

On the discrepancy between the observed and predicted abundances of the radioactive isotope ${}^7\text{Be}$ produced in nova explosions

Recent measurements of the ${}^7\text{Be}$ abundance in nova ejecta show that it may exceed theoretically predicted values by an order of magnitude. I will demonstrate that this discrepancy can be significantly reduced if a nova explosion model takes into account that, according to observations, nova envelopes are enriched in ${}^4\text{He}$. I will also explain why the assumption that nova accreted envelopes are pre-enriched in ${}^3\text{He}$ made in previous models to explain the anomalously high abundances of ${}^7\text{Be}$ in nova ejecta does not help to solve the problem.

Length of presentation requested

Oral presentation: 17 min + 3 min questions

Please select between one and three keywords related to your abstract

Stellar explosions and mergers - theory

2nd keyword (optional)

Nucleosynthesis

3rd keyword (optional)

Stellar evolution

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