2024 CEDAR STUDENT POSTER CONTEST

# Poster Awards

# *Participation*

Tuesday (MLT + IT): **53** posters

Wednesday (IT): **52** posters

# Acknowledgments (Tuesday)

**MLT+IT Judges** *(Lindsay Goodwin, Nathaniel Frissell)*

Jiarong Zhang
Federico Gasperini
Lynn Harvey
Chihoko Cullens
Mark Conde
Ningchao Wang
Tyler Mixa
Dominique Pautet
Yucheng Zhao
Shuang Xu
Titus Yuan
Sharon Vadas
Ercha Aa
Jing Liu
Qian Wu
Russell Cosgrove
Don Hampton
Meghan Burleigh
Craig Heinselman
Chen Wu
Wenjun Dong

# Acknowledgments (Wednesday)

**IT Judges** *(Titus Yuan, Matt Zettergren)*

Haonan Wu
Preeti Bhaneja
Erin Lay
Claire Gasque
Ed Mierkiewicz
Shantanab Debchoudhury
Jaime Guerrero
Komal Kumari
Sebastijan Mrak
Devin Huyghebaert
Hong Yu
Pablo Reyes
Cheng Sheng
John Emmert
Diana Loucks
Aimee Merkel
Shibaji Chakraborty
Meers Oppenheim
Esayas Shume
Kristina Lynch
Sovit Khadha
Colin Triplett

!Thanks to *Liying Qian* and *Maggie Costley* 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

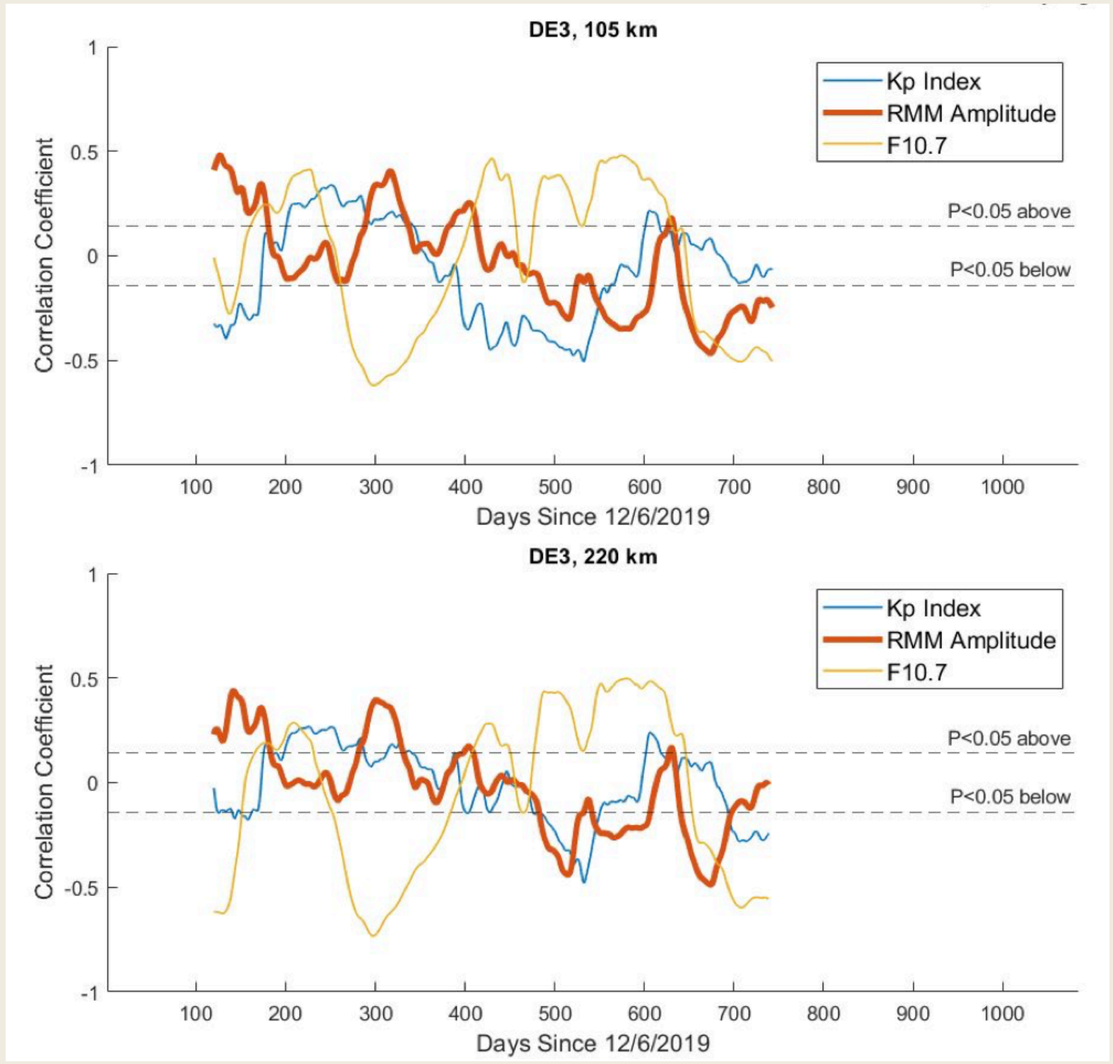
*Written comments are included at the end of the score sheet*

