Abstract Submitted
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Tracking the Synthesis Paths of P-Process Nuclei[1] STEPHANIE BOEHRINGER, Adrian College, JINA COLLABORATION[2] — The p-process nuclei are proton-rich nuclei heavier than iron are an astrophysical abnormality because of the enigmatic nature of their synthesis. It is possible to trace the production of the p-process nuclei as a path that starts from thirty-five different p-nuclei to their seed nuclei composed of lighter isotopes. Data from NSCL's nuclear reaction network of a Type II Supernova explosion with a temperature shock front that passes through multiple zones of the O/Ne layer was used to make calculations on the change in abundance of seed nuclei. The flow rates involving p-nuclei were calculated accurately enough to continue calculations on the paths taken by seed nuclei.

[1]NSF Research Experience for Undergraduates
[2]Using the network codes and reaclib network provided by the JINA collaboration

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