

# Dark Matter Detection with Laser Interferometers

*Wednesday, September 14, 2016 5:45 PM (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)