



TECHNOLOGICAL RESEARCH

I.FAST PAVES THE WAY FOR NEXT-GENERATION ACCELERATORS

I.FAST, the European programme dedicated to strengthening the integration between European laboratories engaged in research and development of particle accelerator technologies, was launched on 4th May 2021 during an online event. Coordinated by CERN, I.FAST will be funded by the European Commission with € 10 million for the next four years and will receive an important contribution from the INFN. I.FAST will continue on the tracks made by ARIES, the current European reference programme for the funding of activities focused on accelerator physics, by promoting and supporting different lines of research. For Italy, the INFN will coordinate the development of technologies for superconducting magnets for hadron therapy and studies on radiofrequency (RF) cavities and new acceleration techniques. The INFN will lead projects dedicated to understanding the potential of the plasma-based particle acceleration system and to the technological transfer of materials and innovative manufacturing methodologies, such as additive manufacturing, for the creation of beamlines. The I.FAST programme will also fund transnational access to various test facilities and distribute resources to collaborations and networks of researchers, also coordinated by the INFN, engaged in studies of alternative paradigms for the creation and acceleration of ultra-high energy particles, such as those aimed at testing the feasibility of a Muon Collider.

The INFN facilities that will take part in I.FAST are the National Laboratories of Frascati and Legnaro, the Accelerators and Applied Superconductivity Laboratory (LASA) of Milan and the divisions of Genoa, Padua, Rome 1 and Turin, which will be supported by the computing and networks service of the Ferrara division. ■