



Seismometry in deep ice core boreholes some case studies

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Usually ice thickness at deep icecore borehole locations is determined from surface radar studies, which give a first hand quite good estimate on the ice thickness to be expected. In many cases however and for various reasons this estimate is not accurate enough being dependent on the right choice of wave velocities. In order to better plan drilling procedures close to bedrock it may be advantageous to have a more accurate knowledge of the remaining ice thickness. This can very effectively and accurately be determined from borehole seismometry. We will present details of the instrumentation used both in Greenland and Antarctic deep ice core sites as well as show results from actual field experiments. Furthermore we will discuss the layout of experiments which could yield information on changes with depth of ice sheet physical properties such as anisotropy, wave velocities and derived quantities.