

Referee#2 :

Thanks for your efforts in addressing my comments Referee#2. I am in general satisfied with your responses, with the following few technical corrections, according to the revised version with track changes:

1) What type of pressure regulator was used to stabilize the cell pressure? Is the needle valve upstream or downstream of the pressure regulator?

The needle valve is upstream ("at the inlet of the sampling cell" , L3 P5), the pressure regulator is downstream . This latest point is now in L2 P5 :

*The gas is continuously flowing and the cell pressure is stabilized with a downstream pressure regulator, to 200 mbar in this study. The flow is adjusted manually with a needle valve at the inlet of the sampling cell,....*

2) The conversion of ECMWF specific humidity: it should be H<sub>2</sub>O mole fraction, instead of mixing ratio, otherwise the equation you use for xH<sub>2</sub>O and for water correction will not be correct.

We replaced all occurrences of *mixing ratio* by *mole fraction*

3) "flux" was used at several places, and to my understanding should be "flow"  
corrected