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Tiny Objects and Big Science: Light and Shadows

The explanation of the nature and dynamics of visible matter present in the universe is one of the most successful theories in relativistic quantum physics. The discovery of the Higgs Boson in 2012 marked the end of a very fruitful era as well as the start of much more uncertain times. If the theory of particle physics stands out for its simplicity and beauty the experimental program, based on gigantic accelerators and particle detectors, paved the way for what now has become almost the standard in science, the big science. In this talk, I will present an overview the state of the art in the field of particle physics and the challenges ahead.