ID: Type: **Poster**

Near Surface Geophysical Observations on the Great Cavern, Felsőpetény Testing Area, near Budapest, Hungary

The Great Cavern, Felsőpetény testing area, near Budapest, Hungary, had a great interest for On-Site Inspection (OSI) as an old nuclear explosion site. The area was subjected for near surface geophysical investigations in the form of microgravity and seismic investigations along two crossing profiles. The main objective of these observations in Felsőpetény area was to outline the subsurface void of Great Cavern which are accompany with mass discontinuity. A sensitive gravity sensor (Scintrex CG-5 AutoGrav of 1 μGal resolution) are used for gravity data acquiring.The gravity data were modeled (2.5 D modeling). The results showed that the low gravity signals can be observed on the W-E profile and this location is considered to be the center of the subsurface target. Correlation between the resulted gravity signals along both profiles and the theoretical gravity values of the target at spot locations reveals that, the lowest gravity values exceeding the value of the theoretical gravity at the same spot locations. This could be due to the value of the negative anomaly is represented the void (target) and the overburden of less dense rocks than the surroundings. The results showed that, there is a great coincidence between the seismic and gravity data output.

Primary author: ISSAWY, Elsayed Abdelazim Mohamed (National Research Institute of Astronomy and Geophysics (NRIAG))

Presenter: ISSAWY, Elsayed Abdelazim Mohamed (National Research Institute of Astronomy and Geophysics (NRIAG))

Track Classification: 3. Advances in sensors, networks and processing