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Abstract for an Invited Paper for the APR16 Meeting of the American Physical Society

Solar Neutrinos, Past, Present, Future

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I present a brief discussion of the neutrinos emitted in the Sun, based on Bethes theory of energy production in stars, and summarize the first experiments that were done to observe solar neutrinos. The focus of my talk will be on the liquid scintillator method that was developed for Borexino. I discuss the methods developed to achieve the low backgrounds needed for direct detection of low energy neutrinos, and summarize the measurements of the four neutrinos emitted in the proton-proton fusion chain, including the recent measurement of pp neutrinos from the primary fusion reaction that powers the Sun. I conclude with a discussion of the prospects for measuring CNO neutrinos.