REVIEWER # 2

The paper by Conte et al. investigates the effects of mesoscale motions in the MLT and presents the climatology of the transport of vertical momentum fluxes, the horizontal divergence and the relative vorticity. The authors estimate these parameters from multistatic specular meteor radar measurements by applying techniques developed in the past 10 years.

This is a well written paper that deserves to be published. I just have a few observations that should be addressed prior to publication.

We kindly thank this reviewer for taking the time to read and revise our manuscript. Below, a detailed response to every point raised by this reviewer.

Regarding the vertical thickness layer of 2 km to estimate horizontal wind. Is there any superposition between adjacent layers?

R. Yes. Every wind estimate is calculated in an altitude bin of 2 km, centred around the given altitude. For example, for the wind estimate corresponding to 90 km, we use the meteors detected between 89 and 91 km of altitude. Since the bin is shifted 1 km, the next wind estimate will be calculated using the meteors detected between 90 and 92 km. This is a well-established procedure to estimate mean winds using meteor radar measurements (see, for example, Hocking et al. 2001, and Holdsworth et al. 2004).

page 6, line 166: regarding the gaps in the wind, the authors state that they found 13 hourly gaps in the data and filled them with linear interpolation. How are these gaps distributed? What is the longest sequence of missing data?

R. The 13 gaps are not consecutive, so the longest sequence of missing data is just one hour. That is what we tried to say with the word "hourly". Nevertheless, we now explicitly say that the gaps are not consecutive.

Are the units of momentum flux meters*Pascal? The dimension of momentum flux ρ<u'w'> in the metric system is kg*m-3*ms-1*ms-1. How could it end up in m*Pa?

R. No. The momentum flux units are in milli Pascals (mPa).

In the discussion session, the authors talk about the "number of links" that the radar systems have. Nevertheless, it is not clear what they are. Please, spend a few words to clarify it.

R. By "link", we mean every transmitter – receiver pair for a given network. For example, the multistatic meteor radar network we are currently operating in southern Patagonia

(SIMONe Argentina) has one transmitter and five receivers. Hence, that network comprises 5 links. We have added to the manuscript a short sentence to clarify this point.

Minor

In text, the authors use the words “fall” and “autumn”. I suggest the choice of one of them.

R. Thanks for this comment, but we prefer to keep using both words to refer to this season of the year.

page 5, line 357-358: “…thus the horizontal wind horizontal gradients still be influenced by the rotation of the Earth…” I feel some is missing.

suggestion: thus the horizontal wind horizontal gradients still **can/could** be influenced by the rotation of the Earth.

R. Yes, the word “can” is missing. Thanks for finding this typo. We have corrected it.