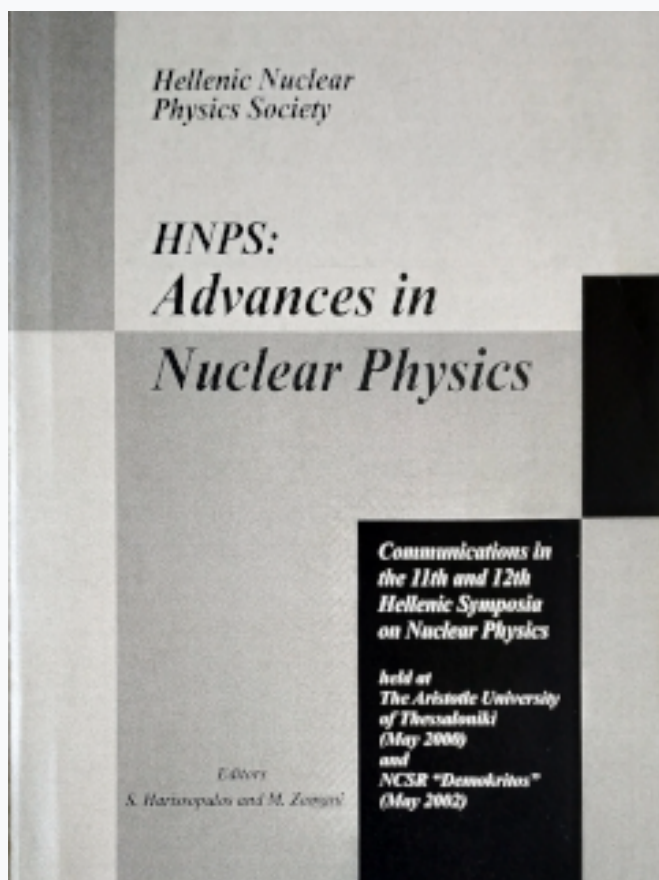


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Cross sections of proton capture reactions of Sr isotopes ¹

S. Galanopoulos, P. Demetriou, M. Kokkoris, G. Kriembardis, and S. Harissopulos
*Institute of Nuclear Physics, National Centre for Scientific Research "Demokritos",
POB 60228, 153.10 Aghia Paraskevi, Athens, Greece.*

R. Kunz, M. Fey, and J.W. Hammer
*Institut für Strahlenphysik, Universität Stuttgart, Allmandring 3, 70569 Stuttgart,
Germany.*

Gy. Gyürky, Zs. Fülöp, and E. Somorjai
*Institute of Nuclear Research of the Hungarian Academy of Sciences (ATOMKI),
Bem tér 18/c, 4001 Debrecen, Hungary*

S. Goriely
*Institut d'Astronomie et d'Astrophysique, Université Libre de Bruxelles,
Campus de la Plaine, CP226, 1050 Brussels, Belgium.*

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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