

Reply (large font) to comments of Anonymous Referee #1 (smaller font):

Thank you for your careful and constructive review. We have made the following changes in response to your comments.

Minor comments

Page 4, line 78. State the southernmost latitude sensed by LIMS.

Page 4, line 78—The poleward limit of LIMS observations is 65°S.

Page 4, line 96 and Page 20, line 552-553. The sentence on page 4, “Finally, we report that there is almost no interference from PSCs in the distribution of the Level 3 HNO₃” and on page 20, “However, it is also possible that the retrieved HNO₃ was contaminated (high) slightly due to excess emissions from the PSCs themselves” are not consistent. Please revise to have a consistent statement of the situation.

Page 4, line 96—The wording of this sentence was been changed to “there are only minor and brief interferences from PSCs” and the preposition “throughout” was deleted.

Page 20, lines 552-553—We now write “However, the retrieved gas phase HNO₃ may also be contaminated (high) slightly at locations of PSCs due to their excess emissions”.

Page 8, line 206 “is judged to be of good quality”

Page 10, line 271. Spell out the acronym RTO in the text.

Page 11, line 297. ‘are considered to be “false positives” for PSCs’

Page 12, line 321 “at pressure levels”

Page 24, line 657 “occurs within a day or so for particles”

Pages 8, 10, 11, 12, and 24—Corrections were made based on your suggestions.