



RESEARCH GRANT

TWO ERC CONSOLIDATOR GRANTS TO ELISABETTA BARACCHINI AND MASSIMILIANO FIORINI

The European Research Council (ERC) has awarded to Elisabetta Baracchini, assistant professor at the GSSI Gran Sasso Science Institute and researcher at INFN, and Massimiliano Fiorini, researcher

at INFN and tenure track associate professor at the University of Ferrara, two Consolidator Grants of € 1,995,719 and € 1,975,000, respectively.

The project proposed by Elisabetta Baracchini, INITIUM (an Innovative Negative Ion Time Projection Chamber for Underground dark Matter searches), aims to implement an innovative detector for the direct search for dark matter, based on the development and implementation of a gas Time Projection Chamber (TPC), able to reconstruct the traces of detected events in high precision 3D. The 5-year project envisages the installation of INITIUM at the INFN Gran Sasso National Laboratories.

The project proposed by Massimiliano Fiorini is called 4DPHOTON (Beyond Light Imaging: High-Rate Single-Photon Detection in Four Dimensions) and envisages the development of an innovative tool able to detect single photons in time and space (in 4 dimensions) with combined resolutions hitherto never obtained. The project, which will be developed over 5 years, will have a great impact in various disciplines, from high energy physics to biology, and will be implemented by scientists from INFN Ferrara division, the University of Ferrara and CERN in Geneva. ■