

Interactive comment on “Temperature lidar measurements from 1 to 105 km altitude using resonance, Rayleigh, and Rotational Raman scattering” by M. Alpers et al.

Anonymous Referee #1

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The paper has a clear title and good overall structure except for the omission of a conclusions section. Figure 1 could be improved by including the potassium lidar set up and changing the directions of the arrows from the telescope. The current scale of figure 2 is too small as the comparisons between the different methods can not be adequately seen. It would be better if figure 2 was separated into three different figures.

The temperature profile presented compares well to the radiosonde profile but further validation of the errors would improve the paper. The troposphere and stratospheric profiles could be compared to ECMWF model in addition to the monthly average from the CIRA model. The time series of temperature profiles shows some interesting wave structures and this paper would benefit from some interpretation and more discussion

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of how they will benefit the study of the gravity, tidal and planetary wave structures in the atmosphere.

Technical Corrections. The numerous typographical corrections have been posted to the author M. Gerding. Further typographical corrections; "the usable range of the potassium lidar data to less than 100km" not 10km.

Interactive comment on Atmos. Chem. Phys. Discuss., 4, 923, 2004.

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