^{9}Be(^{31}Ar,^{31}Ar′) 2018Mu18

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh	NDS 184, 29 (2022)	24-Jun-2022

2018Mu18: E=620 MeV/nucleon ^{31}Ar secondary beam was produced by fragmentation of a 885 MeV/nucleon ^{36}Ar primary beam on a beryllium target at the SIS-FRS facility at GSI. The secondary target was a ^{9}Be. The prime objective of the experiment was to study 2p decays of ^{30}Ar isotopes. Excited states of ^{31}Ar were populated by various inelastic mechanisms, as by-product results. Projectile-like particles were analyzed with the Fragment Separator, protons and heavy recoils were detected with a DSSD array consisting of 4 DSSDs. Measured recoil-p-p correlation. Deduced excited levels in ^{31}Ar. See also 2019Ko29.

^{31}Ar Levels

E(level)†	J^{π}	Comments
0	$5/2^{+}$	E(level): −6 keV *34* inferred based on isobaric symmetry assumptions (2018Mu18). J^{π}: from the Adopted Levels.
950 *50*		
1580? *60*		
2120 *70*		
2.62×10^{3} *13*		
3.56×10^{3} *15*		
4.2×10^{3} *2*		
x		E(level): a continuum region of ^{31}Ar excitations above 5 MeV inferred based on observed 1p transitions in a broad range of energy probably feeding the 3.0 MeV *2* level in ^{30}Cl (2018Mu18).

† Deduced from observed ^{29}S-p-p correlations (2018Mu18).