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 (MLT + IT)




# Undergraduate Award

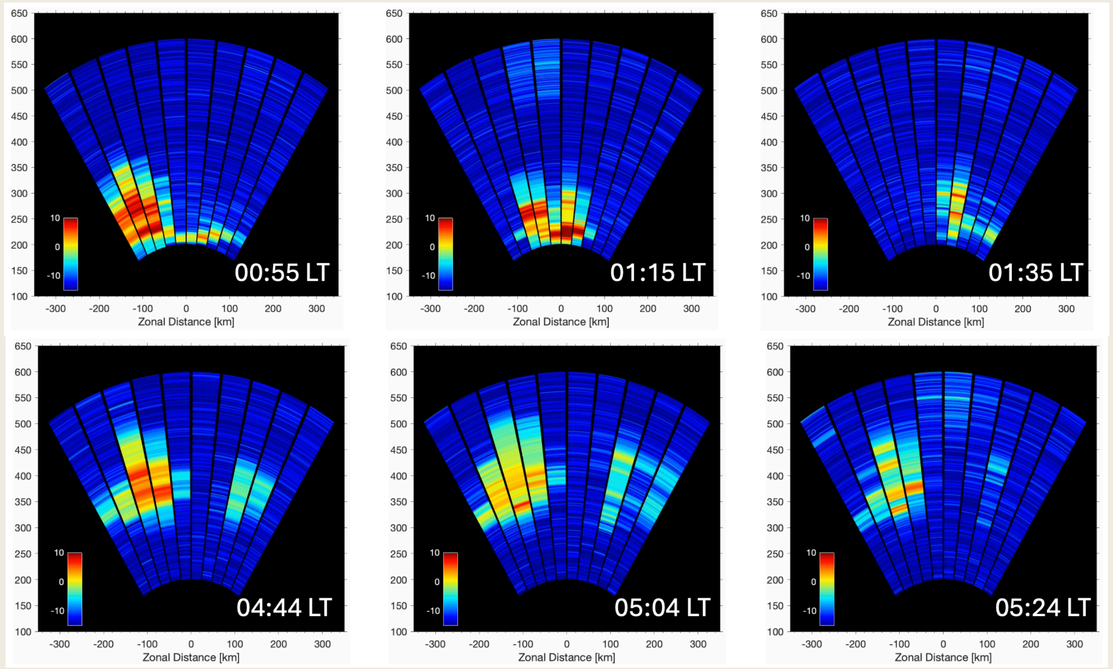
**Author: William McClung**

Title: *Investigating Connections Between Tropical Tropospheric Convection and Thermospheric Intra-seasonal Variability of Wind and Temperature Profiles*

