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Italian National Institute for Nuclear Physics

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EXTREME, PARTICLES ON DISPLAY

It is the first permanent exhibition, in Italy, dedicated to the physics of the infinitely small. "Extreme, in search of particles" was inaugurated on 12th July at the Leonardo Da Vinci Museum of Science and Technology (MUST) of Milan, in the presence of Prime Minister Matteo Renzi and of the Minister of Education, University and Research, Stefania Giannini, of the Director of the MUST, Fiorenzo Galli, of the General Director of CERN, Fabiola Gianotti, and of the President of INFN, Fernando Ferroni, A project which was conceived and borne thanks to the collaboration between the three MUST, INFN and CERN institutions. Extreme introduces its visitors to a research area that can boast a long and prestigious tradition, and which in recent years has gained an ever increasing attention, thanks to important scientific achievements, such as the Nobel discovery of the Higgs boson. Extreme reveals what happens inside the CERN and INFN laboratories. The exhibition space, that extends for a total of about 350 m², composed by a main gallery, which fascinates for the exhibited large objects coming from the experiments, and by the side halls with insights on some of the base concepts of these studies. As a matter of fact, the exhibition path alternates objects of great historical and scientific value, with multimedia and interactive installations, and with textual and oral narration spoken also through the voices of the researches' main players. The narration starts off from the concept of track, as an element that allows the recognition and reconstruction of an event that cannot be observed directly: a fundamental element in particle physics. The path continues with the instruments used by physicists to find tracks of particles, the detectors, and those used to produce them, the accelerators: an area of activity in which the LHC is the key player. Three different interactive installations introduce then the status quo of our current knowledge of particle physics, and some of the most interesting theoretical hypotheses awaiting an experimental verification, such as the existence of dark matter and extra-dimensions. An installation curated by the INFN is dedicated to the latter theme in particular: visitors can go for a virtual dip into other dimensions, which, according



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to physicists, could be surrounding the three-dimensional space we live in. The narration also puts a special focus on the places and the people in research - specialists like physicists, engineers and technicians - describing their daily life inside the labs, and eventually showing some examples of the most important ramifications of these researches in other areas. A visit to *Extreme* puts the visitor in a position of both awe and concreteness at the same time while approaching the world of research on the infinitely small and the achievements of those who work in the field.