

$^{136}\text{Xe}(^3\text{He},t)$ 2011Pu06

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

2011Pu06: $E(^3\text{He})=420$ MeV. Measured triton spectra and $\sigma(\theta)$ for θ between 0° and 4.0° using the Grand Raiden spectrometer (FWHM=42 keV); DWBA analysis.

2017Fr02: $E(^3\text{He})=420$ MeV. Measured triton spectra and $\sigma(\theta)$ using the Grand Raiden spectrometer (FWHM=30-40 keV); DWBA analysis.

 ^{136}Cs Levels

E(level) [†]	J^π [‡]	Γ	L [#]	B(GT) [@]	Comments
590 5	1 ⁺			0.149 20	
850 5	1 ⁺			0.082 15	
1000 5	(2 ⁻)		1+3		E(level): other: 995 (2017Fr02).
1910 5	1 ⁺			0.017 5	
2010 5	1 ⁺			0.024 8	
2290 5	1 ⁺			0.042 11	
2360 5	1 ⁺			0.059 15	
2450 5	1 ⁺			0.015 4	
2500 5	1 ⁺			0.024 8	
2550 5	1 ⁺			0.033 11	
2600 5	1 ⁺			0.033 7	
2710 5	1 ⁺			0.055 18	
2810 5	1 ⁺			0.026 7	
2910 5	1 ⁺			0.027 12	
3420 5	1 ⁺			0.024 10	
3520 5	1 ⁺			0.097 23	
13380	0 ⁺				E(level), J^π : IAS of 0 ⁺ g.s. ^{136}Xe parent state.
$\approx 15 \times 10^3$					E(level): giant GT resonance.
$\approx 23 \times 10^3$		≈ 10 MeV			E(level): broad spin-dipole resonance.

[†] From 2011Pu06.

[‡] From 2011Pu06, using shapes of measured $\sigma(\theta)$ and comparison with DWBA calculations. 2011Pu06 note that in order to obtain a good description of $J^\pi=1^+$ angular distributions, a significant $\Delta J=2$ angular momentum transfer component must be added to the cross section.

[#] From DWBA fit to measured differential cross section (2017Fr02).

[@] GT strength extracted by combining the Gamov-Teller and Fermi unit cross sections at $q=0$; see Eq (4) of 2011Pu06.