



High frequency GPR measurements in comparison to detailed snow profiles

Lisa Kreitmeier (1), Stefanie Weißbach (2), and Martin Schneebeli (3)

(1) Stockholm University, Sweden (lisa.kreitmeier@arcor.de), (2) Alfred-Wegener-Institut, (3) WSL-Institut für Schnee- und Lawinenforschung SLF

Snow stratigraphy in Antarctica is strongly influenced by wind. This results in a complex stratigraphy. Yearly accumulation is often masked by intermediate erosion and deposition events. Kohnen-Station has a higher accumulation than the very low accumulation areas of East Antarctica, and therefore is suited to investigate complex stratigraphy. Here we use very high frequency GPR at 1.6 GHz to resolve stratigraphy. We compared the GPR measurements with detailed snow profiles measured using near-infrared photography and translucent profiles. Detailed depositional features, as dunes and cross-bedding are visible. First results show very complex patterns, which are not easily correlated to other features, and not necessarily to yearly accumulation.