First Characterization of Seasonal Variations of Thermosphere-lonosphere Na (TINa) Layers through All 12 Months Using 7 Years of Lidar Observations over Boulder Yingfei Chen¹, Xinzhao Chu¹

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intermittent occurrence of layers had been reported.

understanding of fundamental

The regular occurrence of the pre-dawn TINa layers allows the observations from 2011 to 2017 to quantify the 12 monthly





$$y = A_0 + A_{12} \cos\left[\frac{2\pi}{12}(mon)\right]$$

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