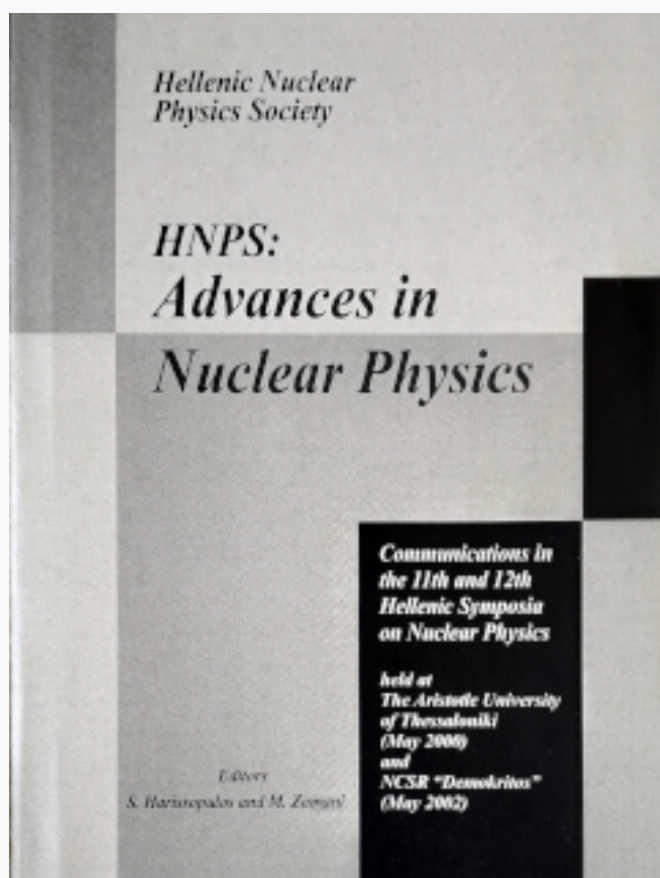


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Cross sections of proton capture reactions of Sr isotopes ¹

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Cross section measurements of the proton capture reactions of the ⁸⁶Sr, ⁸⁷Sr and ⁸⁸Sr isotopes were carried out at energies $E_p=1.4-5$ MeV. At $E_p \leq 3.5$ MeV an array of 4 HPGe detectors with 100% relative efficiency shielded with BGO scintillators for Compton background suppression was used, whereas at $E_p \geq 3.5$ MeV, the measurements were performed by means of one HPGe detector of 80% relative efficiency. For the ⁸⁷Sr(p, γ)⁸⁸Y and ⁸⁸Sr(p, γ)⁸⁹Y reactions total cross sections ranging from 0.5 μ b–5 mb were found. The data analysis of the ⁸⁶Sr(p, γ)⁸⁷Y reaction is in progress. Cross sections have also been calculated by means of the statistical model code MOST. A very good agreement between the experimental data and the theoretical predictions has been found.

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