We thank very much the editor and the two reviewers for their very detailed and helpful comments. We have addressed all comments below and are willing to submit a manuscript taking into account all comments as explained in the answers to comment below.

Many thanks again for your help.

Review 1

I would like to compliment the authors for having prepared such a well-written paper and I strongly recommend the paper for publication after a very few adjustments/corrections. In general, the interpretation and the discussion of results is sounding and easy to follow. All figures are clear (see my only comment on Fig.4).

>> Many thanks for this general comment

I only have one comment/question about the interpretation of the results. Why d-excess has been (almost) left out of the discussion? The authors clearly state that during the depletion events both $\delta^{18}O_v$-q and $\delta^{18}O_v$-dexcess correlations break down. But how d-excess signal looks like during the event? If the d-excess doesn't change much, it would provide support to the hypothesis of rain-vapor interaction close to equilibrium than to rain-evaporation and to atmospheric subsidence, since evaporation of raindrops and free tropospheric air are associated with high d-excess.

>> Many thanks for this suggestion. d-excess of water vapor is indeed not changing much over the $\delta^{18}O_v$ excursion. We thus agree that it may not be explained by strong rain drop evaporation at the surface and it is also in agreement with the relatively high relative humidity at the surface. We thus agree that it is then in better agreement with rain-vapor interaction close to equilibrium for the acquisition of this signal. Such rain-vapor interaction is indeed indicated on our summary on Figure 8 and we will add in the manuscript that the stable d-excess signal supports this interpretation.

Minor comments:

L149 Please rearrange number of gasses (4) and monitoring years (3).

>> We propose this new sentence:

"From 1980 to 2011, CO_2 and CO species have been monitored by non-dispersive infrared measurements (NDIR) systems. From 2012, dry air mole fractions of these two greenhouse species are currently measured by cavity ring down spectroscopy (CRDS) using commercial Picarro analyzers model G2401. Methane (CH_4) and nitrous oxide (N_2O) are also measured continuously using the same instrument model, but since 2014 and 2018 respectively, while Hg species are monitored since 2012 (see section 2.2.2.)."

L187 STP conditions: 273.15 K

>> Thank you, this will be changed.

Figure 4 Including a legend and reducing the size of the caption could improve readability.

>> Thank you, we propose the updated figure:

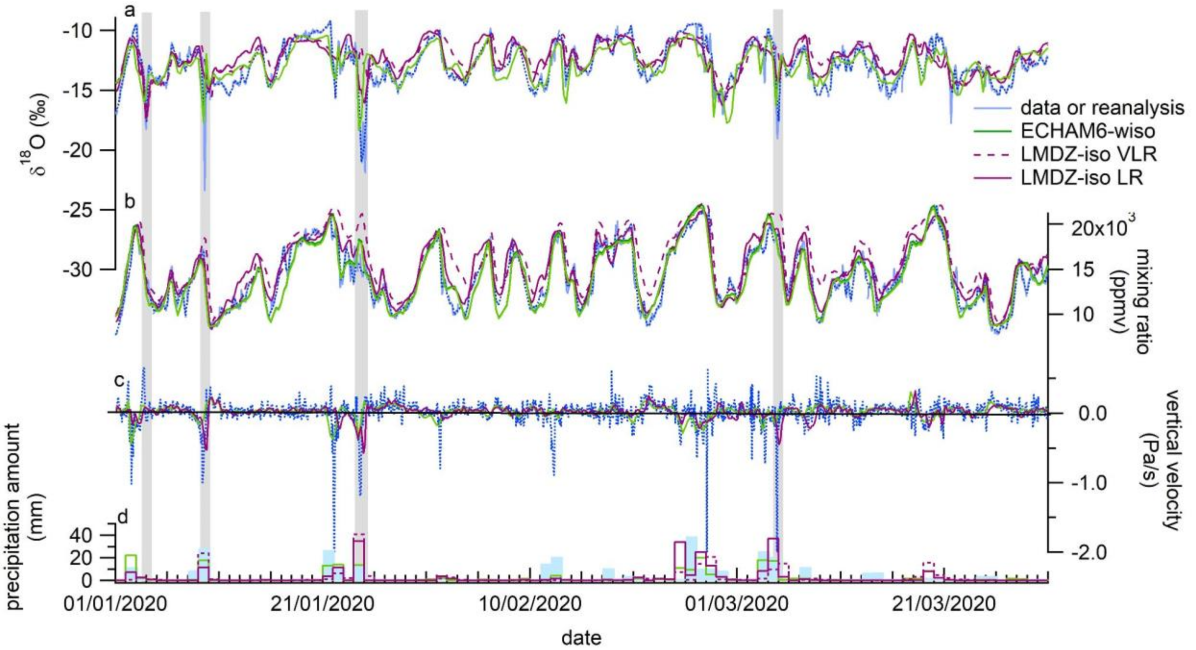

Figure 4: Data model comparison (January – March 2020); a- water vapor d^{18}O (light blue for data on hourly average, dark blue for data resampled at a 6-hour resolution); b- mixing ratio from our data set; c- vertical velocity; d- Precipitation amount. The grey rectangles highlight the negative d^{18}O excursions (note that in this figure the excursions of the 3rd and 9th of January 2020 are distinct while the distinction could not be done on Figure 3 because of the scale).