

## Photonuclear reactions on $^{102,104}\text{Pd}$

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Experimental studies and theoretical calculations of photoneutron reactions on light palladium isotopes  $^{102}\text{Pd}$  and  $^{104}\text{Pd}$  were performed. The target from a natural mixture of palladium isotopes was irradiated with brake  $\gamma$ -quanta on the RM-55 electron accelerator at an electron energy of 55 MeV. Absolute yields of photonuclear reactions on  $^{102}\text{Pd}$  and  $^{104}\text{Pd}$  isotopes with up to three neutrons are determined. Comparison with the results of calculations using the TALYS [1] and the estimated cross sections from the KAERI library [2] showed that in all cases, the theoretical cross sections of photoneutron reactions are overestimated. This is due to the fact that the theoretical calculations of partial cross sections did not take into account the isospin splitting of GDR, which should lead to a significant increase in the share of photoproton reactions and a decrease in the share of photoneutron reactions in the full cross section of photoabsorption on the  $^{102}\text{Pd}$  and  $^{104}\text{Pd}$  isotopes.

[1] A.J.Konig, S.Hilaire, M.C.Duijvestijn, in Proceedings of the International Conference on Nuclear Data for Science and Technology, 2007, Ed by Bersillon O. et al. EDP Sciences (Nice, France, 2008). p. 211

[2] Y.O.Lee, Y.Han, J. Chang, KAERI Photonuclear Data Library, KAERI/TR-1512/2000 (Korea Atomic Energy Research Institute, 2000).

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