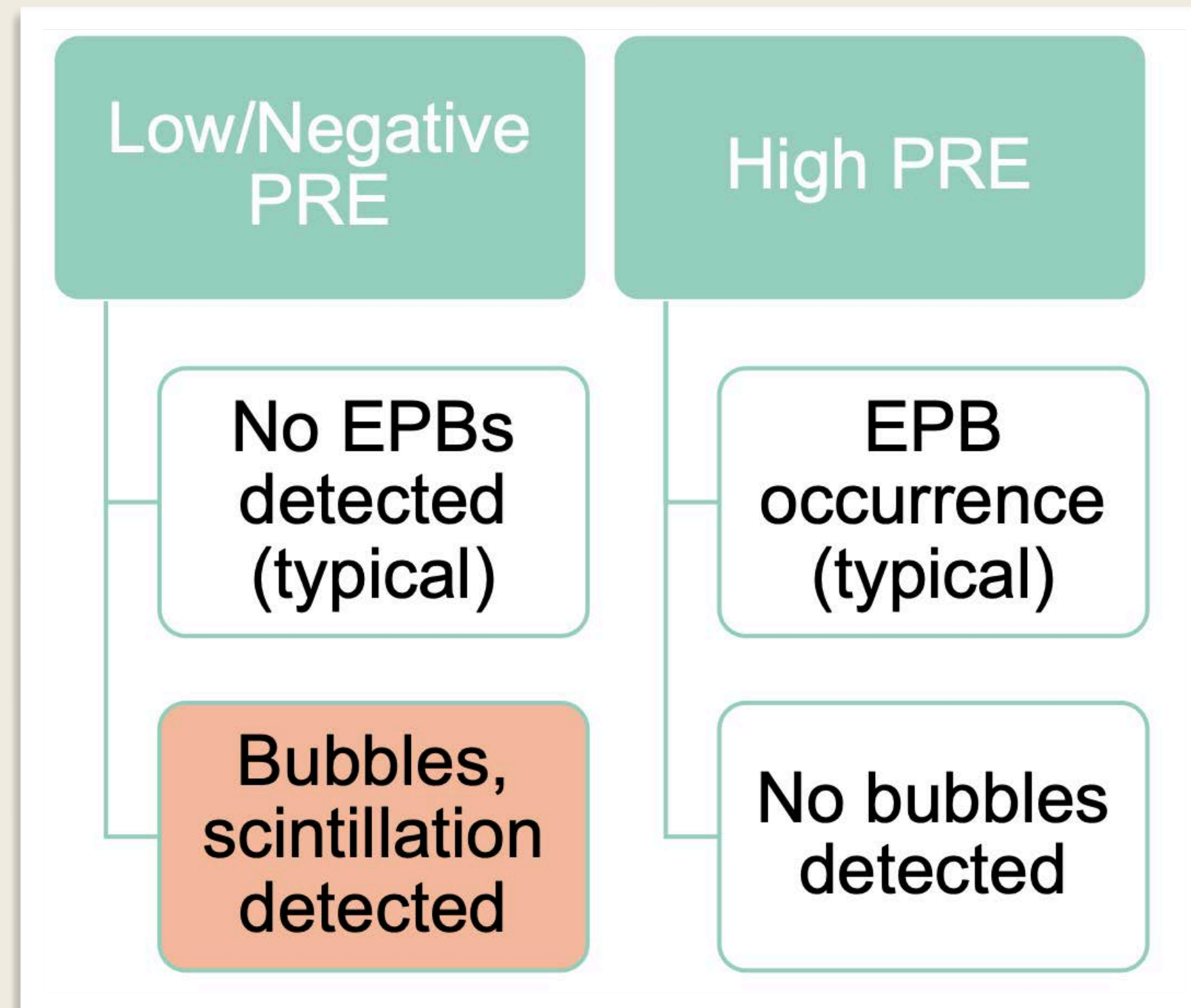
Second Place

Author: Salvador Espinoza

Title: Relationship of the Pre-Reversal Enhancement (PRE) and the Bottomside Ionospheric Structure to Equatorial Plasma Bubble (EPB) Formation

