

PARTICLE PHYSICS WITHOUT ACCELERATORS

J. Carr*

Centre de Physique de Particules de Marseille, France

The first elementary particles not present in normal matter were discovered in the 1930's using cosmic rays in a period before the development of accelerators. Following 60 years during which the majority of knowledge in particle physics came from accelerator based experiments, non-accelerator experiments have begun again to make major discoveries.

In this presentation the experimental developments in non-accelerator particle physics of the past decade will be described together with planned future projects. The subjects covered will range from searches for proton decay; measurements of neutrino mass differences with neutrino oscillations; searches for dark matter and high-energy astronomy with cosmic rays, gamma rays and neutrinos.

* Corresponding author: e-mail: carr@c ppm.in2p3.fr