^{6}Li(^{3}He,π^{-}) 1979As01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, B. Grees	ENSDF	31-July-2020

1979As01: Using a E(^{3}He)=910 MeV beam at the CERN synchrocyclotron, evidence is found for production of the ^{9}C+π^{-} two-body final state, which is termed "doubly coherent π^{-} production". A deviation from the general falloff slope in the high-energy endpoint shape of the π^{-} momentum distribution is attributed to the two-body final state.

1984Br22: The measurement of (1979As01) was repeated at CERN with improved an apparatus that permited better resolution of the ^{9}C states, rather than an enhancement of counts at the endpoint. In this case, three well-resolved groups appeared at the endpoint. At the highest π^{-} momentum (723 MeV/c) a peak is identified and associated with ^{9}C(0,2.2 MeV) states; the only known states at the time. Two additional groups at $P_{\pi^{-}}$=714 and ≈705 MeV/c, corresponding to E_x≈9 and 15 MeV, respectively. The authors suggest the 9 MeV group may be the analog of the E_x=23 MeV GDR of ^{9}Be.

Theory: See theoretical analysis of π production in this reaction in (1982Hi02).

^{9}C Levels

E(level)	Comments
0†	
2.2×10^{3}†	
9×10^{3}	E(level): Suggested as the analog of the ^{9}Be*(23 MeV) GDR. Γ: broad.
15×10^{3}	Γ: broad.

† Unresolved.