Institution: Orion Space Solutions

Poster: COUP-3

# Honorable Mention



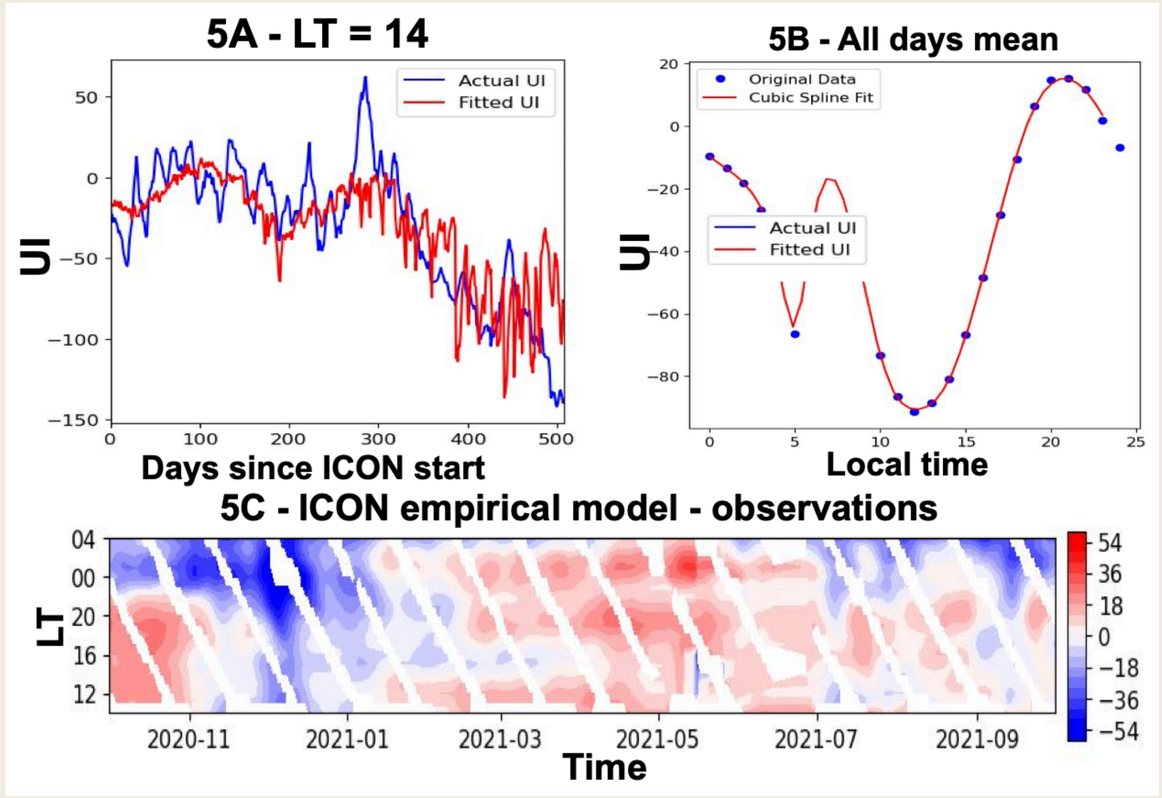

**Author: Alexander Massoud**

Title: *Two-dimensional UHF radar studies of post-midnight ESF at the Jicamarca Radio Observatory*

Institution: UT Dallas

Poster: EQIT-3

# Second Place




**Author: Ben Martinez**

Title: *Photochemistry vs. dynamo as drivers of day-to-day variability in the ionosphere*

