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An improved bedrock map of the EPICA drilling site using a new RES data set.

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During the past years several RES radar surveys have been conducted in the Dome C area by the Italian RES group. The main goal was to obtain the bedrock topography and the internal layer analysis for the best location of the EPICA (European Project for Ice Coring in Antarctica) drilling site. In December 2009 a new ground RES survey of 2x2 km grid with line spacing of 150 m have been carried out at Concordia Station (Dome C, Antarctica) . The used RES system was an envelope radar working at 150 MHz mounted on a ground-based snow vehicle. Detailed bedrock topography of the EPICA drilling site have been obtained and it will be used for improving the modeling of the drilling area characteristics . An accurate electromagnetic (EM) stratigraphy has been obtained by static radar measurements in proximity of the drilling tent. A comparison between ice core and electromagnetic stratigraphies will allow to reach a more accurate dating of EM layers and will be useful for the evaluation of the electromagnetic characteristic of the bottom ice-bedrock interface.