

$^{12}\text{C}(\text{p},\text{P}'\alpha)$  1969Ep01

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, J. E. Purcell and C. G. Sheu		NP A968,71 (2017)	1-Jan-2017

- 1969Ep01:  $^{12}\text{C}(\text{P},\text{p}\alpha)$  E=57 MeV, measured  $\sigma(\text{E}_\text{p},\text{E}_\alpha)$ . Deduced reaction mechanism.  $^{12}\text{C}$  deduced levels, J,  $\pi$ , proton decay, T.
- 1970Go12:  $^{12}\text{C}(\text{P},\text{P}'\alpha)$  E=160 MeV, measured  $\sigma(\text{E}_\text{p}',\text{E}_\alpha,\theta_\text{p}',\theta_\alpha)$ .
- 1977Ro02:  $^{12}\text{C}(\text{P},\text{p}\alpha)$  E=100 MeV, measured  $\sigma(\text{E}_\text{p},\text{E}_\alpha,\theta)$ .  $^{12}\text{C}$  deduced  $\text{S}_\alpha$ .
- 1978La11:  $^{12}\text{C}(\text{P},\text{p}\alpha)$  E=600 MeV, measured  $\text{p}\alpha$ -coin, momentum spectrum,  $\sigma$ .
- 1981De08:  $^{12}\text{C}(\text{P},\text{P}'\alpha)$  E=44.2 MeV, measured  $\sigma(\theta_\text{p}',\text{E}_\alpha)$ ,  $\text{P}'\alpha$ -coin,  $\sigma(\theta_\text{p}',\theta_\alpha)$ . Deduced reaction mechanism.  $^{12}\text{C}$  deduced isoscalar E2 resonance, EWSR strength. DWBA analysis.
- 1997Te14:  $^{12}\text{C}(\text{P},\text{p}\alpha)$  E=156 MeV, measured  $\text{E}_\text{p}$ ,  $\text{I}_\text{p}$ ,  $\sigma(\theta,\text{E}_\text{p})$ .  $^{12}\text{C}$  deduced small continuum nonresonant contribution.
- 1998Yo09:  $^{12}\text{C}(\text{pol. p},\text{p}\alpha)$  E=296 MeV, measured  $\sigma(\theta_\text{p},\theta_\alpha,\text{E}_\text{p})$ ,  $\text{A}_\gamma$ . Deduced  $\alpha$  spectroscopic factor.
- 1999Ha27:  $^{12}\text{C}(\text{P},\text{P}'\alpha),(\text{P},\text{p}3\alpha)$  E=14,18,26 MeV, measured proton spectra,  $\text{E}_\alpha$ ,  $\sigma(\text{E},\theta)$ . Deduced role of three-body simultaneous breakup.
- 2009Co01:  $^{12}\text{C}(\text{P},\text{p}\alpha)$  E=101 MeV, measured cross section and analyzing power.
- 2009Ma21:  $^{12}\text{C}(\text{pol. p},\text{p}\alpha)^8\text{Be}$  E=100 MeV, measured particle spectra, (particle)(particle)-coin,  $\sigma$ ,  $\sigma(\theta)$ , vector analyzing powers.

 $^{12}\text{C}$  Levels

E(level)	$\text{J}^\pi$
$12.7 \times 10^3$	
$14.1 \times 10^3$	
$19.7 \times 10^3$ † 5	
$21.1 \times 10^3$ † 3	
$21.6 \times 10^3$	(2 <sup>+</sup> )
$22.2 \times 10^3$ † 5	
$24.1 \times 10^3$	(2 <sup>+</sup> )
$26.3 \times 10^3$ † 5	
$26.6 \times 10^3$	(2 <sup>+</sup> )

† From (1969Ep01).