

## ***Interactive comment on “Bannerclouds observed at Mount Zugspitze” by V. Wirth et al.***

### **Anonymous Referee #2**

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The authors describe the statistics of banner cloud events at Mt. Zugspitze, based on in-situ observations.

The manuscript is to the point and could serve as a good basis for designing numerical experiments. The observations were carefully planned and the statistical analysis is done very well. I think that the manuscript provides good descriptive statistics and makes a reader pose the obvious questions: what are the dynamical and physical mechanisms that cause banner cloud events at Mt. Zugspitze. If the authors choose to continue their study with a numerical model, its performance could be evaluated with the observations collected for the present manuscript.

The Bernoulli hypothesis could be dismissed in my opinion almost immediately due to two arguments: i) there are diabatic processes involved and ii) the flow is far from quasi-horizontal (the ascent and descent of air parcels in an adiabatic flow should result

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in cooling and warming, respectively).

The manuscript should be edited by a native English speaker, e.g. section 2.3 (page 29412, line 1: 'Temperature and humidity was measured'). Also, there are some very colloquial expressions, e.g. Introduction (page 29409, line 25: '...we, therefore, decided to improve the situation...'), page 29410, line 2: '...and we carried home a large number...'.  
in cooling and warming, respectively).

If the authors indeed will continue the study with numerical simulations, it appears that the existing manuscript could be a part of a larger paper. Perhaps the authors will publish them separately and label them as Part 1 and 2.

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Interactive comment on Atmos. Chem. Phys. Discuss., 11, 29407, 2011.

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