

Abstract Submitted  
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**Lifetime measurements for the proposed antimagnetic rotational band in  $^{101}\text{Pd}$**  MASAHIKO SUGAWARA, Chiba Institute of Technology, Narashino, Chiba, Japan, TAKEHITO HAYAKAWA, MASUMI OSHIMA, YOSUKE TOH, AKIHIKO OSA, MAKOTO MATSUDA, TOSHIYUKI SHIZUMA, YUICHI HATSUKAWA, Japan Atomic Energy Agency, Tokai, Ibaragi, Japan, HIDESHIGE KUSAKARI, Chiba University, Chiba, Japan, TSUNEYASU MORIKAWA, Kyushu University, Fukuoka, Japan, ZAIGUO GAN, Institute of Modern Physics, Chinese Academy of Sciences, Lanzhou, China, TOMASZ CZOSNYKA, Heavy Ion Laboratory, Warsaw, Poland — It has become well known by active researches in the last two decades that particle-hole combinations of dissimilar nucleons in high- $j$  orbitals can create novel structures such as magnetic rotation (MR) bands and antimagnetic rotation (AMR) bands around doubly magic nuclei. We proposed an antimagnetic rotational band including the  $h_{11/2}$  neutron orbital in  $^{101}\text{Pd}$  based on the previous in-beam  $\gamma$ -ray spectroscopy by using the reaction  $^{68}\text{Zn}(^{37}\text{Cl},1\text{p}3\text{n})$ . However, we could not confirm the antimagnetic rotational character at that time for lack of lifetime data. Since a thick target was used in that experiment, it was possible to extract lifetimes for several levels in the  $\nu h_{11/2}$  band through the analysis of Doppler broadened line shapes of  $\gamma$ -rays. The results of those analyses will be presented in this talk.

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