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## Microscopic description of $\beta$ -decay rates of r-process nuclei

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The r-process nucleosynthesis produces roughly half of the heavy elements found in nature. Among its nuclear physics inputs, the  $\beta$ -decay half-lives of extremely neutron-rich nuclei is a key ingredient. Since experimental data in this region is limited, we need theoretical predictions that are globally applicable. Here we present improvements to the existing self-consistent RHB+RQRPA approach including Gamow-Teller and first forbidden transitions. We discuss the  $\beta$ -decay half-lives, their sensitivity to the isoscalar pairing strength and the predictions of  $\beta$ -delayed neutron emission probabilities benchmarked to experimental data.

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