

## ISOMER RATIOS OF PHOTONUCLEAR REACTION PRODUCTS FOR INDIUM ISOTOPES IN THE ENERGY REGION OVER 33 MeV

**O. A. Bezshyyko, A. N. Vodin, L. O. Golinka-Bezshyyko, A. N. Dovbnya, I. M. Kadenko,  
O. A. Kovalenko, V. A. Kushnir, A. I. Levon, V. V. Mitrochenko, S. N. Olejnik, G.  
E. Tuller**

This paper deals with the results of isomer ratio measurements for nuclei  $^{110m,g}\text{In}$  and  $^{108m,g}\text{In}$  from photonuclear reactions  $^{113}\text{In}(\gamma, 3n)^{110m,g}\text{In}$ ,  $^{115}\text{In}(\gamma, 5n)^{110m,g}\text{In}$ ,  $^{115}\text{In}(\gamma, 7n)^{108m,g}\text{In}$ . Bremsstrahlung energies varied within (34÷43) MeV for  $^{113}\text{In}(\gamma, 3n)^{110m,g}\text{In}$  reaction, in energy region (43÷100) MeV for  $^{115}\text{In}(\gamma, 5n)^{110m,g}\text{In}$  and  $^{115}\text{In}(\gamma, 7n)^{108m,g}\text{In}$  reactions. The instrumental gamma-ray spectra of irradiated target specimens have been measured with high purity germanium semiconductor spectrometer. The isomer ratio results and dependence of isomer ratios upon maximal bremsstrahlung energies within selected range are obtained and discussed.

*Keywords:* isomer ratios, photonuclear reactions, neutrons, indium, TALYS.