

# The PADME charged particle spectrometer

*Tuesday 25 May 2021 06:06 (18 minutes)*

The PADME experiment aims at searching signals of a dark photon  $A'$ . This is done evaluating the final state missing mass of the process  $e^+ e^- \rightarrow A' \gamma$  by knowing the beam energy and measuring the four-momentum of the ordinary recoil photon. The determination of this quantity, and the capability to reject the background, are the key points for the success of the experiment.

Three charged particle detectors are employed to detect the positrons that have radiated a high energy photon in the target (PVeto), electrons from the beam interactions in the target or from particles which decay to final states with electrons (EVeto), and the positrons with a relatively low energy radiation in the target (HEPVeto). All three detectors are made of plastics scintillator bars placed inside the vacuum vessel of the PADME setup. PADME Commissioning took place in 2018-2019 with the beam of the Linac of the local Beam Test Facility (BTF) and results and performance of the veto stations will be presented.

## TIPP2020 abstract resubmission?

## Funding information

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**Session Classification:** Experiments: Precision and Low Energy

**Track Classification:** Experiments: Experiments: Precision techniques at low energy