^{12}C(^{11}B,^{12}C),(^{11}B,^{11}B) 1991Al12,1992Ja12

History

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

1990Ja12,1992Ja12: ^{11}B(^{12}C,^{11}B) E=344 MeV; measured $\sigma(\theta)$, deduced S.

1991Al12,1991Ja12 : ^{12}C(^{11}B, ^{11}B) $E_{c.m.}$=14.6-41.7 MeV; measured $\sigma(E,\theta)$; deduced model parameters and proton spectroscopic factor.

2001Ru14: ^{12}C(^{11}B, ^{11}B),(^{11}B,^{12}C) E=49 MeV. measured $\sigma(\theta)$; deduced deformation parameters.

2014Ha34: ^{11}B(^{12}C,^{12}C) E=18 MeV. Deduced $\alpha(\theta)$.

2014Li49: XUNDL dataset compiled by TUNL, 2015.

A beam of 50 MeV ^{11}B ions, from the HI-13 tandem accelerator at the Beijing CIAE, measured the ^{12}C(^{11}B,^{12}C) and ^{12}C(^{11}B,^{11}B) reactions to determine the $^{12}C_{g.s.}$ proton spectroscopic factor. The ^{11}B and ^{12}C nuclei recoiling from the target were detected at $8°\leq\theta_{lab}\leq24°$ and $3°\leq\theta_{lab}\leq24°$, respectively. The elastic scattering and elastic transfer events, were analyzed using the FRESCO DWBA code.

The ground state proton spectroscopic factor S=2.15 *23* is obtained and compared with both theory and measured values in five other reactions.

^{12}C Levels

E(level)[†]	J^{π}	S[‡]	Comments
0	0^+	2.85	S: Also See S=2.15 *23* (2014Li49).
4.4×10^3	2^+	0.79	
9.64×10^3	3^-	≤0.55	
10.84×10^3			

[†] From (1991Al12).

[‡] From (1990Ja12,1992Ja12).