

## Periodic variations in the thermospheric density

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We examined the periodic variation of thermosphere in this study using the thermospheric total mass density at 400km altitude derived from more than 5000 flying objects during 1967-2013, and also those measured by the accelerometer aboard the CHAMP satellite during 2001-2010. Among the periodic variations, we found a prominent 2-3 year period. Correlation of this density variation with QBO and ENSO indices are carried out to investigate possible lower atmosphere driver of this thermosphere variability.

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