Institution: Clemson University

Poster: COUP-2

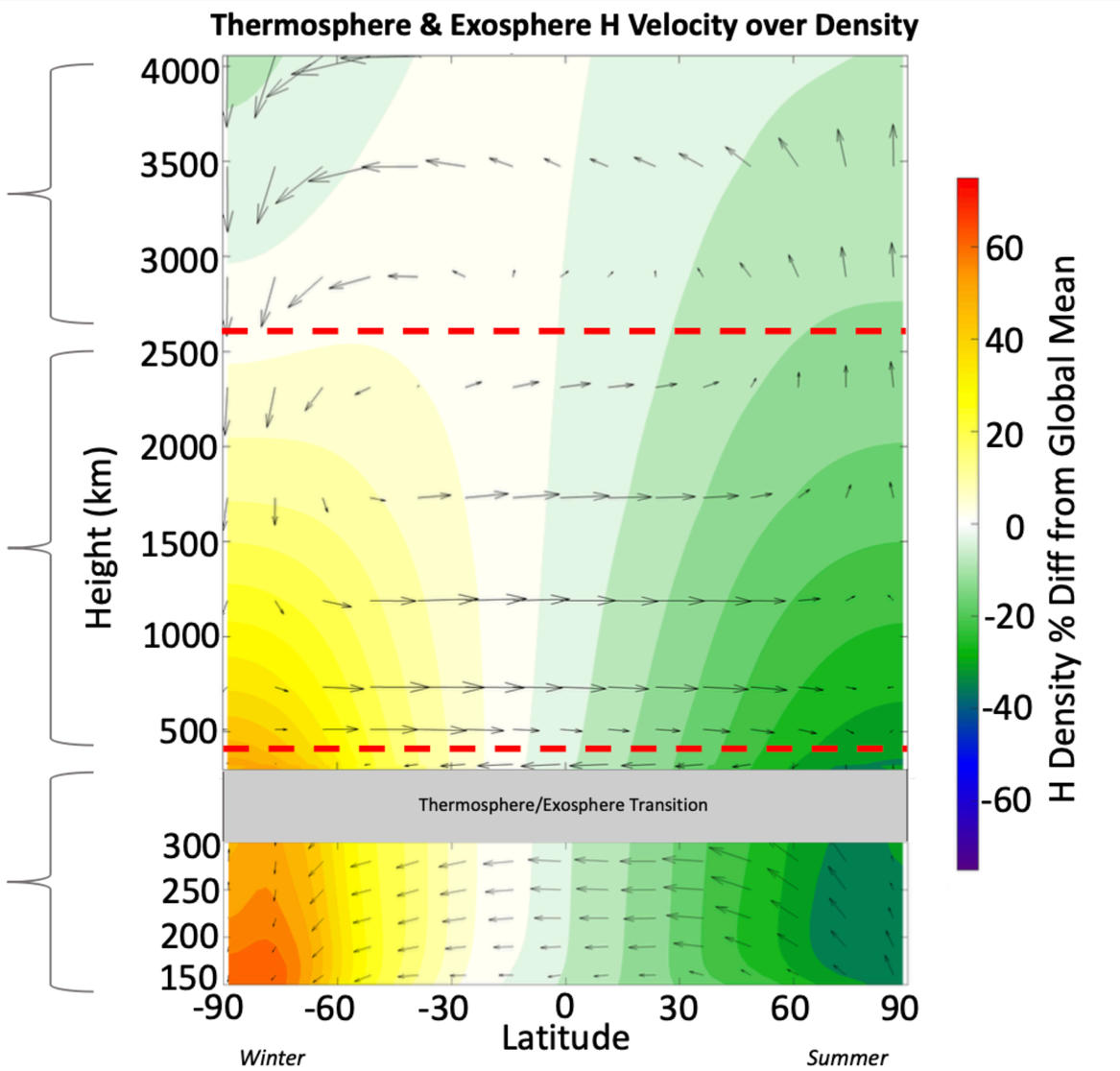



Fig 6. June solstice run. Quiver plot of H velocities over contour plot of H density percent difference from global mean. Red dashed lines separate left/right directionality of H velocity.

