Contribution ID: **110** Type: **Oral Presentation**

Impact of the ^{26m}Al (p,γ) reaction to galactic ^{26}Al yield

Tuesday, 27 June 2017 11:25 (25 minutes)

Astrophysical observables that are directly linked to nuclear physics inputs provide critical and stringent constraints on nucleosynthetic models. As ^{26}Al was the first specific radioactivity observed in the Galaxy, its origin has fascinated the nuclear astrophysics community for nearly forty years. Despite extensive research, the precise origins of ^{26}Al remain elusive. At present, the sum of all putative stellar contributions generally overestimates the ^{26}Al mass in the interstellar medium. Among the many reactions that influence the yield of ^{26}Al, radiative proton capture on its isomer ^{26m}Al is one of the least constrained by experimental data. To this end, we developed a ^{26}Al isomeric beam and performed proton elastic scattering to search for low-spin states in ^{27}Si. The experimental method and the preliminary results of this on-going study will be presented.

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Session Classification: Session 2 (Chair: K. I. Hahn)