

Interactive comment on “Simulation study for ground-based Ku-band microwave observations of ozone and hydroxyl in the polar middle atmosphere” by David A. Newnham et al.

Anonymous Referee #3

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While this is a simulation study, my primary concern is with that the authors should present some indications that they have given some thought to the technical details and feasibility of such an instrument. Most of the sparse technical details that the authors provide are given on page 7, where the authors seem to be taking numbers from a paper by Rogers et al. [2012] (please spell out the acronym for MOSAIC). They then proceed to make a series of claims about what could be done with higher performance LNB receivers (do these exist?), and further improve these receivers by cooling them to 46K (how?). All of this is perhaps not unrealistic, but without any documentation it is difficult, as a reviewer, to judge. Has some of the required technology only become available recently (which is why no one else has done this before)? There is also no

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indication of what kind of antenna is involved. They might use a Direct TV antenna as did Rogers, but Rogers mentions that the beam efficiency was only 75%, so one might hope to do much better than this.

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