

Interactive comment on “Snow accumulation variability in Adelie Land (East Antarctica) derived from radar and firn core data. A 600 km transect from Dome C” by D. Verfaillie et al.

Anonymous Referee #2

Received and published: 18 September 2012

Your last point says, "The fact that undulation crests are moving upwind is thus mainly due to interactions between katabatic wind and surface elevation or slope. A sentence has been added in §4.1 and in Fig.6 to explain this."

Have you actually measured this movement? No one really has (because it would take a long time to observe). You also did not mention plotting accumulation vs. slope, and not vs. elevation. I think you should include this.

The resolution issue is a matter of pulse length, not wavelength fraction, but depends on what you mean by "vertical resolution." There is a difference between accuracy and resolution. Resolution means separation of two horizons, not how accurately you can

C1621

resolve the starting time or depth of a reflected wavelet. For vertical resolution the criterion is half the pulse length, and one pulse length is about three half-cycles.

If your figure size is restricted, then, yes, please make up for it with details. Showing figures with just interpretive lines leaves the reader wondering how they were interpreted. Using a 100 MHz pulse will have surely shown merging (or bifurcating) horizons that can mislead an interpretation.

Rev 2

Interactive comment on The Cryosphere Discuss., 6, 2855, 2012.

C1622