

## ***Interactive comment on “Twin Doppler Rayleigh/Mie/Raman lidar for wind and temperature measurements in the middle atmosphere up to 80 km” by G. Baumgarten***

**Anonymous Referee #1**

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The paper describes the setup and first measurements of a Doppler lidar for wind measurements in the middle atmosphere using iodine filter technique. First simultaneous measurements of wind and temperature are reported for altitude up to 80 km for the first time. This is of high scientific significance.

The paper provides novel instrument developments for wind measurements in the middle atmosphere, based on techniques, which were applied in the lower atmosphere before. The paper is very clear and well written and includes very good and appropriate figures. The overall quality of the paper is high. So I suggested immediate publication in AMTD.

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Nevertheless I have 2 major and several minor comments and editorial suggestions to the paper, which should be addressed in a revised version.

Please also note the supplement to this comment:  
<http://www.atmos-meas-tech-discuss.net/3/C851/2010/amtd-3-C851-2010-supplement.pdf>

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Interactive comment on Atmos. Meas. Tech. Discuss., 3, 2779, 2010.

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