INFN News

TOWARDS A NEW APPLICATION OF PLASMA ACCELERATORS: THE EUAPS PROJECT GETS STARTED

The kick-off meeting of EuAPS (EuPRAXIA Advanced Photon Sources), one of the projects of national interest selected under the PNRR, was held on February 28 at the INFN headquarters, with INFN involved as lead partner through its Frascati National Laboratories. EuAPS will represent one of the milestones toward the achievement of the goals envisaged by EuPRAXIA, a European initiative for the realization of a research infrastructure dedicated to particle accelerators based on a new concept of plasma acceleration and laser technologies. CNR and the University of Rome Tor Vergata are participating in promoting the project, to which €22.3 million in funding will be allocated, in addition to INFN.

The EuAPS project involves the realization of a plasma source of X-ray betatron radiation, induced and driven by lasers, which will be put into operation at the SPARC_LAB laboratory of INFN's Frascati National Laboratories. This technology will be able to provide radiation of a quality high enough to decrease the exposure time required by the experiments that will make use of it, employing a small source that will exploit the oscillations of electron beams within the plasma.