



## RESEARCH

### CUORE: DETECTOR INSTALLATION COMPLETED

The CUORE (Cryogenic Underground Observatory for Rare Events) experiment at the Gran Sasso National Laboratories (LNGS) of INFN has completed the installation of the 19 towers that make up the detector. The operation, involving very delicate and high-precision procedures performed by a team of scientists, engineers and technicians, was completed at the end of August. The 19 towers that make up the detector, consisting of 988 tellurium oxide crystals and weighing almost 750 kg, are now all suspended in the coldest point of the experiment's cryostat. The collaboration is currently preparing to make the finishing touches to the system. Then, in the coming months, the cryostat will be closed, the system will be cooled and scientific operations will start.

CUORE is an experiment designed to study the properties of neutrinos and, specifically, it will look for a rare process called neutrinoless double beta decay. Detecting this process would allow scientists to measure the mass of neutrinos, and also determine whether or not they are Majorana particles, thus offering a possible explanation for the prevalence of matter over antimatter in the universe. The experiment is an international collaboration involving some 157 scientists from thirty organisations in Italy, the USA, China and France. The INFN is taking part through its Bologna, Genoa, Milan Bicocca, Padua and Rome divisions and the Frascati, Gran Sasso and Legnaro National Laboratories. ■