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Dark Matter implications of DAMA/LIBRA-phase2 results

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Recently, the DAMA/LIBRA collaboration released updated results from their search for the annual modulation signal from Dark Matter scattering in the detector. Besides approximately doubling the exposure of the DAMA/LIBRA data set, the updated photomultiplier tubes of the experiment allow to lower the recoil energy threshold to 1 keV electron equivalent from the previous threshold of 2 keV electron equivalent. I will discuss the compatibility of the observed modulation signal with Dark Matter scattering. Due to a conspiracy of multiple effects, the new data at low recoil energies is very powerful for testing the Dark Matter hypothesis. In particular, canonical (isospin-conserving) spin-independent Dark Matter-nucleon interactions do not longer allow for a good fit to the DAMA/LIBRA data.

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