

Magnetic moments of μ -second isomeric fragments

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Nuclear moments are an important ingredient of our knowledge and understanding of the nuclear structure far from the beta-stability line. The nuclear magnetic moments are very sensitive probe to the single particle structure of the nuclei. They can serve as a test of the purity of their nuclear wave functions and to the theoretical models. The quadrupole moments give direct informations on the collectivity and the shape of the nucleus. The discovery of nuclear spin alignment in projectile fragmentation reactions has led to the opportunity to perform such measurements in the neutron-rich exotic region. A powerful method to study isomeric states is the well-known Time Dependent Angular Distribution (TDPAD) technique, usually applied to isomers produced by fusion evaporation. It was our aim to extend the applicability of this technique to fragmentation isomers. So far g-factor and quadrupole moment measurements of projectile fragmentation isomers have been successfully performed at GANIL. Experimental improvements and results of the ^{61m}Fe and ^{43m}S will be presented. The near future perspectives will be discussed.

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The seminar will be given in English

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