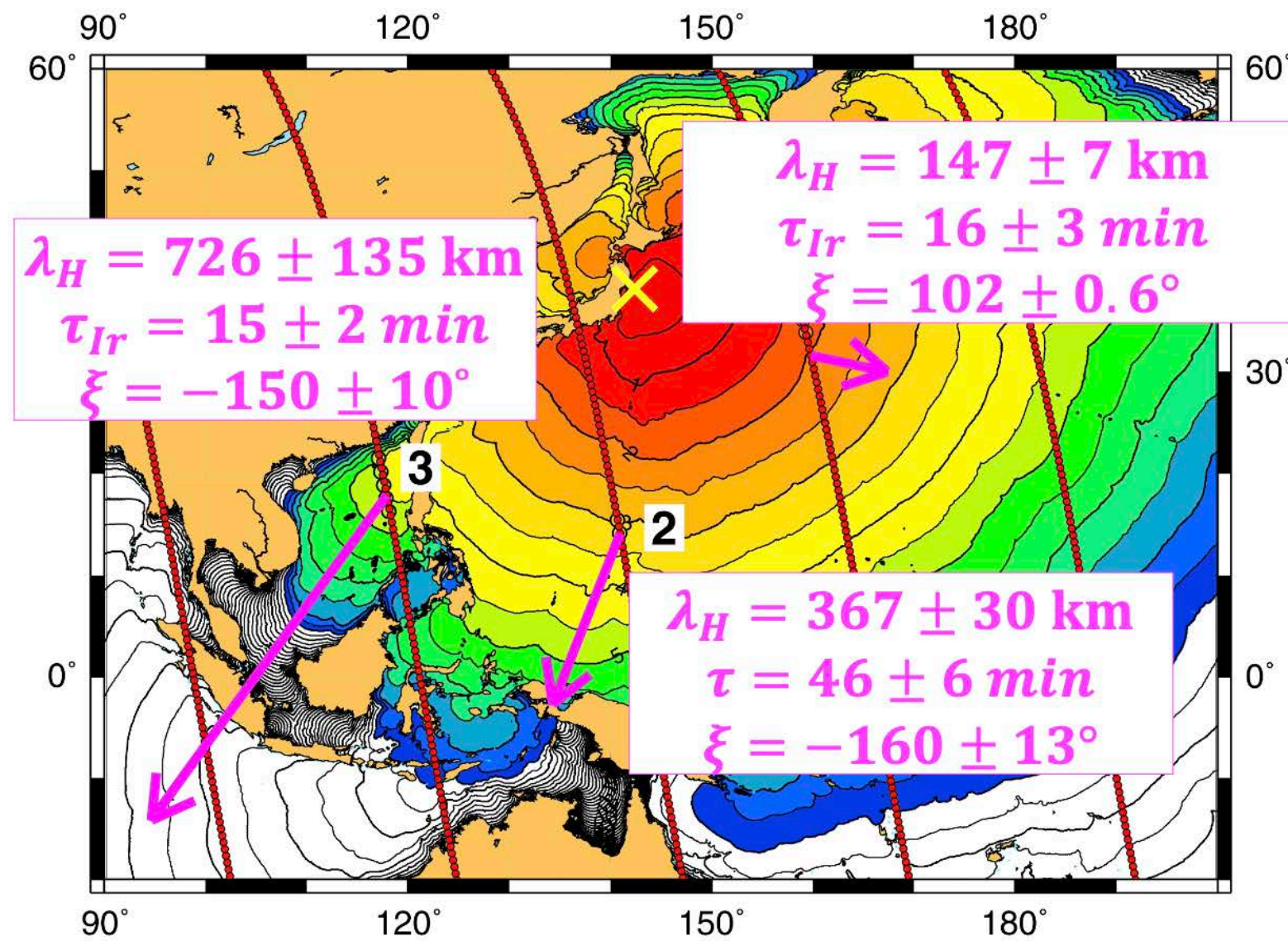
Institution: UT Dallas

Poster: EQIT-20



Tsunami occurrence: 05:46 UTC on 11 March 2011 (x). GOCE observed tsunami-generated GWs in 3 orbits.

(Base map and Tsunami Travel Time are from Figure 1 of Garcia et al. (2014))



First Place

Author: Shuang Xu

Title: In-situ observation of thermospheric gravity waves using the satellites GOCE and CHAMP

