Contribution ID: 36

Type: oral contribution

Measurement of the Two-Halo Neutron Transfer Reaction 11Li(p,t)9Li at 62.4 MeV

Wednesday, 22 August 2018 16:55 (15 minutes)

We report the measurement of differential cross section of the 11Li(p,t)9Li reaction performed at TRIUMF. Previous investigation of the reaction was reported at lower energy of 3A MeV [1]. Present data were taken at higher energy where the direct reaction mechanism is expected to be more dominant. It will be shown that the present measurement shows the transition to a higher excited state than the previous report.

We used the ISAC-II facility to accelerate 11Li to 62.4 MeV and the IRIS facility was used for measuring the 11Li(p,t) reaction. This experimental data were simultaneously taken with the published experiment of (p,p')[2].

The transition to the second excited state of 9Li was observed for the first time. The presentation will describe the experiment and analysis.

- [1] I. Tanihata et al., Phys. Rev. Lett. 100, 192502 (2008).
- [2] J. Tanaka et al., Phys. Lett B 774, 268 (2017)

Primary authors: Mr WANG, Xuan (RCNP Osaka Univ); Prof. TANIHATA, Isao (RCNP Osaka Univ; Beihang Univ)

Co-authors: Mr TANAKA, Junki (TU Darmstadt; RCNP Osaka Univ); Mr KANUNGO, Rituparna (Saint Mary's University; TRIUMF); MARTIN, Alcorta (TRIUMF); BIDAMAN, Harris (Univ of Guelph); CRUZ, Steffen (Univ of British Columbia); DAIVIDS, Barry (TRIUMF); VARELA, Adiazvar (Univ of Guelph); EVEN, Julia (TRIUMF); HACKMAN, Greg (TRIUMF); HENDERSON, Jack (TRIUMF); ISHIMOTO, Shigeru (KEK); KAUR, Satbir (Saint Mary's University); KEEFE, Mathew (Saint Mary's University); KRÜCKEN, Reiner (TRIUMF; Univ of British Columbia); LEACH, Kyle (Colorado Sch. of Mines); LIGHTHALL, Jon (TRIUMF); PADILLA-RODAL, Elizabeth (TRUMF); RANDHAWA, Jaspreet (Saint Mary's University; TRIUMF); SANETULLAEV, Alisher (Saint Mary's University; TRIUMF); SMITH, J. K. (TRIUMF); WORKMAN, Orry (Saint Mary's University)

Presenter: Mr WANG, Xuan (RCNP Osaka Univ)

Session Classification: YSS