



## **Evaluation of geophysical methods for detection of the underground cavities and the karstic systems in the city of Beni Mellal (Morocco)**

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During the recent years there has been a growing interest in recording and investigation the effects of paleoseismic events in surface and underground karsts in almost all countries. The karsts terrain in Morocco occupy considerable areas. The city of Beni-Mellal has been built on a ground affected by an important network of underground cavities due to hydrous erosion and human action that characterizes Beni Mellal karstic systems and underground cavities. These phenomenas have already caused the collapse of many buildings in the inner city. In order to test the efficiency of geophysical methods to localize and map those underground cavities, seismic methods, 2D electrical tomography and the ground penetrating radar campaign with 225 mhz antennas have been used to map this network that validate the GPR and others geophysical methods concerning the detection of cavities in urban environment.