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Atmospheric Measurement Techniques Discussions

Interactive comment on "A high-resolution oxygen A-band spectrometer (HABS) and its radiation closure" *by* Q. Min et al.

Anonymous Referee #2

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It is well known that the oxygen A-band absorption can be used to retrieval photon path length and is a powerful tool to study the cloud/aerosol properties. This work demonstrates the development of a high-resolution oxygen A-band spectrometer (HABS) with feature of polarization. The excellent performance is shown with stable spectral response ratio, high signal-to-noise ratio, etc.. I therefore recommend publishing this manuscript. Followings are some suggestions which might help readers to understand the work better.

1. P1031, L25, it is not very clear to me what is the open mode. It is mentioned the diffuser mode is used to measure the direct beam. How does it work to prevent the diffuse photon coming in. Authors are better to provide some explanation or reference.

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2.P1033, L14, it suddenly appears that 1.55 pixels = 0.016nm, better to show the definition of pixel here.

3. P1036, Eqs.(6-7), to my understand, T_{mean} is a pre-determined reference temperature, like 273K, not a previously calculated parameter. Please check.

4. P1037, L15, rephrase this sentence. In this doubt-k approach, there are two integrated ...

5. Finally, I suggest the authors adding a few sentences for their plan to use HABS for study cloud/aerosol property in the near future.

Interactive comment on Atmos. Meas. Tech. Discuss., 7, 1027, 2014.