

Odd Z
 $T_z = -7/2$

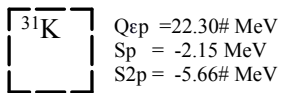
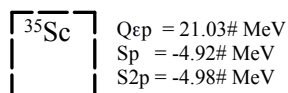
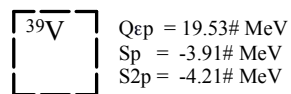
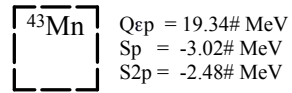
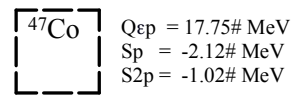


Fig. 1: Known experimental values for heavy particle emission of the odd $T_z = -7/2$ nuclei.

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Table 1Observed and predicted β -delayed particle emission from the odd- Z , $T_z = -7/2$ nuclei

Nuclide	J^π	$T_{1/2}$	Q_ϵ	$Q_{\epsilon p}$	$BR_{\beta p}$	$Q_{\epsilon 2p}$	$Q_{\epsilon 3p}$	$Q_{\epsilon \alpha}$	Experimental
^{31}K		<10 ps	22.94(36)#	22.30(30)#		22.78(30)#	19.54(30)#	14.35(50)#	[2019Ko18]
^{35}Sc			21.91(45)#	21.03(45)#		21.91(40)#	18.57(40)#	13.35(45)#	
^{39}V			20.07(45)#	19.53(45)#		21.13(40)#	18.12 (40)#	14.96(45)#	
^{43}Mn			19.34(45)#	17.70(45)#		18.49(40)#	16.03(40)#	12.45(45)#	
^{47}Co			17.75(78)#	15.75(61)#		15.55(60)#	12.56(60)#	10.17(63)#	

Table 2Particle emission from the odd- Z , $T_z = -7/2$ nuclei

Nuclide	S_p	BR_{1p}	S_{2p}	Q_α	Experimental
^{31}K	-2.15(15)*	100%	-5.66(35)#		
^{35}Sc	-4.92(50)#		-4.980(45)#	-9.59(50)#	
^{39}V	-3.91(50)#		-4.21(50)#	-6.96(57)#	
^{43}Mn	-3.02(50)#		-2.48(45)#	-7.63(57)#	
^{47}Co	-2.12(67)#		-1.02(67)#	-9.18(72)#	

* From [2019Ko18], [2021Wa16] lists -4.90(35)#.

Table 3direct proton emission from $^{31}\text{K}^*$, $T_{1/2} = <10$ ps, $BR_p = 100\%$.

E_p (c.m.)	I_p (abs)	$E_{daughter} (^{30}\text{Ar})$
2.15(15)	100%	0.0

* All values from [2019Ko18].

References used in the Tables

- [1] **2019Ko18** D. Kostyleva, I. Mukha, L. Acosta, E. Casarejos, V. Chudoba, A. A. Ciemny, W. Dominik, J. A. Duenas, V. Dunin, J. M. Espino, A. Estrade, F. Farion, A. Fomichev, H. Geissel, A. Gorshkov, L. V. Grigorenko, Z. Janas, G. Kaminski, O. Kiselev, R. Knobel, S. Krupko, M. Kuich, Y. A. Litvinov, G. Marquez-Duran, I. Martel, C. Mazzocchi, C. Nociforo, A. K. Orduz, M. Pfutzner, S. Pietri, M. Pomorski, A. Prochazka, S. Rymzhanova, A. M. Sanchez-Benitez, C. Scheidenberger, H. Simon, B. Sitar, R. Slepnev, M. Stanoiu, P. Strmen, I. Szarka, M. Takechi, Y. K. Tanaka, H. Weick, M. Winkler, J. S. Winfield, X. Xu, M. V. Zhukov, Phys. Rev. Lett. **123**, 092502 (2019). <https://doi.org/10.1103/PhysRevLett.123.092502>
- [2] **2021Wa16** M. Wang, W. J. Huang, F. G. Kondev, G. Audi, S. Naimi, Chin. Phys. C **45**, 030003 (2021). <https://doi.org/10.1088/1674-1137/abddaf>