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# Detecting physics beyond the Standard Model with the REDTOP experiment

## Abstract

REDTOP is an experiment, at its proposal stage. It belongs to the High Intensity class of experiments. REDTOP will use a 1.9 GeV continuous proton beam impinging on a fixed target. It is expected to produce about $10^{13}$ $\eta$ mesons per year. The main goal of REDTOP is to look for physics beyond the Standard Model by detecting rare $\eta$ decays. The $\eta$ meson has unique properties which make it an excellent particle physics experiment to test the conservation of discrete symmetries, discovery of new particles and forces, as well as to perform further studies. The detector is designed with innovative technologies such that interesting events can be observed and the background events are efficiently rejected. In this poster, the experimental design, the physics program and the running plan of the experiment are presented.

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