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Review of experimental search for light WIMPs: present status and future prospect

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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 and of its expansion, the so called Hot Big Bang, but still most of the content of the universe eludes our observation. The observation of the missing matter of the universe is of compelling necessity for understanding the Universe.
In recent years the need of a wider approach to search for dark matter beyond the WIMP paradigm has became clear to the community. In particular light dark matter candidates, with masses ranging from 0.1 GeV to ˜10 GeV, can give answer to the presence of matter-antimatter asymmetry also in the dark sector (asymmetric dark matter).
The research in this range of masses nowadays is dominated by solid state detectors, with cryogenic detectors currently leading the field (CRESST, CDMS). CCD particle detectors are now a mature technology and CCD based experiment (such as DAMIC) are setting competitive limits. Also gas based TPC (NEWS-G) can give relevant contributions to the field.
A review of the best performing technologies and of most recent results is given together with a glance into the perspective.

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