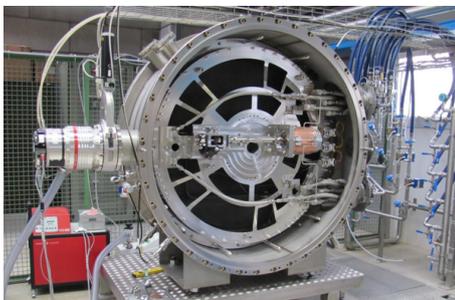


RESEARCH

FIRST MIRROR FOR VIRGO

A new milestone has been achieved by Advanced Virgo, the experiment for the study of gravitational waves of the Italian-French consortium Ego, in the countryside near Pisa. The first mirror has, in fact, been successfully installed: the beam splitter, which has the task of dividing the laser beam that runs inside of the arms of the interferometer. The mirror, with its suspension and control system, has been placed on the super-attenuator, the seismic isolation system of the device. The Advanced Virgo beam splitter, with its 55 cm diameter, is the largest mirror ever made in the world for a gravitational wave detector. The INFN Virgo groups were the protagonists in this complex integration job. “The installation has entered the most delicate phase, that of integration in situ of the components developed in the various laboratories”, explains Giovanni Losurdo, coordinator of the Advanced Virgo project. “We have just obtained a major success in the construction of the detector that will be completed by next year, becoming part of the network of second generation detectors, and which will thus begin acquiring data, along with Ligo, the pair of American detectors”, concludes Losurdo. ■



APPLICATIONS

FROM VENETO TO NORMANDY: THE CORE OF SPIRAL2 DELIVERED

The main component of the Spiral2 project was entirely conceived and designed in the INFN Laboratories in Legnaro: a neutron converter for the production of radioisotopes which will be installed in the accelerator complex of the French laboratory of Ganil, in Normandy. The device required the development of the highest nuclear technology skills and will be used for the production of radioisotopes to be widely used in research in nuclear physics, both basic and applied, medicine, biology, solid state physics and industrial applications. “Spiral2 is an example of how the INFN laboratories play a leading role in international projects”, remarked Luigi Tecchio, who coordinated the entire project. “But it is also an example of the transfer of technology with high added value to small and medium-sized industries in Italy”. The project, supported by the European Union through the collaboration with 25 European research institutes, including INFN, is part of a cooperation between Italy and France for research in nuclear physics: the Legnaro National Laboratories have designed and built the neutron converter, while in France they are implementing the charge breeder, which will be installed in Legnaro within the scope of the INFN SPES project. ■