

Abstract Submitted  
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**The rp-process in Type-I X-ray Bursts with REACLIB V1<sup>1</sup>**

RICHARD CYBURT, NSCL/JINA/MSU — Nuclear astrophysics is a rich and diverse field of research, requiring knowledge of experiments, observations and modeling. Of key importance to modeling is the nuclear physics input, whether it be thermonuclear reaction rates or weak decay rates. The Joint Institute for Nuclear Astrophysics (JINA) has taken a leading role in maintaining an up-to-date database of these rates. The JINA REACLIB Database, based of F. Thielemann's 1995 REACLIB, has been updated to incorporate the latest weak decay data, as well as modern experimental/theoretical reaction rates relevant for various nucleosynthetic processes. I will present several of the rates in the newly released REACLIB library V1, which takes advantage of new experimental data to create a new set of nuclear input for model calculations. I will discuss the impact this V1 library has on explosive hydrogen burning along the rp-process path in Type-I X-ray bursts and where improvements can be made.

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