

Retrievals of  $X\text{CO}_2$ ,  $X\text{CH}_4$ , and  $X\text{CO}$  from portable, near-infrared Fourier transform spectrometer solar observations in Antarctica.

Pollard et al. studied the data collected using portable Fourier transform spectrometer (Bruker EM27/SUN) at the site Arrival Heights laboratory, Antarctica. ILS was compared for both the portable FTS and TCCON instrument to study the instrument stability. TCCON data from the site, Lauder was compared to the FTS retrievals. Comparison of  $X\text{CH}_4$  and  $X\text{CO}$  with TROPOMI was also studied by the authors.

### Minor comments

1. In abstract section the data set reference lines no 17-28 is not necessary. It can be mentioned in the data section in the manuscript.
2. The latitude and longitude at Arrival heights and at TCCON station Lauder can be removed from the abstract section and can be added appropriately in the Introduction section.
3. In introduction section, Line 23, please club OCO-2 and OCO-3 and keep references later.
4. Line 25 ---While the TCCON have long been considered the gold standard.... Please check the sentence. It may be global standard....
5. Line 48- please check the sentence. It is not clear.
6. The objective of the study can be clearly written in the introduction section like comparison with the TCCON station and with TROPOMI satellite data.
7. Please check the references format as per the journal style.
8. Page 7 sentence 144 is not clear. Please check the sentence and modify as required.
9. Section 2.2 sentence 79 is not clear. Please check and correct the sentence.
10. Please check fonts for all the figures, x-axis, y-axis, legend. Please follow journal guidelines for figures and tables.
11. Please check for  $X$  ( dry air mole fraction ) which should be italic throughout the manuscript.

### Major comments

1. Authors can make comparative study of  $\text{CO}_2$  data with portable FTS with satellite data such as OCO-2 or any other satellite data available during the common period of measurements.
2. Figure 5, please abbreviate the term SAT in the legend. This is not clear.....
3. Please check for English grammar throughout the manuscript.