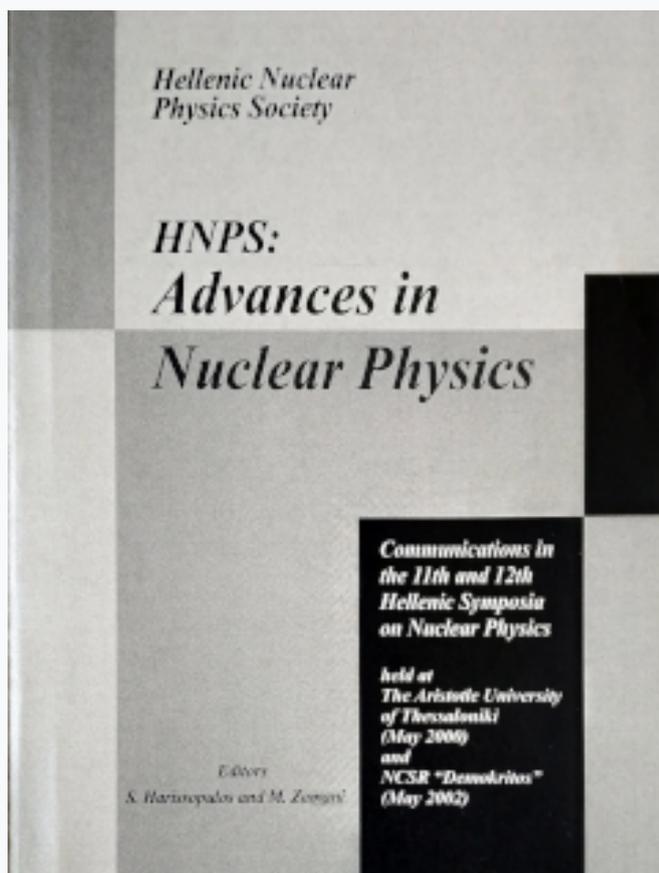


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Cross sections of the $^{89}\text{Y}(p,\gamma)$ reaction relevant to the p process

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Cross sections of the $^{89}\text{Y}(p,\gamma)$ reaction relevant to the p process ¹

P. Tsagari, M. Kokkoris, E. Skreti, P. Demetriou, S. Galanopoulos, A. G. Karydas, Ch. Zarkadas, S. Harissopoulos, and T. Paradellis

*Institute of Nuclear Physics, National Centre for Scientific Research "Demokritos",
POB 60228, 153.10 Aghia Paraskevi, Athens, Greece.*

R. Kunz, and J.W. Hammer

Institut für Strahlenphysik, Universität Stuttgart, 70569 Stuttgart, Germany.

The cross section of the $^{89}\text{Y}(p,\gamma)^{90}\text{Zr}$ reaction was determined at $E_p=1.4-4.8$ MeV via angle-integrated measurements carried out by means of a 4π NaI summing detector as well as via angular distribution measurements using an array of 4 HPGe detectors with 100% relative efficiency. The resulting cross sections vary from 0.5 to 5 mb. Astrophysical S factors and reaction rates have also been derived. A good agreement between the experimental rates and the predictions of statistical theory has been found.

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