

$^{24}\text{Mg}(\pi^+, \pi^{+'}), (\pi^-, \pi^{-'})$ **1990BI04**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia, Anagha Chakraborty		NDS 186, 2 (2022)	31-Mar-2022

1990BI04: $^{24}\text{Mg}(\pi^+, \pi^{+'}), (\pi^-, \pi^{-'})$, E=150, 180 MeV; measured $\sigma(\theta)$, $\sigma(E(\pi))$. Data were obtained using the Energetic Pion Channel and Spectrometer (EPICS) facility at the Clinton P. Anderson Meson Physics Facility (LAMPF) of the Los Alamos National Laboratory. The experimental system, consists of a momentum dispersing channel and a high-resolution spectrometer. Deduced level energies. Performed distorted-wave impulse approximation (DWIA).

 ^{24}Mg Levels

E(level) [†]	J ^π [‡]	L [‡]	Comments
0	0 ⁺		
1.36×10 ³	2 ⁺	2	
4.14×10 ³	2 ⁺	2	
5.93×10 ³	4 ⁺	4	
6.44×10 ³	0 ⁺		J ^π : In 1990BI04 from comparison of coupled-channels calculations employing monopole form factors with the measure $\sigma(\theta)$ data.
7.34×10 ³			
7.55×10 ³	3 ⁻	3	
8.33×10 ³	3 ⁻	3	
9.32×10 ³	4 ⁺	4	
9.97×10 ³	5 ⁻	5	
11.08×10 ³	3 ⁻	3	
12.06×10 ³			
13.26×10 ³			
13.96×10 ³	3 ⁻	3	
15.1×10 ³	(6 ⁻)		T=1 J ^π : From Adopted Levels.
15.4×10 ³			

[†] As listed in **1990BI04**, no mention about uncertainty. An error of 11% was mentioned, appears to be not related to level energy.

[‡] From **1990BI04**, except where otherwise noted. J^π based on L value. L values were deduced from measured $\sigma(\theta)$ and distorted-wave impulse approximation (DWIA) analysis.