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Interactive Comment

Interactive comment on "A new airborne tandem platform for collocated measurements of microphysical cloud and radiation properties" by W. Frey et al.

Anonymous Referee #2

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The paper by Frey et al., "A new airborne tandem platform for collocated measurements of microphysical cloud and radiation properties" is a very interesting paper presenting a novel technique to measure cloud microphysical and radiation properties at two different altitudes. This new airborne tandem platform allows scientists to measure aerosol properties simultaneously in and outside of the clouds with only one aircraft, which avoids the need to coordinate flights with more than one aircraft. The recent IPCC report from 2007 showed how important clouds are in the earth radiation budget; it is thus of interest to have this new system to improve the measurements of cloud characteristics. The authors present the technique well and discuss all the flight tests performed in great precision. The experimental part and evaluation of the data are





described clearly. Possibilities and limitations of the technique are also discussed in detail. The authors show that with taking into consideration the uncertainties due to the different flight parameters, it is possible to get a good comparison of the cloud microphysical-based measurements of radiation properties with direct radiation measurements. The paper is thus suitable for publication without any major revision. Just one small question: how does the yaw angle of the plane affect AIRTOSS?

Interactive comment on Atmos. Meas. Tech. Discuss., 2, 1, 2009.

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