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Measurement of the $^{25}\text{Al}(\text{d},\text{n})^{26}\text{Si}(\text{p})$ reaction at RESOLUT: Spectroscopy of $l = 0$ and $l = 1$ resonances¹

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Studies of rp-process nucleosynthesis in stellar explosions show that establishing the lowest $l = 0$ and $l = 1$ resonances is the most important step to determine reaction rates in the astrophysical rp -process path. In an experiment performed at the RESOLUT radioactive beam facility of Florida State University, we have studied the $^{25}\text{Al}(\text{d},\text{n})^{26}\text{Si}$ reaction in inverse kinematics to establish the spectrum of the lowest $l = 0$ and $l = 1$ resonances. The spectrum is consistent with a previous experiment using the same reaction at RESOLUT [1] and results obtained from recent stable beam experiments [2].

[1] P.N. Peplowski *et al.* Phys.Rev.**C 79**, 032801 (2009)

[2] K.A. Chipps *et al.* Phys.Rev. **C 82**, 045803 (2010)

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