***Atmospheric and Chemistry and Physics Discussion manuscript review of**:*
"Radiative effects of ozone waves on the Northern Hemisphere polar vortex and its modulation by the QBO"
By: V. Silverman et al.

The authors have (for the most part) addressed my questions and concerns, with one exception (detailed below). If the authors address this issue, then I think the manuscript is ready for publication.

Minor comment (referring to line #'s 20-30 on page 5 of the version 3 manuscript) :

In my previous review, I asked if the authors could clarify exactly what types of ozone physics are retained and suppressed in the 3DO3 versus ZMO3 runs. The authors tried to address this but it is still a little unclear to me what they did. On the one hand, the authors added a reference to the figure in the Albers/Nathan paper, which helps clarify that they are primarily interested in understanding the effects of photochemical wave damping via the inclusion of three-dimensional ozone in the radiation code calculations. However, the authors still do not clarify whether their ZMO3 runs include what Albers/Nathan refer to as "pathway two". That is, in the ZMO3 runs, does the advection scheme *only* advect ozone via zonal mean processes? In other words, if the advection scheme is three-dimensional, then the zonal mean ozone field in the ZMO3 runs *is a function of 3D advection*, which means that the zonal mean ozone field that is passed to the radiation code in the ZMO3 runs does (implicitly) include effects of three-dimensional ozone. This effect is "pathway two" in the nomenclature of the Albers/Nathan paper. Thus in order for the ZMO3 runs to suppress the "pathway two" effects, then the impact of 3D advection processes *cannot* be allowed to alter the ZMO3 ozone field. To be clear, I am fine with whatever setup the authors used, I just think it is very important for the authors to detail *exactly* what types of physics are included in their two run types.