

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

Mittwoch, 1. Juni 2022 15:20 (5 Minuten)

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

Hauptautoren: SIDHU, Ragandeep Singh (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI)); CHEN, Rui Jiu (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI)); GLORIUS, Jan (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI)); SANJARI, Shahab (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI)); WEICK, Helmut (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI)); BLAUM, Klaus (Max-Planck-Institut für Kernphysik); LITVINOV, Sergey (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI)); LITVINOV, Yury (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI)); STECK, Markus (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI)); STÖHLKER, Thomas (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI))

Vortragende(r): SIDHU, Ragandeep Singh (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI))

Sitzung Einordnung: ESR