Where does mass come from? Spherical Proportional Counters and other approaches for light Dark Matter searches

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It is established through astronomical observations and precise measurements that approximately 85% of the matter content of our Universe consists of nonbaryonic cold Dark Matter. Despite the decades long, ever more sensitive, searches performed, the particle nature of Dark Matter remains elusive. This experimental scrutiny fell mostly on Dark Matter candidates in the 10 GeV - 1 TeV mass range, in part because these are predicted in models addressing the hierarchy problem. However, more recent considerations have brought to attention lighter candidates with sub-GeV masses. This is an experimentally challenging mass region, which remains largely uncharted. Innovative approaches to explore this parameter space will be discussed, including the searches performed by the NEWS-G collaboration using Spherical Proportional Counters.