

Influence of hyperfine interaction on the nuclear electron capture decay in ^{64}Cu

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Beta-decay properties of highly-charged ions can differ significantly from the ones known in neutral atoms. Here, we propose to investigate the dependence of the nuclear electron capture rate in fully-ionized, hydrogen-like, and helium-like ^{64}Cu ions at the FRS-ESR facility by employing the time-resolved Schottky mass spectrometry.

The present proposal was evaluated with grade A by the G-PAC in the year 2007 but was never scheduled. We request the GSI management to consider the experiment for the beam time schedule in 2023 without any additional G-PAC evaluation.

Approved shifts: 17 shifts

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