# First Place

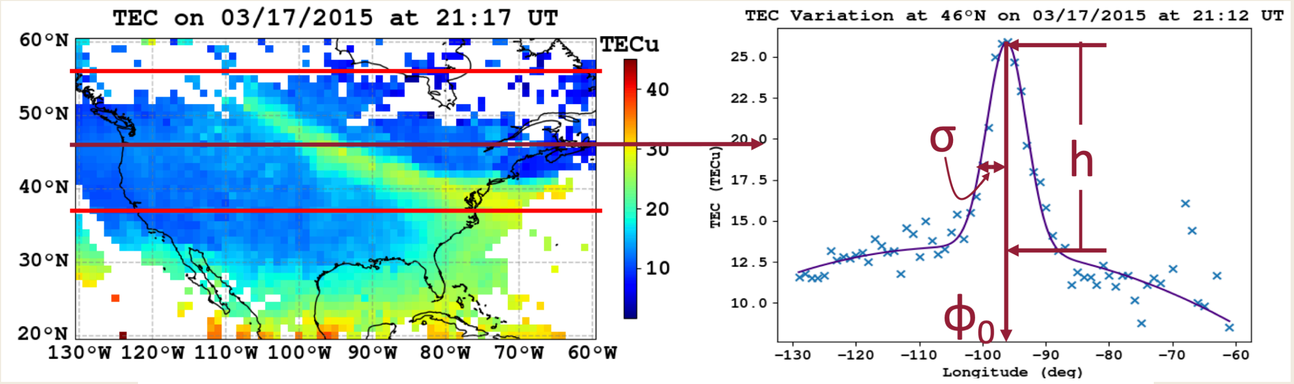
**Author: Sarah Luettgen**

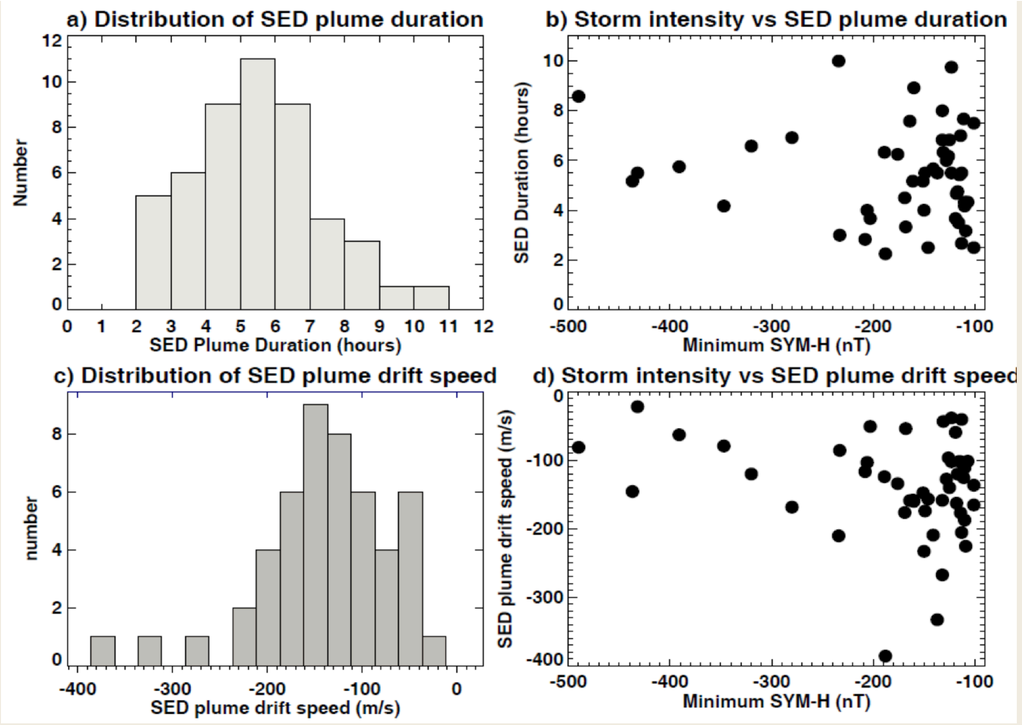
Title: *A Coupled Thermosphere-Exosphere Model: Results and Implications for Hydrogen Transport*

Institution: University of Colorado Boulder

Poster: SOLA-1

# Wednesday Awards (IT)




# Undergraduate Award

**Author: Patricia Dzwill**

Title: *A Statistical Analysis of the Morphology of Storm-Enhanced Density Plumes*

