Fig. 1. Spectrum of solar neutrinos, and flux of neutrinos at the earth.

Fig. 2. Photograph of the 1000 gallon experiment in the Barberton limestone mine, Ohio.

Fig. 3. Pulse height spectrum of the argon extracted from the 1000 gallons of perchloroethylene exposed in the Barberton mine. The resolution of the counter for argon-37 is indicated.

Fig. 4. The major background effect in the Cl^{37}-Ar^{37} neutrino detection method is the production of argon-37 by the $Cl^{37}(p,n)Ar^{37}$ reaction in the liquid perchloroethylene by protons arising from the interactions of cosmic ray muons. The plot shows the cosmic ray muon produced argon-37 as a function of the depth in meters of water equivalent. The depths of several mines in the United States are shown that would afford sufficient cosmic ray shielding for a solar neutrino experiment. The Kolar mine in India is the deepest mine in the world.

Fig. 5. Schematic layout for the Brookhaven Solar Neutrino experiment.