Institution: Hampton University

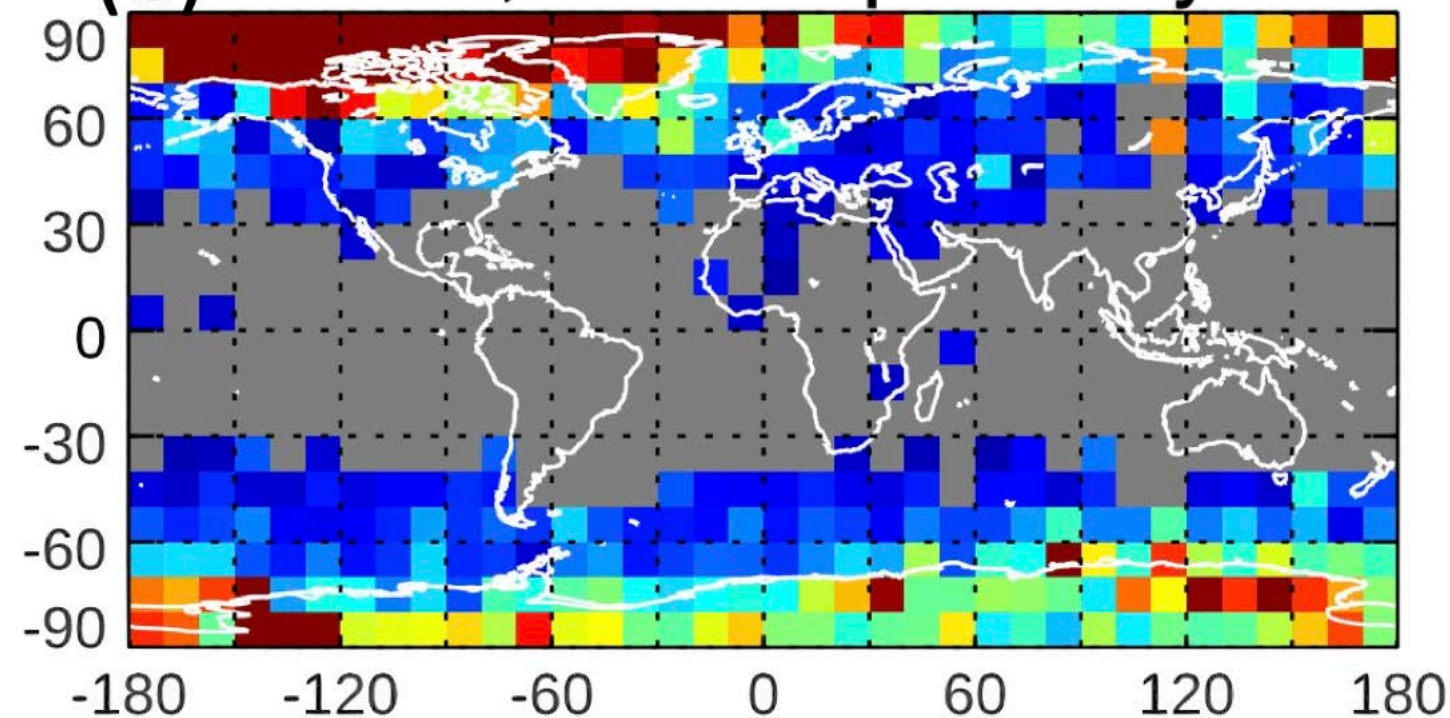
Poster: MLTG-9

Gridded mean of $(\tilde{\rho} \text{ Amp.})^2$, unit $\%^2$



0.0 1.8 3.6 5.4 7.2 9.0

(b) 2011, Mar + Apr + May



Wednesday Awards (IT)

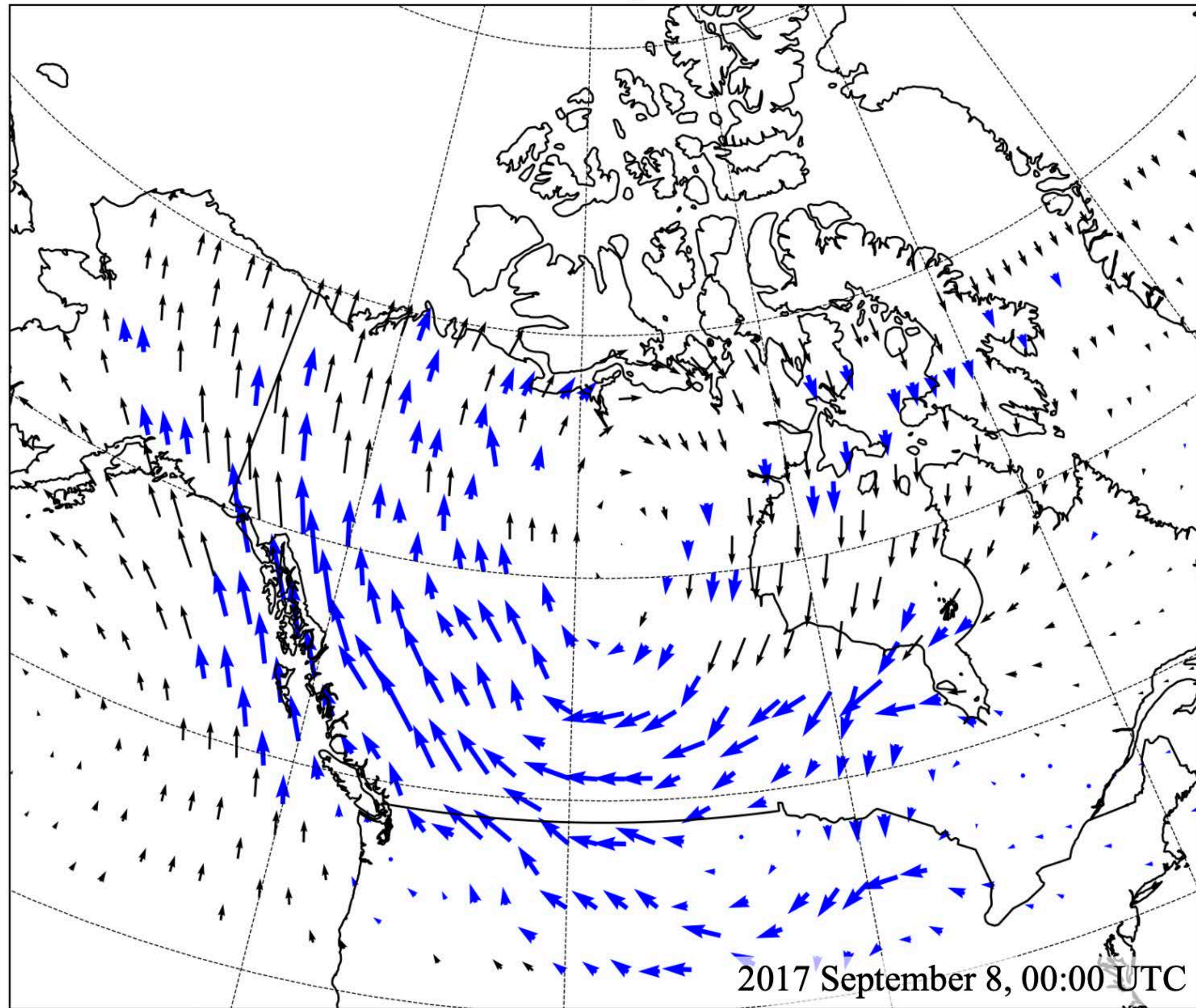
Undergraduate Award

Author: Ryan Caputo

Title: Spherical Elementary Coordinate System for Reconstructing Ionospheric Plasma Flow

