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Latest Results on Searches for Dark Matter from IceCube

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The cubic-kilometer sized IceCube neutrino observatory, constructed in the glacial ice at the South Pole, offers new opportunities for neutrino physics with its in-fill array "DeepCore". IceCube searches indirectly for dark matter via neutrinos from dark matter self-annihilations and has a high discovery potential through striking signatures. We report on the latest results from searches for dark matter self-annihilations in the Milky Way and signals from the Sun. The latter are sensitive to the WIMP-proton scattering cross section, which initiates the WIMP capture process in the Sun. The latest limits from a search with the 79-string configuration of IceCube for WIMP masses in the range 20–5000 GeV are the most stringent spin-dependent WIMP-proton cross section limits to date above 35 GeV for most WIMP models.

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