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The Day-Night Effect in SNO: Beyond the Solar Neutrino Problem

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Results from the Sudbury Neutrino Observatory (SNO) experiment have demonstrated that electron neutrinos produced in the solar interior change flavor prior to reaching the earth, thus resolving the long-standing “Solar Neutrino Problem.” Far from being the end of the story, these and other recent neutrino physics results have opened up a rich field of fundamental questions to be probed by current and future experiments. The day-night asymmetry measurement performed during the second phase of the SNO experiment will be described, emphasizing the role that solar neutrino experiments play in exploring fundamental neutrino physics.