

Table 16.4 from (1986AJ04):  
States of  $^{16}\text{N}$  from  $^{10}\text{B}(^7\text{Li}, \text{p})$  <sup>a</sup>

$E_x$ <sup>b</sup> (MeV)	$J$ <sup>c</sup>	$E_x$ <sup>b</sup> (MeV)	$J$ <sup>c</sup>
0		5.142	e
0.124		5.230	f
0.296		5.318	0, 1
0.400		5.525	4, 3 <sup>g</sup>
3.352	c	5.734	h
3.524	c	6.002	1 <sup>f</sup>
3.964	c	6.172	i
4.321	c	6.374	c
4.392	c	6.504	c
4.785	c	6.608	4 <sup>j</sup>
5.054	1, 2 <sup>d</sup>		

<sup>a</sup> (1984FO07); angular distributions at  $E(^7\text{Li}) = 16.0$  MeV. See also [reaction 3 in \(1982AJ01\)](#).

<sup>b</sup>  $\pm 3$  keV.

<sup>c</sup> Based on the assumption that the angle-integrated cross section is proportional to  $2J + 1$ . States labelled <sup>c</sup> have  $J$  consistent with known values.

<sup>d</sup> If a doublet,  $J = 1$  and  $0$ .

<sup>e</sup> Doublet: The sum of the two  $J = 7, 8$  or  $6$ . (1984FO07) suggest  $4^+(5^+, 3^+)$  for  $J^\pi$  of  $^{16}\text{N}^*(5.13)$  and  $3^-(2^-)$  for the  $J^\pi$  of  $^{16}\text{N}^*(5.15)$  with the combination  $3^+, 2^-$  extremely unlikely.

<sup>f</sup> Narrow state.

<sup>g</sup> If a doublet, and if one state is  $3^+$ , the second member would have  $J = 0$ .

<sup>h</sup> If a doublet of which one member is  $5^+$ , the other would have  $J = 2$  ( $1, 3$ ).

<sup>i</sup> (1984FO07) suggest an unresolved doublet: one of the states is a  $4^-$  state, the other has  $J = 2, 1$ .

<sup>j</sup>  $J = 4$ , if a single state.