^{9}Be(^{78}Rb,^{70}Asγ) 2014Mo26

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	G. Gürdal, E. A. Mccutchan	NDS 136, 1 (2016)	1-Jul-2016

2014Mo25: 101.6 MeV/nucleon beam of ^{78}Rb was produced through nuclear charge exchange from 150 MeV/nucleon ^{78}Kr primary beam impinging on a ^{9}Be target and using A1900 separator at NSCL-MSU cyclotron facility. Secondary ^{9}Be target was 376 mg/cm^2 thick. Measured Eγ, $\gamma\gamma$-coin, (^{70}As)-γ-coin; deduced $T_{1/2}$ of 8^+ and 9^+ states. γ rays were detected using SeGA array of 15 HPGe detectors. The residues were identified according to the TOF and the energy-loss in the focal plane of the S800 spectrometer.

^{70}As Levels

E(level)†	J$^\pi$†	E(level)†	J$^\pi$†	$T_{1/2}$‡	E(level)†	J$^\pi$†	$T_{1/2}$‡
0.0	4^+	887.76	$7^{(-)}$		1752.21	$9^{(+)}$	59 ps *30*
32.01	2^+	898.27	(5)		2467.5		
166.74	3^+	933.16			2579.9	(10^+)	
485.32	4^-	1045.87	$6^{(+)}$		2732.9	11^+	
566.52	$5^{(-)}$	1454.3			4075.6	13^+	
868.91	$6^{(-)}$	1676.11	$8^{(+)}$	55 ps *20*			

† From the Adopted Levels.
‡ From line-shape analysis in $\gamma\gamma$-coin (2014Mo26).

γ(^{70}As)

E$_i$(level)	J$_i^\pi$	E$_\gamma$†	E$_f$	J$_f^\pi$	E$_i$(level)	J$_i^\pi$	E$_\gamma$†	E$_f$	J$_f^\pi$
166.74	3^+	134.63	32.01	2^+	1454.3		566.5	887.76	$7^{(-)}$
		166.83	0.0	4^+	1676.11	$8^{(+)}$	221.8	1454.3	
485.32	4^-	318.60	166.74	3^+			743.0	933.16	
		485.31	0.0	4^+			788.3	887.76	$7^{(-)}$
566.52	$5^{(-)}$	81.19	485.32	4^-	1752.21	$9^{(+)}$	76.1	1676.11	$8^{(+)}$
868.91	$6^{(-)}$	302.41	566.52	$5^{(-)}$	2467.5		791.3	1676.11	$8^{(+)}$
898.27	(5)	331.74	566.52	$5^{(-)}$	2579.9	(10^+)	827.7	1752.21	$9^{(+)}$
933.16		34.7	898.27	(5)			903.8	1676.11	$8^{(+)}$
		64.5	868.91	$6^{(-)}$	2732.9	11^+	980.7	1752.21	$9^{(+)}$
1045.87	$6^{(+)}$	479.35	566.52	$5^{(-)}$	4075.6	13^+	1342.7	2732.9	11^+
1454.3		408.5	1045.87	$6^{(+)}$					

† From the Adopted Gammas.

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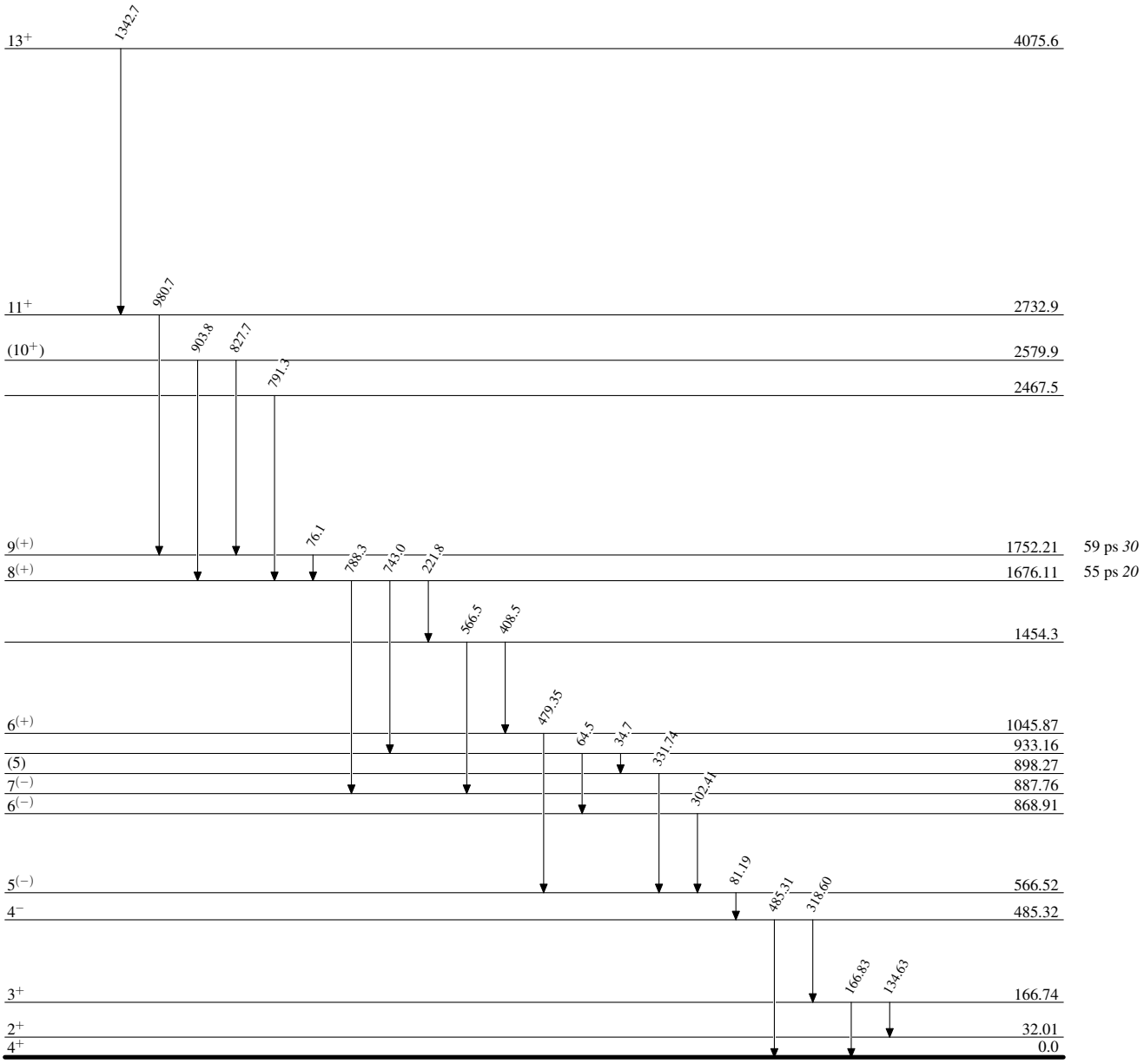
Level Scheme



$^{70}_{33}As_{37}$