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Experimental study of the e+e- -> n anti-n process at the VEPP-2000 e+e- collider with the SND detector

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The $e^+e^- \to n\bar{n}$ cross section has been measured in the experiment at the VEPP-2000 e^+e^- collider with the SND detector. The technique of the time measurements in the multichannel NaI(Tl) electromagnetic calorimeter is used to select n anti-n events. The value of the measured cross section from the threshold up to 2 GeV varies from 0.6 to 0.4 nanobarn. The effective neutron timelike form factor is derived from the measured cross section and compared with the proton form factor. The ratio |GE|/|GM| of the neutron electric and magnetic form factor is obtained from the measured angular distribution and found to be close to 1.

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