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Atmospheric Measurement Techniques Discussions

Interactive comment on "A fiber-coupled laser hygrometer for airborne total water measurement" *by* S. W. Dorsi et al.

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Reviewer #1: Authors present improved version ("second generation") of their solution of the hygrometer for total water measurement for airborne purpose. Such topic fits well to the scope of Atmospheric Measurement Technique. Primary concept of the hygrometer was described in author's previous publications. In this paper however, the instrument is presented in well-developed version, that was tested on the NSF/NCAR Gulfstream-V aircraft. The principle of its operation consists in vaporization of inlet water by heaters and further determination of H2O mixing ratio by absorption of near-infrared light in a single-pass optical cell. Careful characterization of the instrument was presented. Applica-

tion of modern optical solution like fiber optics technique, thermal stabilization, isolation against mechanical vibrations, design in a sealed, desiccated housing that can be located in a standard wing canister, makes the instrument very useful for airborne research.

The article is written in perfect English, and contains clear description of the construction, the investigation methods and results. Both the abstract and the conclusion are clear and consistent but reflecting the major aspects described in the paper. No bad comments about figures quality as well.

Author response: Reviewer #1 does not suggest changes to the submitted manuscript. The authors thank Reviewer #1 for their remarks.