

Table 10.27 from (2004TI06): Levels of  $^{10}\text{B}$  from  $^9\text{Be}(d, n)$  and  $^9\text{Be}(^3\text{He}, d)$  <sup>a</sup>

$E_x$ (MeV $\pm$ keV) <sup>a</sup>	$^9\text{Be}(d, n)$ <sup>b</sup>		$^9\text{Be}(^3\text{He}, d)$ <sup>c</sup>		$J^\pi; T$ <sup>a</sup>
	$l_p$	$S_{\text{rel}}$	$l_p$	$(2J + 1)C^2S$	
0	1	1.0	1	3.30	$3^+; 0$
0.72	1	1.97	1	2.76	$1^+; 0$
1.74	1	1.36	1	1.20	$0^+; 1$
2.15	1	0.41	1	0.82	$1^+; 0$
3.59	1	0.10	1	0.29	$2^+; 0$
4.77	( $\geq 2$ )		$1 + (3)$ <sup>d</sup>	0.10	$3^+; 0$
				$\leq 0.82$	
5.11	0	0.14	$0 + 2$	0.34, 0.14	$2^-; 0$
5.16	}	0.43	1	0.86	$2^+; 1$
5.18					$1^+; 0$
5.92	1	0.49	1	2.05	$2^+; 0$
6.03			(3) <sup>d</sup>	$\leq 0.20$	$4^+$
6.13	(2)		(2) <sup>e</sup>	3.04	$3^-$
6.56	(3)		(2) <sup>e</sup>	2.01	$(4)^-$
$6.89 \pm 15$	(1)				$1^-; 0 + 1$
$7.00 \pm 15$	(1)				$(1, 2)^+; (0)$
$7.48 \pm 15$	f				<sup>g</sup>
$7.56 \pm 25$	f				$0^+; 1$
$(7.85 \pm 50)$	f				$1^-$
$(8.07 \pm 50)$	f				$(2^-; 0)$
$(8.12 \pm 50)$	f				

<sup>a</sup> Values without uncertainties are from Table 10.18; others are from Table 10.15 in (1979AJ01). See that table for additional information and for references. See also (1984AJ01), and see the discussions under  $^9\text{Be}(d, n)$  and  $^9\text{Be}(^3\text{He}, d)$  in this review.

<sup>b</sup>  $S_{\text{rel}}$  from experiment at  $E_d = 12.0 - 16.0$  MeV.

<sup>c</sup>  $E(^3\text{He}) = 18$  MeV; DWBA analysis; values shown are those obtained with one of the two optical-model potentials used in the analysis. For earlier ( $^3\text{He}, d$ ) results see Table 10.17 in (1979AJ01).

<sup>d</sup> Angular distribution poorly fitted by DWBA.

<sup>e</sup> See (1980BL02) for a discussion of these two states, including a comparison with the (d, n) data:  $l_p = 2$  is slightly preferred to  $l_p = 1$  on the basis of the observed strengths. Neither  $l_p = 2$  nor 1 gives a good DWBA fit.

<sup>f</sup> State observed in (d, n) reaction;  $l_p$  not determined.

<sup>g</sup> Group shown corresponds to unresolved states in  $^{10}\text{B}$ .