$\frac{13}{2}^+$ isomeric states in neutron deficient ^{173,175}Pt nuclei

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Two platinum nuclei, A = 173, 175, lying in between the N = 104 mid-shell and the proton drip-line have been studied. Studying odd-mass nuclei in this region sheds light on the single-quasiparticle orbitals present near the Fermi surface. The low-lying $i_{13/2}$ shell model intruder state gives a reason to expect low-lying isomeric states in these platinum nuclei.

Recoil decay tagging (RDT) method has been used in the experiments performed at JYFL to achieve good selectivity despite many possible particle evaporation channels and relatively long alpha-decay half-lives in the region of this study.

The $13/2^+$ band head of ^{173}Pt was found to be isomeric but no isomeric transitions from the assumed $13/2^+$ state have been observed for the ^{175}Pt. The results of these studies will be discussed.