

LNGS SEMINAR SERIES

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The History and Future of searches for Axions from the Sun

The axion is the Goldstone boson that would result from the broken Peccei-Quinn (PQ) U(1) symmetry if the proposed PQ solution of the strong CP problem is correct. This was the original reason for searching for the axion. The axion is also a candidate for the Cold Dark Matter. Axion-like particles (ALPs), if they exist, also have potential important roles in answering the question: How is it possible for extra-galactic TeV gamma rays to escape the effects of the Background Radiation which should severely attenuate them? The sun is the strongest potential source of axions, and searches for solar axions have been made for many years, in many laboratories. This talk will concentrate on the axion helioscopes past, present and the International Axion Observatory, under development at CERN.

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LNGS - "E. MAJORANA" ROOM