Energy Levels of ^{16}Ne from ENSDF (unpublished, February 2020)

E_x (MeV $\pm$ keV)	$J^\pi; T$	Γ	Decay
g.s.	0^+	< 80 keV[a]	2p
1.77 ± 30	2^+	≤ 50 keV	p, 2p
6.19 ± 40	2^+	≤ 100 keV	p
8.44 ± 100		0.32 ± 0.10 MeV	
10.83 ± 200		0.51 ± 0.23 MeV	

[a] The expected width is $\approx$ 0.8 - 3.1 keV (2002GR03, 2015BR11), but the experimental resolution limits observations. In (2014BR19) $\Gamma < 80$ keV was determined from the best fit to the ^{14}O + p + p excitation function using a Breit-Wigner line shape. Similarly, in (2014WA09) a resolution folded Breit-Wigner line shape is fit to the ^{14}O + p + p excitation function resulting in $\Gamma = 82 \pm 15$ keV. Early measurements of ^{20}Ne(α, ^{8}He) reported $\Gamma = 110 \pm 40$ keV (1983WO01) and $\Gamma_{\rm exp} = 200 \pm 100$ keV (1978KE06). In (1978KE06) a detailed discussion on the total decay width is given where proton and diproton penetrabilities are taken into account; the authors suggested a total decay width of 20 keV (ranging between 5 - 100 keV) and a diproton branching ratio of 10 - 90%.