

PROCESSING OF DENSELY SAMPLED ELECTROMAGNETIC INDUCTION DATA COLLECTED ACROSS PEAT DEPOSITS

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Subsurface conductivity imaging with mobile electromagnetic sensor is of growing interest for characterizing soils across large areas of several hectares. In this study, we evaluate the feasibility of characterizing peat deposits with densely sampled electromagnetic induction (EMI) data acquired by a four-configuration SLINGRAM sensor on a well-controlled test-site near Paulinenaue (Germany). We specially discuss the signatures of 2D/3D subsurface structures and the removal of their effects on the 1D inversion results. At this test-site, we performed 62 boreholes in order to collect ground-truth information regarding the spatial distribution of the peat layers. We also compare our inversion results to ground penetrating radar (GPR) data recorded along one selected profile across the peat body.