# Technical Page

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| Proposal Type: | Regular |
| General Category: | Terrestrial Aeronomy |
| Observation Category: | Thermosphere |
| Total Time Requested: | 32 Hours |

**Proposal Title:** A Study of Horizontal Changes and Short -Temporal Variations in the Meridional Neutral Wind Field of the Lower Thermosphere

*ABSTRACT:*

The neutral wind field plays a vital role in the forming and modification of many neutral and plasma phenomena in the mesosphere and lower thermosphere. Small-scale variations in the horizontal neutral wind field are often used to explain changes in atmospheric conditions, such as regions of neutral atmosphere instability, or in the structure of ionospheric events, such as small altitude variations in sporadic E. The following proposed investigation will explore to what extent small-scale horizontal gradients and short- temporal changes may exist in the meridional neutral wind field. The objective of this study is two-fold: 1) Use the recent addition of the dual beam capability to obtain meridional neutral wind profiles at two different horizontal positions, 2) Investigate temporal variations with a minimum scale size of ten minutes.



| Name | Institution | E-mail | Phone | Student |
|---|---|---|---|---|
| Rebecca L Bishop | Clemson University | rbishop@clemson.edu | 8646566750 | no |



**Service Observing Request**

- [X] None
- [ ] All of the observing run.
- [ ] Part of the observing run.
- [ ] Queue Observing

**Remot e Observing Request**

- [X] No
- [ ] Maybe
- [ ] Yes

## Instrument Setup

430 G 430 CH receiver 430 CH radar

**Atmospheric Observation Instruments:**

Ionosonde

**Special Equipment or setup:** none

## RFI Considerations

## Frequency Ranges Planned

430

This proposal requires coordination with AFTWF within the band 425-435 MHz.