Contribution ID: **5** Type: **Oral presentation**

Updates on P-Process Related Measurements Using the Summing Technique with HECTOR

Friday 18 October 2024 10:20 (20 minutes)

The High EffiCiency TOtal absorption spectrometeR (HECTOR) is a summing spectrometer comprised of 16 NaI(Tl) segmented crystals with 2 PMTs on each segment to allow for optimal light collection from incident γ-rays. The arrangement of the 16 NaI(Tl) crystals allows for almost total 4π angular coverage to capture and sum together all γ-rays following the dexcitation of the compound nucleus formed during the reaction. An overview of the recent and current measurements with HECTOR to constrain the p-process will be discussed, including: 1) Cross-sections measured with HECTOR for (p,γ) and (α,γ) reactions on ^{102}Pd and ^{108,110}Cd and their impact on the predictions of the γ-process abundances along with new branching point temperature constraints for ^{111}In(γ,n)/(γ,p). 2) Cross-section measurements over possible resonant structures for ^{92,94}Mo(p,γ) and their reaction rate impacts. 3) Current work on measuring the cross-sections for (p,γ) and (α,γ) on ^{112,114,116}Sn and ^{108}Pd(p,γ)^{109}Ag. 4) Future projects to continue measurements in this mass region.
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Length of presentation requested

Oral presentation: 17 min + 3 min questions

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Nuclear Theory and Experiments

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