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Branching-ratio measurement for superallowed emitter 30S at NIRS-HIMAC YOSHIMASA TAGUCHI, Department of Physics, Tokyo University of Science, HIMAC H312 COLLABORATION — The corrected Ft values with some radiative corrections and the isospin-symmetry breaking correction for the most precisely determined 13 decays are consistent within 0.3 %. However, the Ft value for the superallowed beta emitter 30S significantly deviates from the average Ft value, even through it still has a large experimental uncertainty of a few % which mainly comes from the measured branching ratio. On the other hand, the isospin-symmetry breaking correction has been predicted in several theoretical calculations. Especially, theoretical results for 30S decay differ from each other. In order to resolve this discrepancy of Ft value and to confirm the reliability of these calculations, the branching ratio for 30S has been measured. The secondary beam of 30S was produced by the fragmentation of a 500-MeV/u 36Ar beam on (CH2)n target. After passing through the separator, it was implanted in the center of 6-mm-thick GSO scintillator. Around the GSO scintillator, four clover-type HPGe detectors were located at an angle of 45 degrees symmetrically with respect to the beam axis. The beta and gamma rays emitted from 30S were detected by the GSO active stopper and the HPGe detectors, respectively. The results of branching ratio for 30S will be presented.

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