

Dark photons at SeaQuest E906 Experiment

Monday, 8 June 2015 12:00 (15 minutes)

SeaQuest is a fixed target Drell-Yan experiment that uses the 120-GeV proton beam extracted from the Main Injector at Fermilab to probe the sea structure of the nucleon. The SeaQuest forward spectrometer is optimized for detecting the high rate di-muon pairs arising from the Drell-Yan process.

Protons could also interact with the beam dump and generate massive dark gauge bosons or darkphotons. SeaQuest takes advantage of Proton Bremsstrahlung and ν decay processes to search for dark photons that might have been generated in the Iron beam dump and which decay into dimuons. In this talk, I will mention about the physics motivation to study dark matter and the role of SeaQuest in searching for dark photons.

Is this an abstract for a New Perspectives presentation?

Yes

Is this an abstract for a Users Meeting Poster?

Yes

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Session Classification: Session 2 - Collider Physics II, FSPA, Seaquest, and More!