Astrophysical relevance of γ transition energies

Year 2008
Title Astrophysical relevance of γ transition energies
Journal Physical review. C, Nuclear physics
Volume 78
Number 3
Pages / **Article-Number** 032801
The relevant gamma energy range is explicitly identified where additional gamma strength must be located to have an impact on astrophysically relevant reactions. It is shown that folding the energy dependences of the transmission coefficients and the level density leads to maximal contributions for gamma energies of 2 <= E-gamma <= 4 unless quantum selection rules allow isolated states to contribute. Under this condition, electric dipole transitions dominate. These findings allow us to more accurately judge the relevance of modifications of the gamma strength for astrophysics.

Publisher American Institute of Physics
ISSN/ISBN 0556-2813
edoc-URL http://edoc.unibas.ch/dok/A5253871
Full Text on edoc No;
Digital Object Identifier DOI 10.1103/PhysRevC.78.032801
ISI-Number WOS:000259692300009
Document type (ISI) Article
Additional Information Variant title: Astrophysical relevance of gamma transition energies