^{139}La(p,d) 1973He02

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 146, 1 (2017)	30-Sep-2017

$J^{\pi}(^{139}\text{La g.s.})=7/2^{+}$.

1973He02: E=30 MeV proton beam was produced from the Texas A&M university cyclotron. Targets were 99.5% pure ^{139}La with thickness of 0.7 to several mg/cm^2 on 50 μg/cm^2 carbon backings. Reaction products were momentum analyzed with a magnetic spectrograph (FWHM=25 keV) and detected with a position-sensitive solid-state detector in the focal plane. Measured σ(E,θ). Deduced levels, J, π, L-transfer, spectroscopic factors from DWBA analysis. Comparisons with shell-model calculations.

^{138}La Levels

E(level)	L[†]	S[†]
0.0	2	0.79
70	2+0	0.26+0.18
114	2	0.22
160	2+(0)	0.055
194	2+0	0.034+0.043
232	2	0.59
424	2+0	0.078+0.19
493	2+0	0.023+0.31
530	2+0	0.017+0.40

[†] From DWBA fit to experimental differential cross sections.