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Interpretation of the internal structure of an active rockglacier using geoelectrical methods, geodynamics of alpine permafrost environment: the case of Combe de Laurichard, French Alps.

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During the last two decades, geophysical campaigns have been carried out on the main rockglacier of the Combe de Laurichard, France, located in the central part of the French Alps. Almost twenty vertical electrical soundings performed in the 80's, 1998, 2000 and 2004 on the rockglacier provide a general overview of its internal structure. Additional recent electrical tomographies (2004) have precised the geometry of rockglacier permafrost at its root and at its frontal part. Several geodynamical hypotheses of permafrost behaviour in this high alpine environment are discussed using the geoelectrical results and other datasets, such as geodetic survey, thermal monitoring and geomorphological observations.