Institution: NJIT and MIT Haystack

Poster: MDIT-1

NJIT New Jersey Institute of Technology

MIT HAYSTACK OBSERVATORY

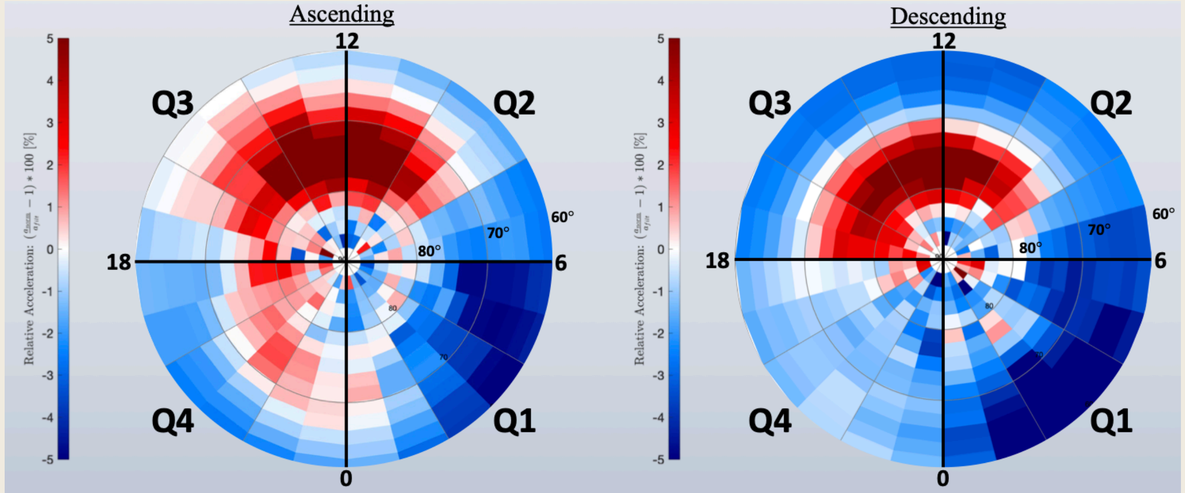



**Figure 2**: Averaged ascending relative acceleration data in the north pole organized in mlat and MLT




**Figure 3**: Averaged descending relative acceleration data in the north pole organized in mlat and MLT

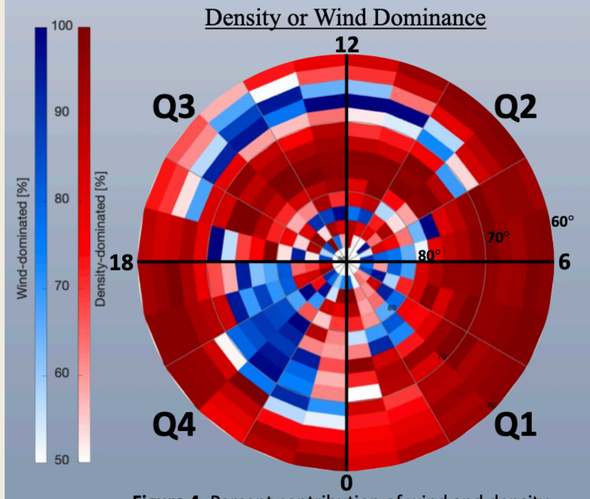



**Figure 4**: Percent contribution of wind and density perturbations in the north pole organized in mlat and MLT

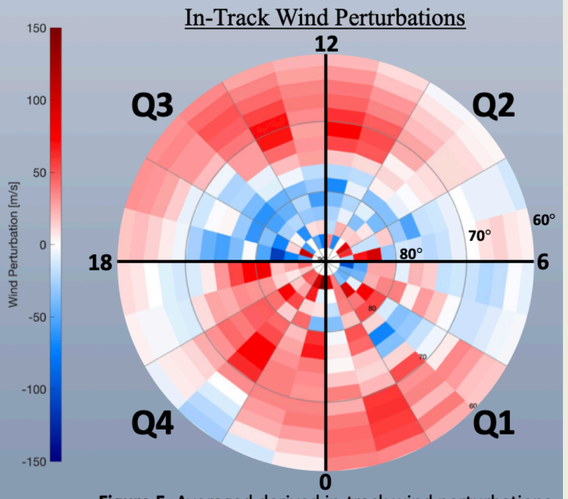



**Figure 5**: Averaged derived in-track wind perturbations (positive = equatorward, negative =poleward)

# Honorable Mention

**Author: Anton Buynovskiy**

Title: *Investigation of Thermosphere Mass Density Perturbations Ascribed by CHAMP Observations*

