

## Referee comments to the manuscript

### Results from the DAMOCLES ice-buoy campaigns in the transpolar drift stream 2007-2009

By M. Haller, B. Brümmer and G. Müller

The properties of the Arctic transpolar ice drift is analysed and the impact of synoptic conditions on the ice drift is estimated using a unique ice-buoy experiment within the DAMOCLES project. The general quality of the article is good. The scientific problems related to the Arctic sea ice drift are very important in the context of global climate warming. The results of this study are of a wide interest in the science community.

Generally, the material is presented correctly, the text is clear and well written. The structure is not traditional. The sections of methods and of discussion are missing. Their content is included into the other sections. I have only some minor remarks concerning the manuscript.

1. I think that the section of methods is needed anyway. The composite method used in this study is only named without any references. Its detailed description would be useful. How this method was applied?
2. It is difficult to analyse synoptic weather situations without synoptic maps. I suggest that the map is needed at least for the 13 August storm. Synoptic maps tell to specialists much more than pure text or graphs. I think that more detail description of cyclone trajectories can explain many features of ice drift. It is important to emphasise that different trajectories cause even opposite air flow and, therefore, different impact on ice drift.
3. The list of publications seems to be too short. I suggest that adding references on relevant studied enables to improve the discussion of results. Anyway, I would prefer if the section of discussion is presented separately. Comparison of the results of current study with the results of similar estimates would be very interesting. Interpretation of the results for a much wider range of scientists would be useful. What do the values of ice drift vorticity and divergence reflect in the real nature? It can be explained with 1-2 sentences.