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Title: **Investigation of the $K^\pi = 8^-$ isomers in N=74 isotones on beam of the Warsaw Cyclotron**

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The decay of the $K^\pi = 8^-$ isomers in ^{132}Ce and ^{134}Nd have been investigated on the beam of the Warsaw Cyclotron using OSIRIS array. Reactions ^{120}Sn(^{16}O,4n)^{132}Ce and ^{118}Sn(^{20}Ne,4n)^{134}Nd were used.

For ^{132m}Ce a half-life of 9.4±0.3 ms was determined. Two new decay paths have been found in the deexcitation of this isomer. The hindrance factors for the $E1$, $M2$ and $E3$ transitions deexciting the isomer have been determined [1]. The decay properties of the 8^- isomers in the N=74 isotones are discussed. A band mixing mechanism involving the ground state band and s-band seems to be responsible for the behaviour of the reduced hindrance factors of the $E1$ transitions deexciting the K^π=8^- isomers in these isotones.

A K-mixing, characteristic for the axially asymmetric nuclei, may account for the reduced hindrance factors $f_3 \approx 6.5$ of the $E3$ transition to the 5^+_γ states in ^{130}Ba and ^{132}Ce. Similar E3 decay of the 410 μs isomeric state in ^{134m}Nd has not been observed. However, we were able to determine that in this case the reduced hindrance factor $f_3 \geq 9$.

References

[1] T. Morek et. al, Phys.Rev **C63 (2001), in print.**

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