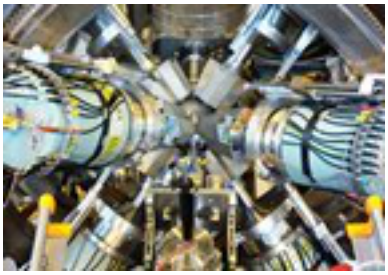

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Atomic Parity Violation in muonic atoms

Friday, 21 October 2016 16:40 (30 minutes)

Searching for neutral current effects in muonic atoms is an old idea. A muon around a nucleus in the 2S state gets a small parity violating admixture from the 2P state, which then allows E1-M1 interference in the 2S-1S. For nuclei around Z=30, the experimental challenge is to deal with the intense background from nP-1S transitions and electrons from Michel decays. We investigate the feasibility of a parity violation experiment, utilizing large solid-angle germanium detectors to get the background from the atomic cascade under control.

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