Institution: CU Boulder

Poster: ITIT-19



University of Colorado **Boulder**

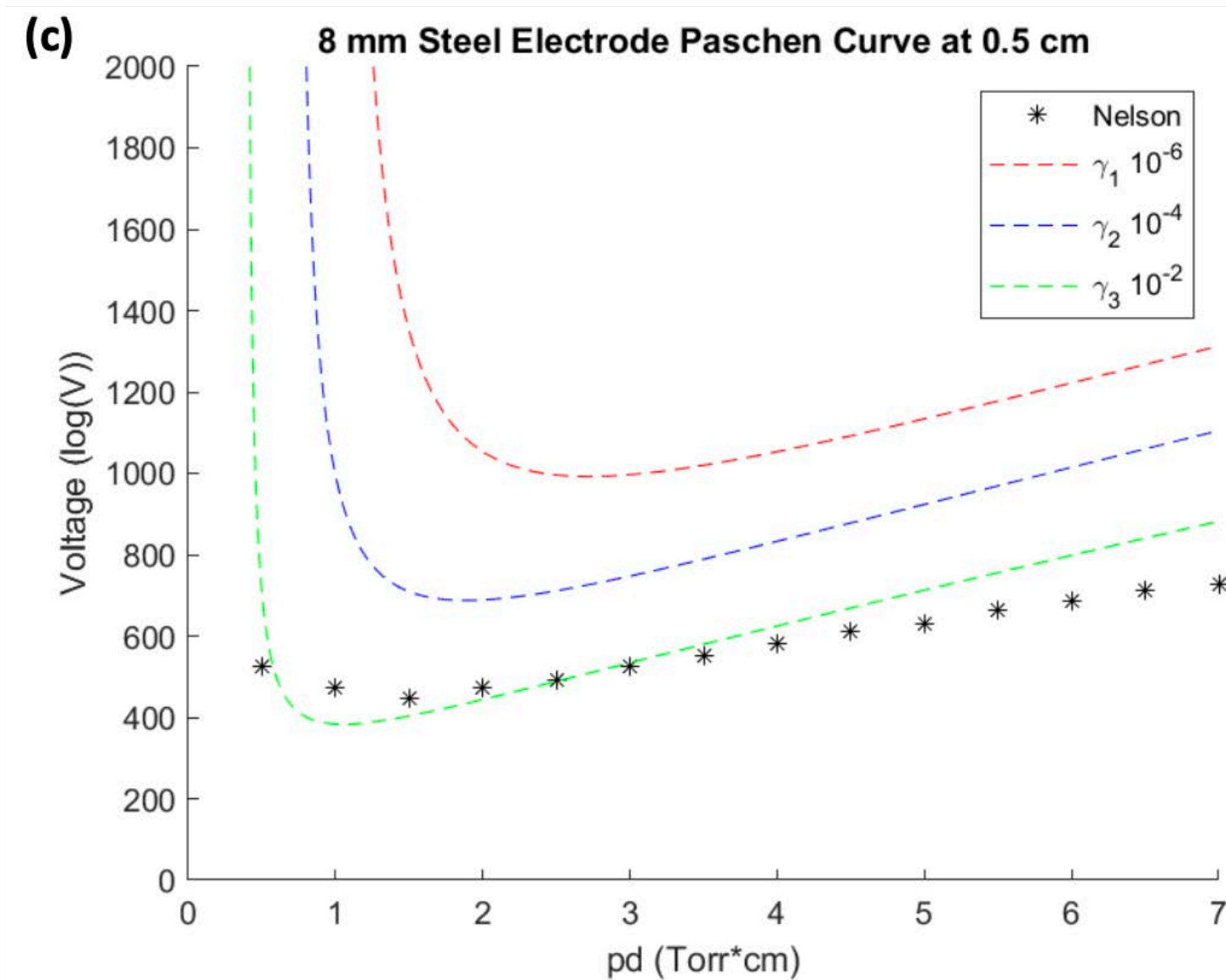
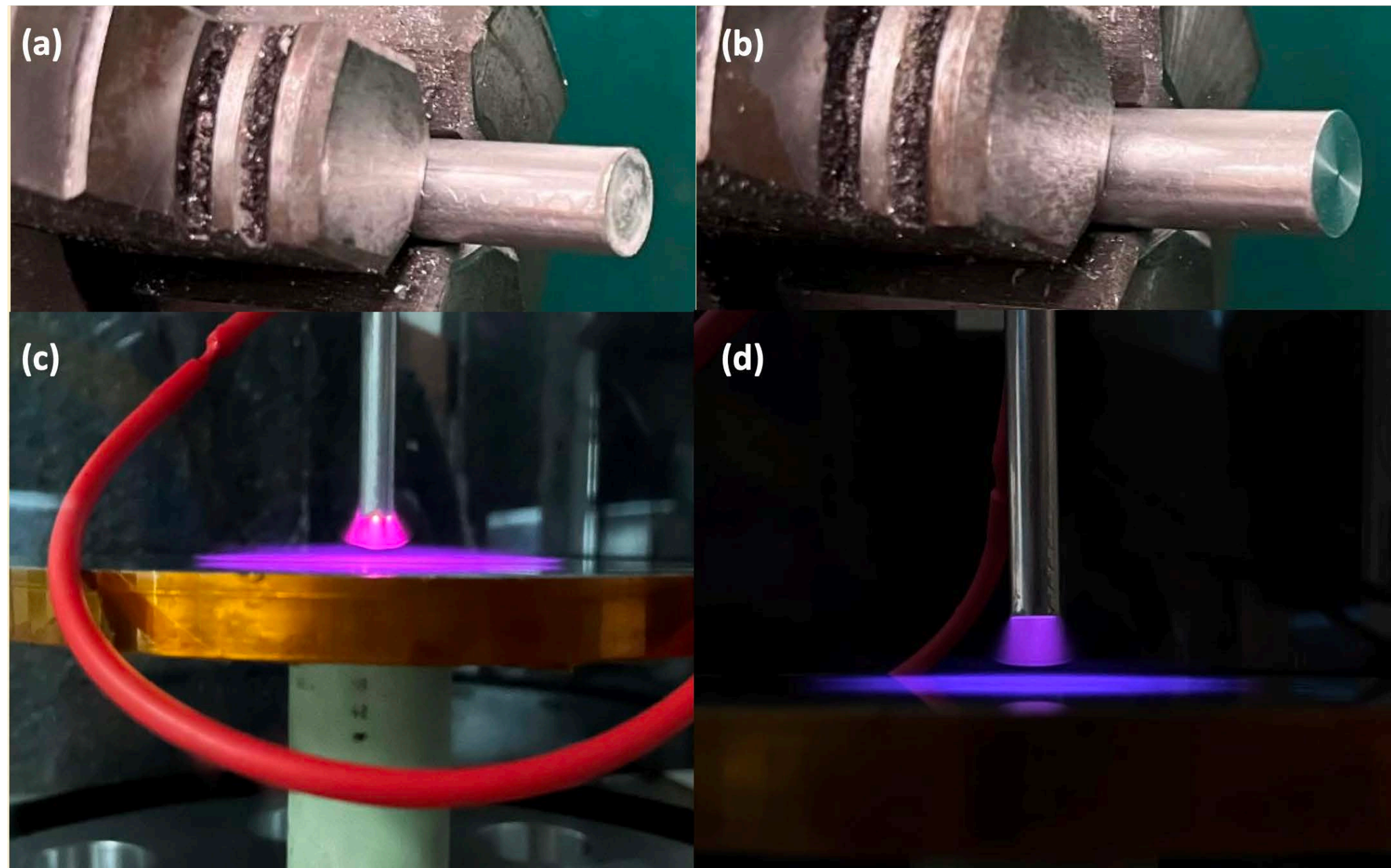
Honorable Mention

