Contribution ID: **5** Type: **Talk**

The Physics Program of the PADME Experiment

Saturday 5 September 2020 12:40 (25 minutes)

The PADME experiment, conducted at Laboratori Nazionali di Frascati of INFN, searches for a signal of a Dark Photon A'in the e+e−⟶γA'reaction in a positron-on-target experiment by evaluating the missing mass of annihilation events with a single photon.
The basic idea is that a massive photon-like particle could be the portal toward a hidden sector where Dark Matter is secluded. In about one year of data taking, a sensitivity on the interaction strength down to 0.001 is achievable in the mass region M(A') <23.7 MeV.
In addition, the PADME approach allows searches for any new particle produced in e+e− collisions through a virtual off-shell photon, such as long lived Axion-Like-Particles (ALPs), proto-phobic X bosons, Dark Higgs, etc. In the talk, the scientific program of the experiment and its current status will be illustrated.

Is this abstract from experiment?

Yes

Internet talk

Yes

Name of experiment and experimental site

PADME

Is the speaker for that presentation defined?

Yes

Details

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Session Classification: Parallel session