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E2 transition probabilities in light 110,112Te isotopes

The region right above the semi-magic Sn nuclei close to 100Sn is a hot point for both experimental research and theoretical investigations. The experimental study of this region is challenging due to low cross sections to populate nuclei in the reactions. Although the spectroscopic data (sometimes scarce) is often available for certain nuclei, the information on the electromagnetic transition probabilities is poor. In the reported experiment the nuclei in the vicinity of 100Sn were accessed in a fusion-evaporation reaction 58Ni+58Ni studied at Galileo spectrometer at LNL Legnaro. To determine lifetime, the differential decay curve (DDC) was used in the coincidence mode to avoid the problems related to side feeding of the states of interests. Using Euclides Si-ball coupled in the reduced configuration to Galileo and the plunger device resulted in the significant improvement of the selectivity. The first results on lifetime of low-laying excited states in 110Te, 112Te are discussed.

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