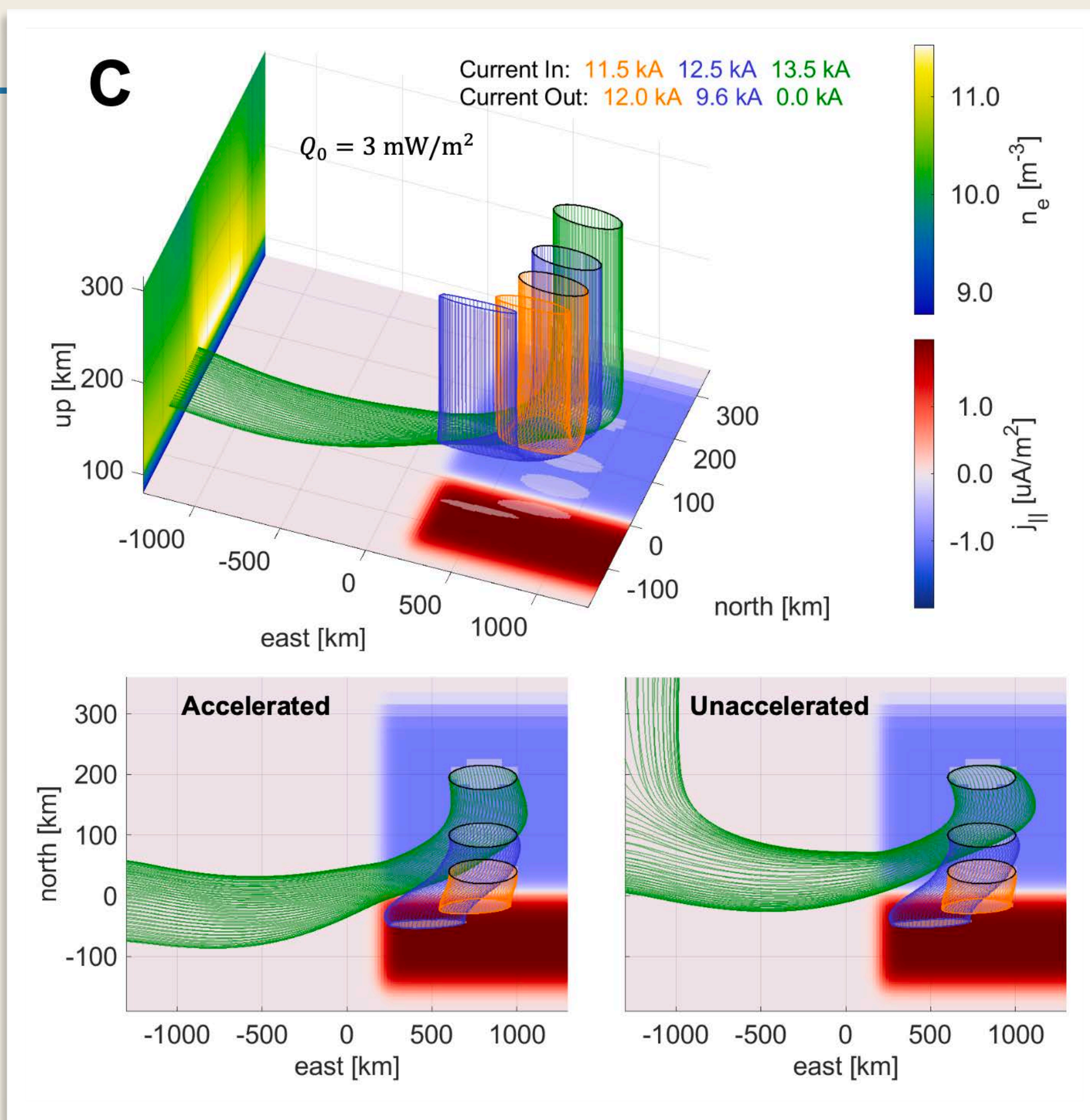
Author: Jared Nelson

Title: *Experimental study of secondary electron emission and its role in atmospheric electricity*

Institution: ERAU

Poster: ITIT-27





Honorable Mention

Author: Jules Van Irsel

Title: Current Continuity in Auroral System Science: Defining Electron Precipitation

