



## **Exploration and paramterisation of a hillslope with geoelectrical resistivity prospection**

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The investigation of the structure of a hillslope located in the *downer Harz Mountain* was investigated with the geophysical method of resistivity prospection. In these mountain areas the interflow component is in floodevents the dominant factor of the catchment discharge. It is necessary for the understanding of the processes of water-movement through the hillslope to know the geomorphologic and pedologic structure. The location of possible gravel or impermeable layer in the slope have to be known. Geoelectrical prospection is an easy measurement to identify those formations.

The geological structure in the catchment Schäfertal was shaped by periglacial processes particularly by solifluctuation, kryoturbation and loess accumulation. These processes formed a complicated hillslope morphology with different layers and variable soilphysical properties. It was important for the parameterisation of the physical based deterministic model CATFLOW to know the structure of these above discussed geomorphologic formations. The aim of the investigation was to detect the thickness of the complete subsurface over the bedrock as a discharge potent area. Furthermore it was important to find out the localisation of possible less permeable layers in the upper soil layer, over which fast interflow could be created. There were two transects measured. The measurement was calibrated with laboratory measured soil and rock samples as well as pedological auger holes. Geoelectrical prospection shows a two dimensional field of apparent specific resistivity.

In this poster, the configuration of the geophysical exploration is outlined and the results of the interpretation are presented.