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PICO-2L analysis and background discrimination techniques.

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The PICO collaboration has recently commissioned a superheated liquid dark matter detector with 2 liters of perfluoropropane (C₃F₈) as a target material at the SNOLAB underground laboratory. Although PICO-2L is a pilot experiment for the larger mass PICO-250L detector, it provides an excellent sensitivity to low-mass (~ 10 GeV) WIMP due to the powerful background rejection at nuclear recoil thresholds of as low as 3 keV. The status of the analysis and the performance of the detector will be discussed, and an overview of the various techniques used in data analysis will be provided.

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