Institution: Dartmouth

Poster: MITC-14



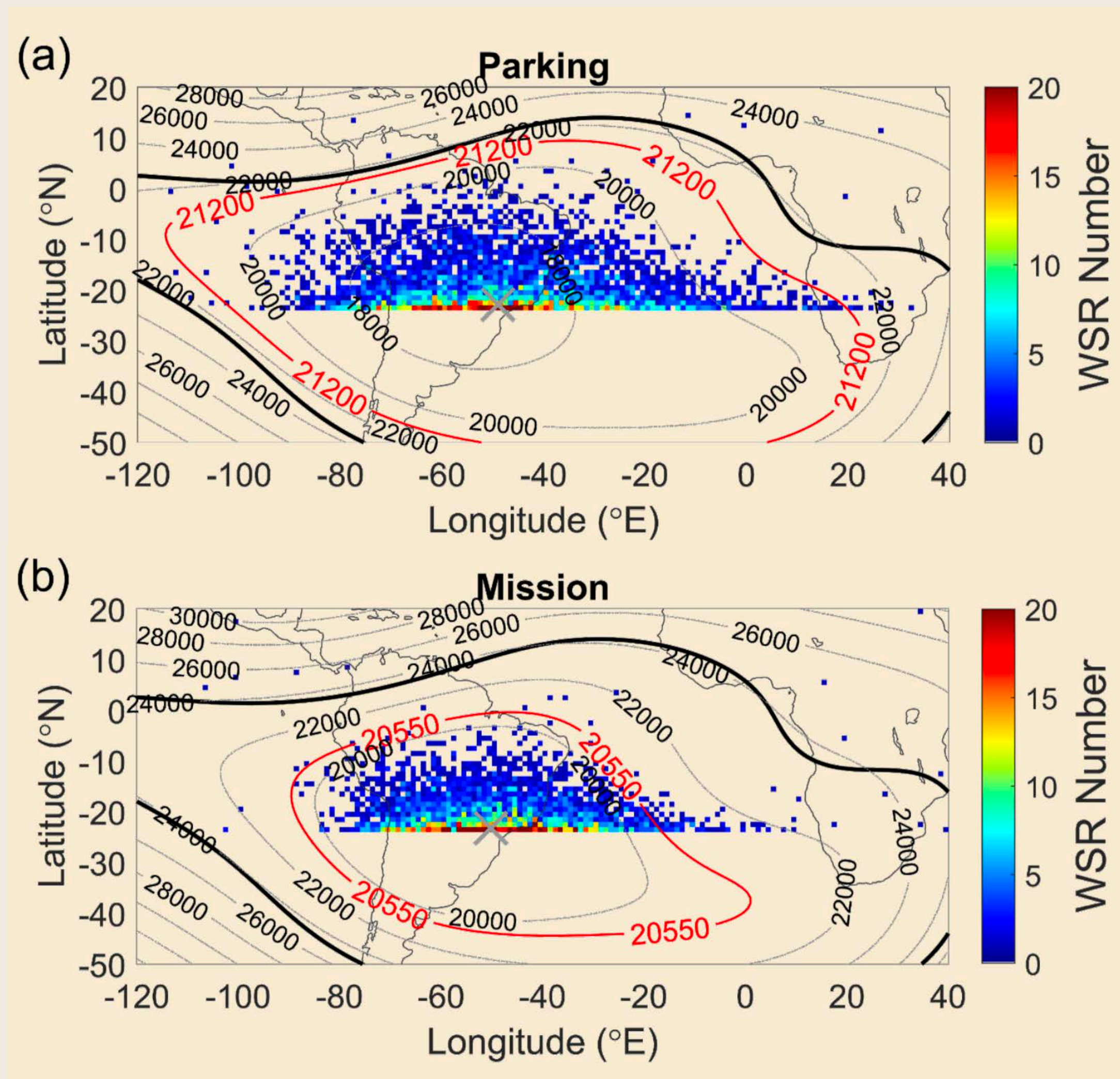
Second Place

Author: Tzu-Hsun Kao

Title: Study of Single Event Effects on Commercial off-the-shelf GPS Receivers Onboard FORMOSAT-7/ COSMIC-2 Constellation in Low-Earth Orbit

Institution: National Central Univ.

