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Interactive comment on "Monitoring water accumulation in a glacier using magnetic resonance imaging" *by* A. Legchenko et al.

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Dear colleague,

Thank you for this comment. Indeed, other geophysical methods could be applied to investigation of the Tête Rousse glacier or other glaciers. For example, we used GPR for localizing this cavern and characterizing englacial inhomogeneity. However, in glacial environment interpretation of GPR for water accumulation was not an easy task and the solution was not unique. In this term the 3D-SNMR is probably the tool for non-invasive estimate of water accumulation. I think that the use of this method for investigating other glaciers is only the question of the impact of water accumulation on the infrastructures or whatever. The microgravity was not used, but it could of course. The problem is that a very fast dynamics of the glacier body. Surface deformations

and continuous movement of ice within the glacier accelerated by drainage may cause serious problems in interpretation of the microgravity measurements in term of water volume variations.

Sincerely yours, Anatoly Legchenko

Interactive comment on The Cryosphere Discuss., 7, 2119, 2013.