^{136}Xe(p,p′) 1972Se17,1970Mo11

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 152, 331 (2018)	1-Apr-2018

1970Mo11: E(p)=9.8-12.9 MeV. Measured $\sigma(\theta)$ using four lithium-drifted silicon detectors (FWHM=50 keV); R-matrix analysis. Subset of results presented in 1969Mo02.

1972Se17: E(p)=13.982 MeV. Measured $\sigma(\theta)$ for 20 angles between θ=30°−160° (FWHM≈38 keV); DWBA and Coupled-Channel Calculations (CCC).

Other: 1978Fo07 (studied ^{137}Cs IAR), 1970Hi05 (reanalysis of data from 1970Mo11).

For cross sections, partial proton widths, and spectroscopic factors see 1970Mo11.

Only configurations with dominant (80%−99%) components are indicated in the comments. Configurations based on agreement with calculations based on the quasiparticle random-phase approximation (1972Se17).

^{136}Xe Levels

E(level)[†]	Jπ[‡]	L[#]	β_L[#]	Comments
0.0				
1305 *15*		2	0.061	configuration=π1g7/2^{+2}. β_L: other:0.064 from coupled-channels calculation (1972Se17).
1684 *15*		4	0.054	configuration=π1g7/2^{+2}.
1888 *15*		6,(5)[@]	0.053	configuration=π1g7/2^{+2}.
1920[&] *15*		2[@]	0.026	configuration=(π1g7/2)(π2d5/2).
2108 *15*		6,(5)[ab]	0.045	configuration=(π1g7/2)(π2d5/2).
2262 *15*		6	0.064	
2294[c] *15*		2	0.025	
2409 *15*		2	0.033	configuration=(π2d5/2)$^{+2}$.
2448[c] *15*		4	0.050	configuration=(π1g7/2)(π2d5/2).
2556 *15*		4	0.036	configuration=(π2d5/2)$^{+2}$.
2627[c] *15*		2	0.025	
2855[d] *15*				
2969 *15*		2	0.035	
3.16×10^3 *2*				
3263[e] *15*		3	0.122	β_L: other:0.199 from coupled-channels calculation (1972Se17).
3.31×10^3 *2*				
3.63×10^3[f] *2*				
3.78×10^3 *2*	(4$^-$)			
3.87×10^3 *2*	(3$^-$)			
4.06×10^3[f] *2*	(3$^-$)[a]			
4.15×10^3 *2*	(2$^-$)			
4.27×10^3 *2*	2$^-$[a]			
4.38×10^3[f] *2*	4$^-$			
4.45×10^3[f] *2*	(2$^-$)[a]			
4.54×10^3 *2*	(1$^-$)			
4.71×10^3[f] *2*	(2$^-$)[a]			
4.82×10^3[f] *2*	1$^-$			
4.94×10^3[f] *2*	2$^-$			
5.10×10^3 *2*	(2$^-$)			
5.15×10^3 *2*	(2$^-$)			
5223 *15*	(3$^-$)			
5.31×10^3 *2*				
5.36×10^3 *2*				
5.42×10^3 *2*				

Continued on next page (footnotes at end of table)

^{136}Xe(p,p′) 1972Se17,1970Mo11 (continued)

^{136}Xe Levels (continued)

E(level)[†]	Jπ[‡]
5.56×10^3 *2*	(2$^-$,3$^-$)
5.67×10^3 *2*	(3$^-$)
5.85×10^3 *2*	
5.99×10^3 *2*	
6.15×10^3 *2*	
6.29×10^3 *2*	

† From 1972Se17 (ΔE=15) and 1970Mo11 (ΔE=20).
‡ From R-matrix fit to $\sigma(\theta)$ at the f7/2, p3/2, and first f5/2 resonance (1970Mo11) for E≥3.26 MeV.
# From DWBA analysis; second values for β_L from Coupled-Channel Calculations (CCC) (1972Se17).
@ Spectra partially masked by contaminant.
& Not observed by other groups; therefore, not adopted.
a Not consistent with adopted J^π.
b Evaluator believes that spectra for this level may also be contaminated.
c Not observed by 1970Mo11.
d Multiplet.
e See 1972Se17 for calculations of admixtures from various configurations.
f Peak near this energy indicated in Figure 1 of 1972Se17, however, not included in their Table II or the discussion.