

Table 15.2 from (1959AJ76): Energy levels of  $^{15}\text{N}$ 

$E_x$ (MeV $\pm$ keV)	$J^\pi$	$\Gamma$ (keV)	Decay	Reactions
0	$\frac{1}{2}^-$	—	stable	1, 5, 11, 16, 19, 20, 27, 28, 31, 32, 33, 34, 36, 37, 38
$5.276 \pm 6$	$\leq \frac{7}{2}^+$		$\gamma$	5, 11, 16, 19, 20, 27, 32
$5.305 \pm 6$	$\frac{1}{2}^+, \frac{3}{2}^+$		$\gamma$	5, 11, 16, 19, 20, 27, 32
$6.328 \pm 6$	$\leq \frac{5}{2}^-$		$\gamma$	5, 11, 16, 20, 27, 32, 34
$7.164 \pm 6$	$\leq \frac{7}{2}^+$		$\gamma$	13, 20, 27
$7.309 \pm 6$	$\frac{1}{2}^+, \frac{3}{2}^+$		$\gamma$	16, 20, 27
$7.572 \pm 8$	$\leq \frac{7}{2}^+$		( $\gamma$ )	16, 27
$8.316 \pm 6$	$\frac{1}{2}^+, \frac{3}{2}^+$		$\gamma$	20, 27
$8.575 \pm 8$	$\leq \frac{7}{2}^+$		$\gamma$	20, 27
$9.062 \pm 10$	$\frac{1}{2}^+, \frac{3}{2}^+$		$\gamma$	20, 27
$9.165 \pm 10$			$\gamma$	20, 27
$9.834 \pm 10$			( $\gamma$ )	27
$10.069 \pm 10$	$\leq \frac{5}{2}^-$		$\gamma$	27
$10.458 \pm 10$			$\gamma$	13, 27
$10.548 \pm 10$	$\frac{5}{2}, \frac{7}{2}$		$\gamma$	13, 27
$10.710 \pm 10$	$\frac{3}{2}^+$		$\gamma$	13, 14, 27
$10.815 \pm 10$	$\frac{3}{2}^-$		$\gamma$	13, 27
$11.243 \pm 10$	$> \frac{1}{2}^-$	3.3	n	21, 27
$11.299 \pm 10$	$\frac{1}{2}^-$	$5.5 \pm 1$	$\gamma, n, p$	13, 15, 21, 23
$11.438 \pm 10$	$\frac{1}{2}^+$	$40 \pm 3$	$\gamma, n, p, \alpha$	2, 13, 15, 21, 23
11.61	$\frac{1}{2}^+{}^a$	450	$\gamma, n, p$	13, 15, 30
$11.773 \pm 10$	$\frac{3}{2}^+$	$39 \pm 3$	n, p, $\alpha$	2, 15, 21, 23
$11.885 \pm 10$	$\frac{3}{2}^-$	$20 \pm 2$	n, p, $\alpha$	2, 15, 21
$11.950 \pm 10$	$> \frac{1}{2}^-$	$\leq 3$	n, $\alpha$	2, 21
$11.972 \pm 10$	$\frac{1}{2}^-$	16	n, p, $\alpha$	15, 21
$12.103 \pm 10$	$\frac{5}{2}$	$19 \pm 5$	n, p, $\alpha$	2, 3, 15, 21
$12.152 \pm 10$	$\frac{3}{2}$	49	n, p, $\alpha$	2, 3, 15, 21, 23, 24
$12.333 \pm 10$	$\frac{5}{2}$	$21 \pm 3$	n, p, $\alpha$	15, 21
$12.502 \pm 10$	$\frac{5}{2}^+$	28	n, p, $\alpha$	2, 3, 15, 21, 24
$12.928 \pm 10$	$\frac{3}{2}^-$	60	n, p, $\alpha$	3, 15, 21
12.93	$\frac{7}{2}^-$	30	p, $\alpha$	3
13.15		$< 2$	n, p, $\alpha$	2, 3

Table 15.2 from (1959AJ76): Energy levels of  $^{15}\text{N}$  (continued)

$E_x$ (MeV $\pm$ keV)	$J^\pi$	$\Gamma$ (keV)	Decay	Reactions
13.18	$\frac{1}{2}^{\pi-}$ $\frac{3}{2}^{\pi-}$ $\frac{5}{2}^{\pi+}$ $\frac{7}{2}^{\pi-}$	6	n, p, $\alpha$	2, 3
13.36		20	n, $\alpha$	2, 3
13.41		30	p, $\alpha$	3
13.61		15	n, $\alpha$	2, 3
13.71		30	n, $\alpha$	2
13.85		50	n, $\alpha$	2
14.08		$\approx 7$	n, $\alpha$	2
14.17		25	n, $\alpha$	2
14.63		53	n, $\alpha$	2
14.90			n, $\alpha$	2
15.01			n, $\alpha$	2
15.08			n, $\alpha$	2
15.29			n, $\alpha$	2
15.37			n, $\alpha$	2
15.61			n, $\alpha$	2
15.92			n, $\alpha$	2
15.93			n, $\alpha$	2
15.99			n, $\alpha$	2
16.04			n, $\alpha$	2
16.47			p	7
16.72	$\approx 90$	n, p, d	6, 7	
16.90	$\approx 350$	n, d	6	
17.11	broad	d, $\alpha$	9	
17.24	$\approx 170$	t, d	8	
17.37	$\approx 350$	p, $\alpha$ , t, d, n	6, 7, 8, 9	
17.58	$\approx 170$	t, d	8	
17.70	$\approx 500$	d, n, $\alpha$	6, 9	
17.72	$48 \pm 9$	p, $\alpha$ , d, t	7, 8, 9	
18.07	$19 \pm 4$	$\alpha$ , d	9	
18.09	$\approx 45$	p, d, t	7, 8	
18.28	$230 \pm 60$	n, p, $\alpha$ , d	6, 7, 9	
19.16	$\approx 130$	n, d	6	

<sup>a</sup>  $T = \frac{3}{2}$ .