

Dark Matter Detection with Laser Interferometers

Wednesday, 14 September 2016 17:45 (15 minutes)

A worldwide network of kilometer-scale laser interferometers will come into operation during the next several years. Future terrestrial and space-based detectors have also been planned. We investigate the use of gravitational-wave observatories as detectors of dark matter in the process of direct interaction of DM objects with detectors. We will present the prospects for a detection based on gravitational interaction and on possible additional interactions –modeled as a Yukawa potential –between dark matter and the particles of the standard model. We will also briefly discuss the possibility of a domain wall (DW) detection, albeit the equation of state for a DW network is not appropriate as a DM candidate.

Summary

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Session Classification: Poster Session (coffee at 15:00) & CERN Visit

Track Classification: Dark matter (direct detection)