Institution: University of Colorado Boulder

Poster: ITIT-3

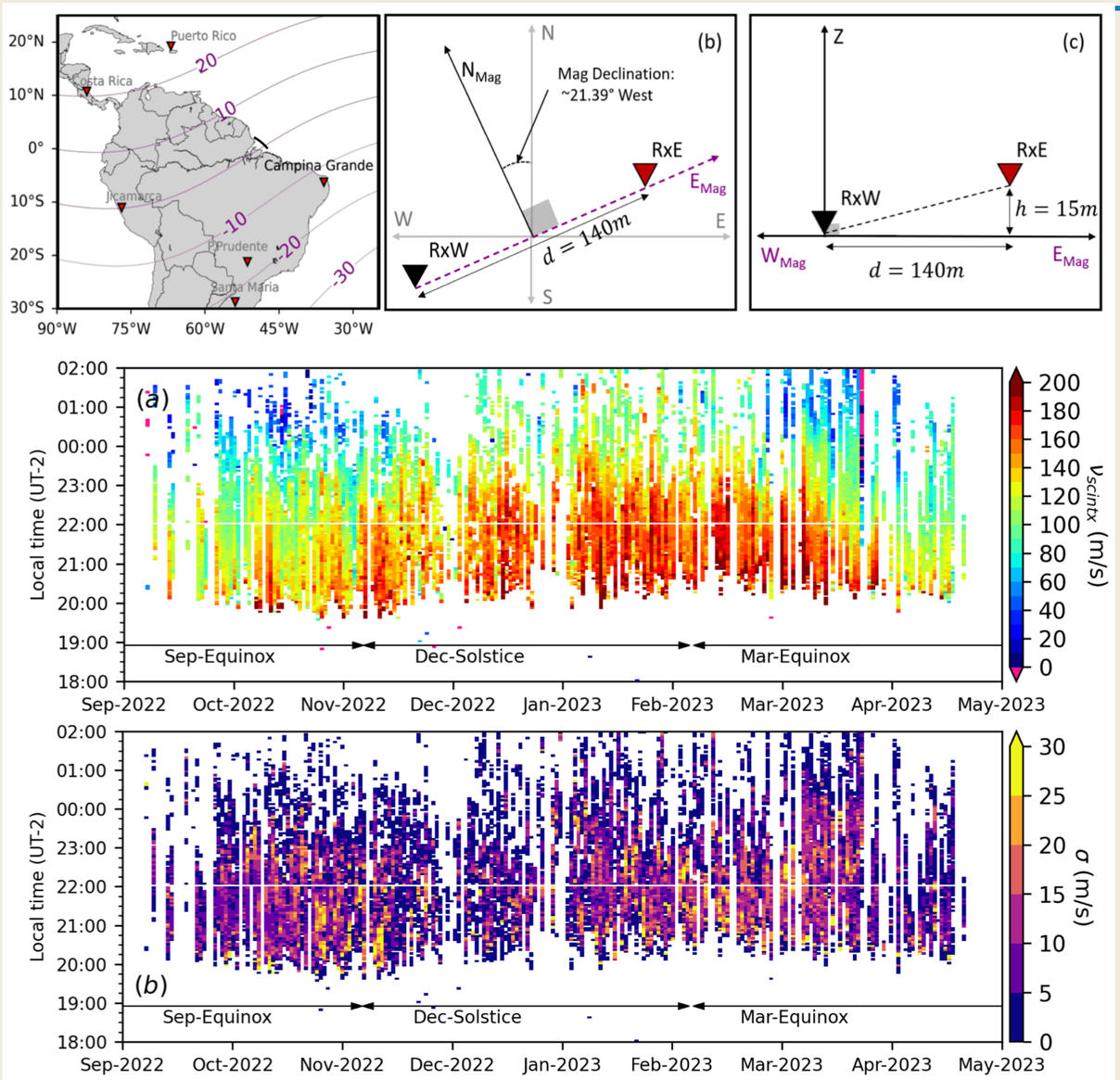



**Fig. 6** – *Panel (a) shows 3-min averaged irregularity drift. (b) Standard deviations for each 3-min average drift. Different seasons determined as +/- 45 days around equinox and solstice days are also indicated.*

