

# THE DECAY OF HIGH SPIN ( $9^+$ ) STATES OF $^{156,158,160}\text{Ho}$

Kalinnikov V.G., Vaganov Y.A., Hons Z.,  
Sushkov A.A., Stegailov V.I., Yushkevich Yu.V.  
*Joint Institute for Nuclear Research, Dubna, Russia*  
E-mail: stegajlov2013@yandex.ru

Some experimental results concerning to investigate the decay of the high spin isomers of odd-odd nuclei of the excited states of dysprosium's daughter nuclei have been discussed [1–10].

A beta-decay of the isomer  $^{156\text{m}2}\text{Ho}$  in dysprosium daughter nuclei (2789 keV) neutron state and a rotational band of the ground state has been analyzed. The discharge of the state 2789 keV in the dysprosium nuclei has occurred through the strong forbidden by  $K$  number gamma transitions.

The intensity of the observed gamma-transitions, which discharge the 2789 keV state, has been estimated.

The decay of the isomer  $^{158\text{m}2}\text{Ho}$  in the level 2528 keV of the neighbor nuclei  $^{158}\text{Dy}$  has been accompanied analogically by strong  $K$  prohibition,  $\Delta K=8$ .

The experimental results, representing the investigations of the decay of the isomer  $^{160\text{m}2}\text{Ho}$  on the level of strong deformed nuclei of  $^{160}\text{Dy}$ , have not allowed making the analogy to the decay of the isomers  $^{156,158\text{m}2}\text{Ho}$ .

We have discussed a comparison between experimental data and theoretical calculations' results, got in the frame of microscopic version of the model of interacting bosons (IBM1) [11].

The scientific work has been carry out by the support of Russian Fund of Basic Research RFBR.

1. V.G.Kalinnikov *et al.* // Int. Conf. on Nucl. Phys. Sarov. 2006. Abstracts. P.82.
2. V.G.Kalinnikov *et al.* // Int. Conf. on Nucl. Phys. St. Petersburg. 2005. Abstracts. P.58.
3. V.I.Stegailov *et al.* // Int. Conf. on Nucl. Phys. St. Petersburg. 2005. Abstracts. P.72.
4. V.G.Kalinnikov *et al.* // Int. Conf. on Nucl. Phys. Riga. 1987. Abstracts. P.119.
5. A.V.Sushkov *et al.* // Int. Conf. on Nucl. Phys. St. Petersburg. 2005. Abstracts. P.59.
6. I.Adam *et al.* // Izv. RAN. Ser. Fiz. 2002. V.66. P.1384.
7. V.V.Pashkevich *et al.* Preprint JINR. 4-83-535. Dubna. 1983.
8. V.O.Nesterenko *et al.* // Izv. RAN. Ser. Fiz. 1992. V.56. P.53.
9. G.D.Alkhozov *et al.* // Nucl. Phys. A. 1989. V.504. P.549.
10. V.G.Kalinnikov *et al.* // Int. Conf. on Nuclear Physics. Cheboksary. 2009. P.86.
11. A.D.Efimov *et al.* // Int. Conf. on Nucl. Phys. "Nucleus-2018". Abstracts.