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Low Temperature Dark Matter Detectors

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The dark matter problem has accompanied cosmologist and particle physicist for more than 80 years. Nowadays we have an extremely accurate model of our Universe, but still most of its content eludes our observation. Grasping the nature of this missing matter is of compelling necessity for our understanding. Direct searches aim to detect dark matter particles with Earth-bound detectors. Low-temperature detectors play a crucial role in this challenging hunt, with their capability of accessing interactions of light dark matter particles well below the WIMP-scale. A review of the most sensitive cryogenic approaches to dark matter search and of recent results will be given together with a glance on future prospects.

Less than 5 years of experience since completion of Ph.D

N

Student (Ph.D., M.Sc. or B.Sc.)

N

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