Comments on the revised manuscript "Variability of Antarctic ozone loss in the last decade (2004-2013): High resolution model simulations compared to Aura MLS observations" by Kuttippurath et al.

The authors have addressed all comments and I appreciate the new figures. However, there are some points that have to be clarified before publishing.

General comments:

- I need some more explanations to the calculation and unit of ozone loss and production. I am not an expert on this topic but I think that ozone loss refers to a time unit. If the loss is integrated or accumulated over time, the unit is ppmv, but it is still essential to know over which period it is integrated, e.g. second, day or month.

  I understand that the unit ppmv results from the way of calculation since you use the difference of two ozone fields in ppmv. However, I think, that there are used some assumptions for the calculation that hide the time information.
  From my naive point of view I would say that the ozone loss must be equal to the difference between the change of the passive ozone (over a specific time period) minus the change of the interactive ozone (over the same time period).

  Loss = ΔO3(passive)- ΔO3(interactive)

  If I use the time period = 1 day then I get the cumulative ozone loss over one day in ppmv.
  However, you use the (daily mean?) ozone fields instead of the ozone tendencies of the two tracers. What is the idea behind this? Or is the passive tracer set equal to the interactive tracer after each timestep in the model?
  Is it possible that the unit is something like the daily mean of the loss in ppmv integrated over a second?

- I don't understand why the slower descent in the model leads to an underestimation of the calculated observed ozone loss as you state in Line 467. You say that the model underestimates the measured ozone due to the slower descent. This means that less ozone is transported downward. But if less ozone is transported downward also the descent of the passive tracer is reduced. Doesn't this mean that the measured ozone loss is rather overestimated?

Specific comments:

Line 8: Please remove "that"

Line 39: .. losses in **stratospheric** ozone have been ..

Line 44: … over the region, **the chlorine and bromine induced catalytic** ozone loss takes

place..

Line 55: .. vortex that forms in fall/winter **in the stratosphere** is relatively …

Line 60: .. and **the concomitant** stability of the polar vortex ..

Line 134: Please remove "also"

Line 136: 2°x2°

Line 249: Please remove "normal"

Line 294: .. are higher (around 184 K) than **in** other winters ..

Lines 328-332: I suggest moving this sentences a little bit backwards, after the statement that the simulated ClO stands in contrast to the temperature structure.

Line 362: .. as HCl is smaller in the simulations than in the measurements ..

Lines 375-377: Slower vertical descent of what? Ozone or chlorine? Since there is an underestimation I guess you mean slower vertical descent of ozone.

Line 418: .. loss onset (**i.e. ozone loss** > 0.5 ppmv) ..

Line 624: I think my comment on this sentence was not clear enough. If you write "one of the coldest winters" you have to specify in which period. Is it one of the coldest winters in the last 20 years? Or in this specific period? But if you mean the period 2004-2013, I would say "the coldest winter in this period" instead of "one of the coldest winters". All in all, I suggest writing something like the following to get it clarified:
…, which included an extremely cold winter (2006), three warm winters (2004, 2010 and 2012), and three very cold winters (2005, 2008 and 2011).

Line 645-650: On the one hand there is less chlorine and thus less ozone loss due to the slower descent and on the other hand there is less ozone tansported downwards. You should specify in which altitude which process is relevant.

Line 661-667: .. with a number of winters showing shallow ozone holes**, but also with the year of the maximum ozone hole in the last decades.**

Figure 2: - Is it possible to change the range of the y-axis to 175 - 215 K?
          - From the figure, the TICE threshold temperature seems to be 189 K. I thought it is 188 K?