Re-Review of: "Connection between the length of day and wind measurements in the meaosphere and lower thermosphere at mid and high latitudes.
by Sven Wilhelm et al. [AnGeo 2018-15 rev., rcvd Oct. 2018]

My previous comments on the original version criticisms have well answered - but there have been interesting new items added. So I have a few more comments.

According to the theory here, the expansion and contraction of the atmosphere based on the distance from the sun should influence the seasomal changes in the LOD. So the LOD should lag the heating - that is heating causes expansion, the atmosphere slows down (maintaining conservation of angular momentum) and since the earth is turning eastward, that means there will be a westward perturbation in the atmospheric wind. The correlations presented in Table 1. appear to present an ideal way to test this lag. Is there a lag, and if so, is it in the expected sense? There are 10 years of data available; if the theory is correct, some effect of lag on correlation should be seen.

Pg 5 lines 3-8 and equation 7: This is not clear. I take "astronomically determined" to mean D is "siderial" angular velocity, which results in ∼4 min. per day rotation time (∼86164 sec.) less than "mean solar day" (defined as 86400 sec.). In this case the "LOD" as defined by equation 7 will always be negative.
Alternately, if D refers to "solar day" - then there is another daily/seasonal non-rotational factor related to the changing speed of the Earth in its slightly elliptical orbit.

Pg. 7 line 32-34: The statement says an enhanced eastward directed wind is linked to an increased F10.7 index. But presumably increased F10.7 means an expanded atmosophere which means slower atmospheric rotation, i.e. reduced eastward?

Much argument is expended in this paper to show that seasonal changes in LOD and zonal wind are expected due to the effect of changes in Sun-Earth distance on the atmosphere. In the abstract it should be stated clearly, as it is in the conclusion (Pg. 12, line 10,11) that these seasonal changes were not found in the wind and LOD data probably because of competing effects, such as ... (that is, unless lagged correlation show anything interesting.)
Minor typos etc.:

Pg. 8 line 5: "... is higher than during ... "

Pg. 9 line 20: "explicitly"

Pg. 11 line 20: ."... zonal wind agrees with the relation ..." ?

Pg. 12 line 9: ".... between these ..."

Pg. 12 Line 14: "Additionally, ... "
Pg. 12 line 16: "Further we only compare ..."

Pg. 12 line 17: "... effects which drive ..."

—///—