Recent experimental progress for measurements of reaction rates involving radioactive nuclei

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Many astrophysical scenarios include reactions on radioactive short-lived nuclei, such as the rapid proton-capture process during X-ray bursts and the γ-process. It is still a challenge to constrain these reaction rates, that might have an impact on the output of the overall process. This also involves reactions on nuclei that have short-lived isomeric states, which is of potential relevance also for the s process. To overcome this problem, new techniques and experimental approaches need to be developed, e.g. by using surrogate reactions as an indirect measurement, as well as using heavy-ion storage rings for direct reaction studies.

This talk will give an overview of recent experimental progress and results of astrophysically relevant reactions studies like e.g. the important ^{23}Al(p,γ) reaction rate important for X-ray bursts.