Photon Strength Functions at the Low-Energy Tail of the GEDR Obtained from Different Reactions*

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The photon strength functions (PSFs) for different multipolarites are the key entities describing the statistical γ-decay, being at the same time related to the photoabsorption cross sections. It is well known that PSFs and photoabsorption cross sections at energies above the threshold for particle emission are well described by the Lorentzian giant electric dipole resonance (GEDR) with the maximum near 15 MeV and a width of about 5 MeV. On the other hand, shapes of PSFs at the low-energy tail of GEDR are known rather poorly.

In this contribution the main difficulties with the extraction of the PSFs from different experiments at γ-ray energies below the particle emission will be emphasized. A special attention will be paid to a mutual comparison of PSFs deduced from (n,γ), (γ,γ') and ^{3}He-induced reactions. It will be shown that with the available techniques for extracting the data on PSFs the different reactions yield inconsistent results. At present, it is thus very difficult to make a reliable comparison of experimental data on these quantities with theoretical predictions.

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