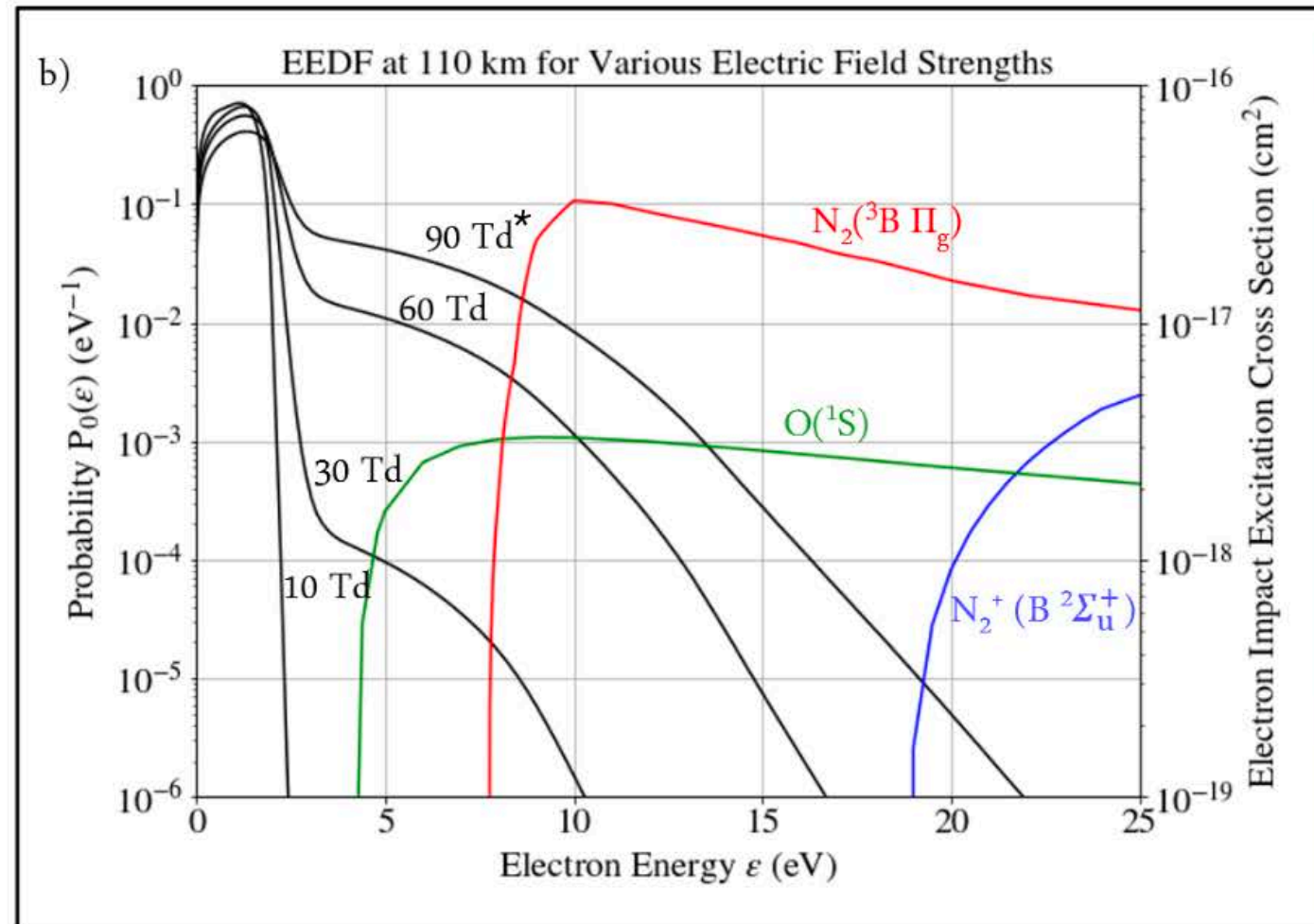
Poster: ITIT-15



Picket Fence Modeling Flowchart

MSIS, IRI, IGRF

a) Model Atmospheric and Ionospheric Profiles



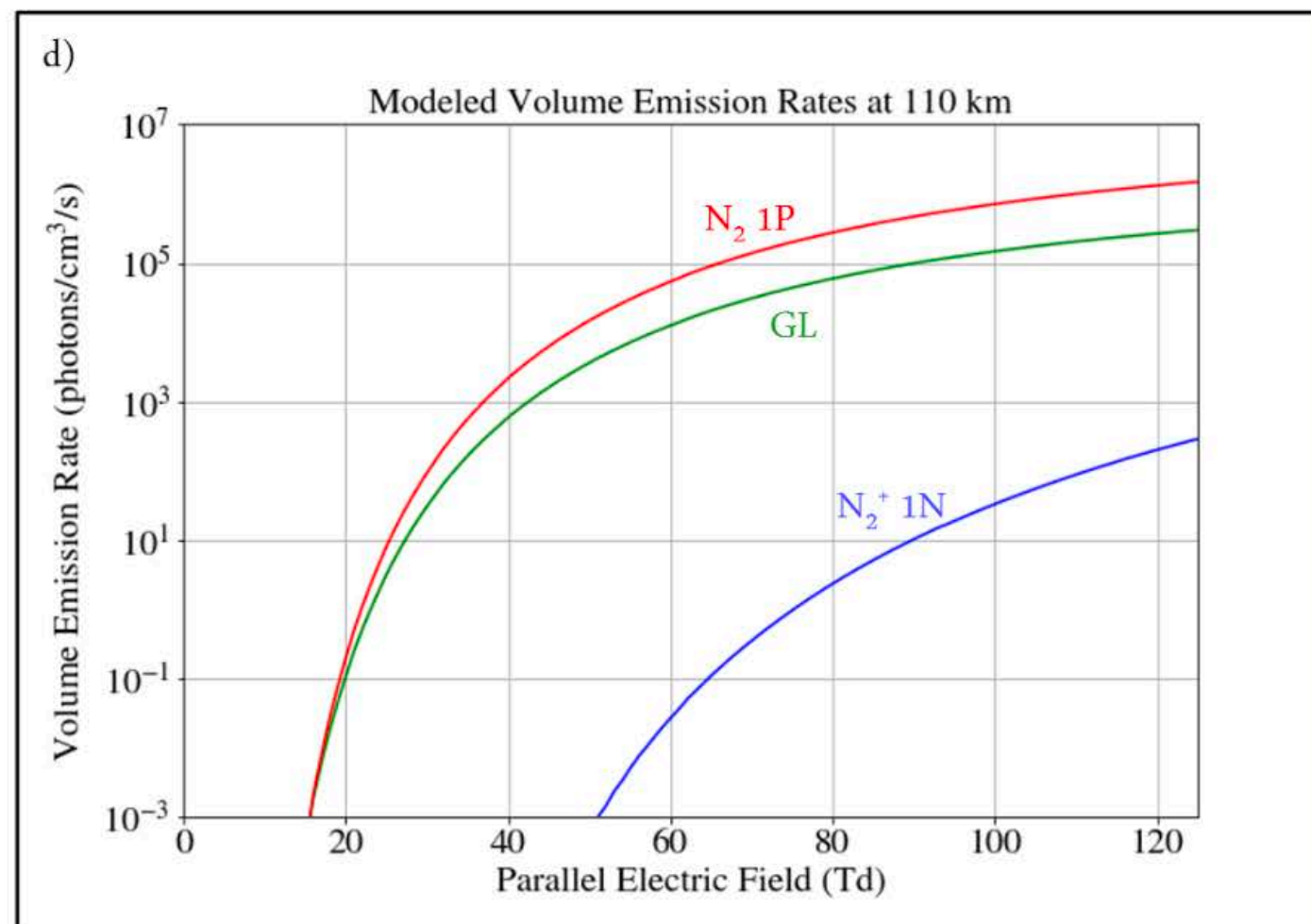
b) EEDF: $P_0(\epsilon)$

Average Collision Rate Coefficients over EEDF

c) Electron Impact Excitation Rates

Steady State Kinetic Model

d) Volume Emission Rates



*Representing electric fields in units of Td normalizes electric field strength to the neutral density ($1 \text{ Td} = 10^{-21} \text{ V m}^2$)

First Place

Author: Claire Gasque

Title: It's Not Easy Being Green: Kinetic Calculations Simulating the Emission Spectra of the Picket Fence

Institution: UC Berkely/SSL

Poster: MDIT-1

Student Poster Awards

Tuesday (MLT+IT)

Harshit Panwar

Alexander Massoud

Diana Swanson

Salvador Espinoza

Shuang Xu

Wednesday (IT)

Ryan Caputo

Jared Nelson

Jules Van Irsel

Tzu-Hsun Kao

Claire Gasque

Posters can be viewed on CEDAR website!
