

$^{24}\text{Mg}(^3\text{He}, ^8\text{Li})$  1975Be38

Type	Author	History	Citation	Literature Cutoff Date
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The ground and first excited states of  $^{19}\text{Na}$  were populated in the  $^{24}\text{Mg}(^3\text{He}, ^8\text{Li})$  reaction.

A beam of 76.8 MeV  $^3\text{He}$  ions, from the MSU K50 cyclotron, impinged on a  $80 \mu\text{g}/\text{cm}^2$   $^{24}\text{Mg}$  target (mounted on a  $20 \mu\text{g}/\text{cm}^2$  backing). Reaction products were measured using a magnetic spectrograph positioned at  $\theta_{\text{lab}}=7.6^\circ$  and  $10.0^\circ$ . The focal plane was energy calibrated using several reactions, including  $^{24}\text{Mg}(^3\text{He}, ^6\text{He})$ ,  $^{24}\text{Mg}(^3\text{He}, ^6\text{Li})$ , and  $^{24}\text{Mg}(^3\text{He}, ^7\text{Li})$ .

Two peaks are observed in the spectrum, the ground state (at  $\Delta M=12928$  keV *12*) and the first excited state (at  $\Delta M=13048$  keV *15*). In the figure, the widths appear narrower than 100 keV (from evaluator).

 $^{19}\text{Na}$  Levels

E(level)	$J^\pi^\dagger$
0	( $5/2^+$ )
120 <i>10</i>	( $3/2^+$ )

$^\dagger$  From comparison with  $^{19}\text{O}$ .