Phenomenology 2016 Symposium



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ShiP: Experiment and Physics

Monday 9 May 2016 16:30 (15 minutes)

This talk will discuss the physics program and detector set-up of the proposed SHiP experiment at the SPS at CERN, Geneva,

Switzerland. The SHiP experiment is a proposal for a new general-purpose fixed target facility to search for hidden particles as predicted by a very large number of recently elaborated models of Hidden Sectors which are capable of accommodating dark matter, neutrino oscillations, and the origin of the full baryon asymmetry in the Universe. Specifically, the experiment is aimed at searching for very weakly interacting long lived particles including Heavy Neutral Leptons - right-handed partners of the active neutrinos; light supersymmetric particles - sgoldstinos, etc; scalar, axion and vector portals to the hidden sector. The high intensity of the SPS and in particular the large production of charm mesons with the 400 GeV beam allow accessing a wide variety of light long-lived exotic particles of such models and of SUSY. Moreover, the facility is also suited to study the interactions of tau neutrinos. SHiP is currently a collaboration of 46 institutes from 15 countries.

Summary

Author:DE ROECK, Albert (CERN)Presenter:DE ROECK, Albert (CERN)Session Classification:BSM III