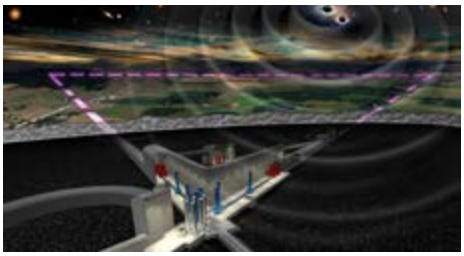

INTERNATIONAL PROJECTS

SARDINIA, THE SOS ENATTOS MINE HAS THE IDEAL CHARACTERISTICS TO HOST ET

To implement a third-generation gravitational wave observatory, the Einstein Telescope – ET, able to observe cosmic processes with unprecedented sensitivity, a multidisciplinary team, made up of researchers from the National Institute for Geophysics and Volcanology (INGV), INFN, the Universities of Sassari, Padua, Sapienza of Rome, Federico II of Naples, GSSI Gran Sasso Science Institute and EGO European Gravitational Observatory, conducted a study on the dismissed metal mine of Sos Enattos, in Sardinia, thanks to the support of IGEA S.p.A., the company that now manages the mine. To operate at its best, the ET observatory requires a geologically stable and sparsely inhabited area; the vibrations of the ground (of either artificial or natural origin) can in fact mask the weak signals generated by the passage of a gravitational wave. The multidisciplinary study, which had the aim of seismologically characterizing the Sos Enattos site, has demonstrated its full suitability to host ET. The paper “A Seismological Study of the Sos Enattos Area - the Sardinia Candidate Site for the Einstein Telescope” presenting the results has been published in the international journal Seismological Research Letters. Sardinia and Limburg – a region at the borders between Belgium, Germany and Holland - are the candidate sites to host ET. ■