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The impact of (n,γ) reaction rate uncertainties of unstable isotopes near $N=82$ on the i process nucleosynthesis

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I will present the results of our new study of (n,γ) reaction rate uncertainties of unstable isotopes near the magic neutron number $N = 82$ on the i -process nucleosynthesis. Like in our previous work, in which we studied the impact of (n,γ) reaction rate uncertainties of unstable isotopes near $N = 50$ on the i -process nucleosynthesis in the He-flash white dwarfs, we use Monte Carlo simulations with randomly varied multiplication factors for the reaction rates, constrained by nuclear physics uncertainties, to reveal the isotopes whose n -capture cross section uncertainties have the strongest impact on the predicted i -process nucleosynthesis yields, this time, at the second peak n -capture elements.

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