

Radiative strength of neutron-rich nuclei and its astrophysical implications

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The density and width of nuclear excited states increase with excitation energy towards the particle separation. The NLD and the RSF are fundamental input parameters for calculating nuclear reaction cross-sections and reaction rates. The Oslo nuclear physics group has developed a method to determine simultaneously the NLD and the RSF from particle spectroscopy. Recently an unexpected low-energy increase in the radiative strength function of light and medium-mass nuclei, and an experimental program to study the gamma-ray strength function of neutron rich nuclei has been recently proposed.

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