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12-18-2019

## Exploratory Measurements of Large Winds and Shears in the Lower Thermosphere and Their Variability Using an Enhanced Sodium Lidar

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### Recommended Citation

Yuan, Tao, "Exploratory Measurements of Large Winds and Shears in the Lower Thermosphere and Their Variability Using an Enhanced Sodium Lidar" (2019). *Funded Research Records*. Paper 126.

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## Data management Plan

Early lidar data are archived in Madrigal data base at CSU. The access of these data can still go through <http://madrigal.physics.colostate.edu/htdocs/>. For this new program, we have established a new database, where the lidar data will be stored and managed by Utah State University through [https://digitalcommons.usu.edu/all\\_datasets/54/](https://digitalcommons.usu.edu/all_datasets/54/). The Merrill-Cazier Library provides institutional repository services through the Bepress Digital Commons platform [DigitalCommons@USU](https://digitalcommons.usu.edu/) that supports all file types and formats. Datasets are provided with persistent URLs and DOIs (<https://doi.org/10.15142/T33H26>). All files are backed up at multiple sites, including cloud storage. Preservation copies are stored in Amazon Web Services, with redundant storage across multiple facilities and are regularly verified for integrity of data using checksums. To be consistent with the USU Na lidar data in Madrigal data base, the new data will keep the standard temporal and spatial resolutions of 1-hour and 2-km for nighttime lidar observations, while the daytime spatial resolution is 4-km. Higher resolution data are available through the communication with the project PI (Dr. Yuan) when further requests are made by the user. In addition, the existing USU Na lidar website (<https://nalidar.usu.edu/>) provides information on the lidar data availability and operation configurations.

The AMTM data will be processed at USU and archived on the USU Digital Common system as well. It is accessible at: <https://digitalcommons.usu.edu/ai/> Passwords will be provided upon request to the PI. VIPIR data will be achieved in the same manner through Utah State University Merrill-Cazie Library.