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Experimental photonuclear cross sections

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Photonuclear cross sections are important to both practical applications and astrophysics in addition to being interesting in their own right from a nuclear structure point of view. Despite this, existing data taken at different laboratories are discrepant and some important cross sections have not been studied at all or are considered unreliable. The Phoenix Collaboration aims at providing new data of (g, n) cross sections for 18 isotopes ranging from 205Tl to 58Ni for generating a reference database for photon strength functions (PSF) within the framework of the IAEA Coordinated Research Project on Photonuclear Data and Photon Strength Functions (F41032). In this talk, the experimental setup for (g,n) cross section measurements at the NewSUBARU storage ring in Japan will be presented. Some key findings from the (g,n) campaigns in the period 2013-2015 will be presented. In addition an update on the analysis of the photonuclear data on 64Zn(g,n),66Zn(g,n), 68Zn(g,n) and the Oslo method analysis of 68Zn(p,p'g) data will be presented.

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