

## ***Interactive comment on “Using sonic anemometer temperature to measure sensible heat flux in strong winds” by S. P. Burns et al.***

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We have made a similar finding for Gill sonic instrument in Smedman et al. (2007), see section 4 of that paper as well as the Appendix which describes the MIUU instrument we used as a reference (it used a 15 micron Pt wire for temperature measurements). Grelle and Lindroth (1996) also experienced issues with the temperature measurements from a Gill sonic at high wind speeds. I think these should be useful references in your paper. We did not however find out exactly what was causing the problem but speculate (like you) that it was due to mechanical deformation.

References: Smedman, A., U. Högström, E. Sahlée, C. Johansson, 2007: Critical re-evaluation of the bulk transfer coefficient for sensible heat over the ocean during unstable and neutral conditions, *Quart. J. Roy. Meteorol. Soc.*, 133, 227-250

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Grelle A, Lindroth A. 1996. Eddy-correlation system for long-term monitoring of fluxes of heat, water vapour and CO<sub>2</sub>. *Global Change Biol.* 2: 297–307

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