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Searching for dark matter in DEAP-3600 in a 758 tonne-day data set.

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The DEAP-3600 detector, based 2km underground at SNOLAB (Sudbury, Canada) is a dark matter direct detection experiment. The detector is a single phase liquid argon (LAr) target, of 3279 kg mass. In this talk, the results of a dark matter search analysis of 758 tonne-days will be presented. No candidate signal events were observed in the WIMP region of interest, resulting in the leading limit on the WIMP-nucleon spin-independent cross section measured on a LAr target. The world-leading pulse shape discrimination result will be discussed, together with the plans to move towards a profile-likelihood statistical approach to perform the dark matter search analysis.

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