

Table 12.11 from (1959AJ76):  $^{12}\text{C}$  states from  $^{14}\text{N}(d, \alpha)^{12}\text{C}$

| A                    |                  | B                    | C                    | D                    | E                    | F                    | G                          |
|----------------------|------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------------|
| Q<br>(MeV $\pm$ keV) | $\sigma$<br>(mb) | Q<br>(MeV $\pm$ keV) | Q<br>(MeV $\pm$ keV) | Q<br>(MeV $\pm$ keV) | Q<br>(MeV $\pm$ keV) | Q<br>(MeV $\pm$ keV) | $^{12}\text{C}^*$<br>(MeV) |
| 13.39 $\pm$ 80       | 1                | 13.575 $\pm$ 12      |                      |                      |                      |                      | 0                          |
| 9.02 $\pm$ 70        | 3                | 9.137 $\pm$ 6        |                      |                      |                      |                      | 4.442                      |
| 5.77 $\pm$ 70        | 0.3              |                      | 5.89 $\pm$ 30        | 5.910 $\pm$ 15       | 5.912 $\pm$ 13       |                      | 7.664                      |
|                      |                  | 3.955 $\pm$ 3        |                      |                      |                      | 3.933 $\pm$ 14       | 9.63                       |

A:  $E_\alpha = 1.01$  MeV,  $\theta = 90^\circ$  (1940HO1A).

B: (1951MA08).

C: Based on  $Q_1 = 9.137$  for the second group (1953DU23). At  $E_\alpha = 0.62$  MeV,  $\theta = 90^\circ$ , this group has 6% the intensity of the first.

D: (1955PA50).

E: (1956AH32).

F: (1956DO41): it is suggested that a systematic error exists in (1951MA08)'s value for this state.

G: Based on  $Q_0 = 13.579$ .