

Referee #2

1. 1- We improved the introduction by adding two main paragraph in the first of introduction to describe main goal of the research in order to emphasis on the importance of the study.
- 2- The unclear sentence was rewritten again and was highlighted in the body of the manuscript.
- 3- the novelty of the manuscript was inserted in the new introduction by adding two main paragraph in the first of introduction to describe main goal of the research. We also insert some extra sentences in the body of manuscript in order to emphasis on the importance of the study.
- 4- PW in $\Delta hmF2$ was also previously simulated and PW may exist in whole ionosphere. We cannot describe the mechanism but some numerical simulation with TIEGCM try to describe the mechanism.

“Longitude versus day-of-month variations at PW periods (2 to 20 days) of order $\pm 30\text{--}50\%$ in F-region electron density (N_e , at 325 km) at a particular LT occur as a result of PW-modulated tides.”

Forbes, J. M., Maute, A., Zhang, X., & Hagan, M. E. (2018). Oscillation of the ionosphere at planetary-wave periods. *Journal of Geophysical Research: Space Physics*, 123. <https://doi.org/10.1029/2018JA025720>.

There may be other question about how the wind shear theory can project PW effects on whole TEC values (more than lower ionosphere)? We don't know the clear answer and may other researches can reply to the question and describe the mechanism with simulation in future. We just interpret the zonal mean TEC oscillation based on upward PW wave propagation based on the results.

We also insert some probable mechanism from simulation study of *Forbes et al.* (2018) to clarify the results.

- 5- we improved the results of super-fountain effect and discussed more about the figures.
- 6- we try to improve English mistakes and revised it again. We hope it was satisfying. Please let us know clearly about English mistakes to edit it again (if necessary).