

## ***Interactive comment on “Laboratory Spectral Calibration of the TanSat Atmospheric Carbon Dioxide Grating Spectrometer” by Zhongdong Yang et al.***

### **Anonymous Referee #2**

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The work is very interesting and well-focused however there are some details that should be addressed: (i) On the abstract, lines 10, 13, 14, the authors refers to their results as “notably symmetric”, “excellent consistence”, “good linearity”,... These expressions give no scientific relevance. Numeric evaluation should be given to support these expressions. (ii) On the introduction, line 23, the authors refer to “wide dynamical range and a high spectral resolution”. Again numerical values should be given to support the expressions. (iii) There are some grammar mistakes, e.g. line 15; section 2.2; .. (iv) It is not clear to me the difference of the calibration method used in this work compared to some others. There is a confuse explanation on the introduction. It looks like the main aim of the work is to characterise and precisely calibrate the sens-

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ing results, when the authors also state that they have used a super-high-resolution grating spectrometer for measuring atmospheric CO<sub>2</sub>. Please clarify the introduction explanation. (v) Section 3.1: Could the authors specify the thermal stabilization used in the measurements? (vi) Section 3.1: Could the authors specify (detail) how the Laser speckle was removed using a spinning ground glass disk. (vii) Scales and typing of most of the figures are not visible, especially in Figure 3.

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