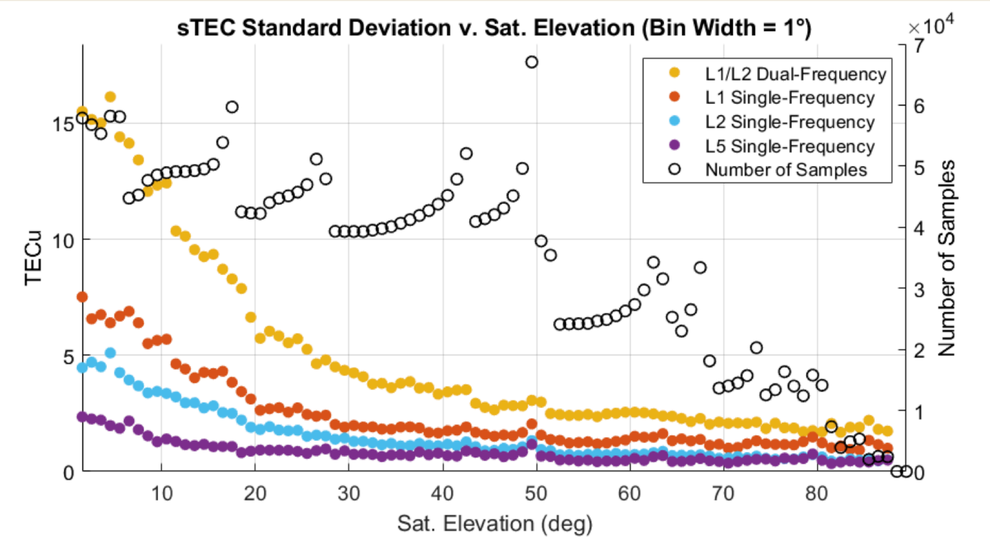
# Second Place

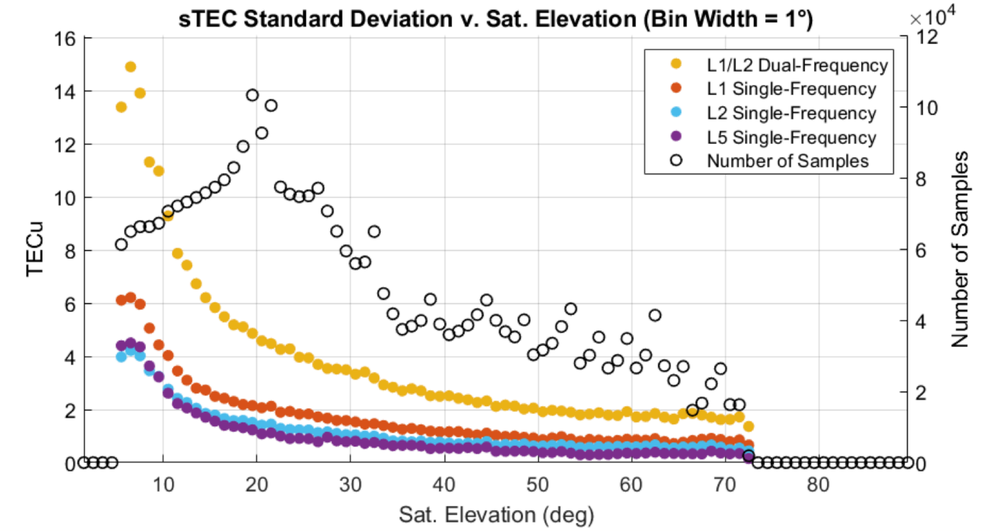
**Author: Josemaria Gomez Socola**

Title: *Estimation of low-latitude irregularity drifts using closely spaced low-cost scintillation monitors (ScintPi) and multi-constellation GNSS signals*

Institution: UT Dallas

Poster: ITIT-6




# First Place

**Author: Madeline Evans**

Title: *Estimating Ionospheric TEC Using Single-Frequency Wideband Low Elevation GNSS Signals*

Institution: The University of Colorado Boulder

Poster: ITIT-4

University of Colorado Boulder

# Student Poster Awards

| *Tuesday (MLT+IT)* | *Wednesday (IT)* |
| --- | --- |
| William McClung | Patricia Dzwill |
| Alexander Massoud | Anton Buynovskiy |
| Ben Martinez | Josemaria Gomez Socola |
| Sarah Luettgen | Madeline Evans |

*Posters can be viewed on CEDAR website!*