

$^{20}\text{Ne}(^{16}\text{O}, ^{16}\text{O}), (^{16}\text{O}, ^{12}\text{C})$:fusion [1996Mi01](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Ninel Nica, John Cameron and Balraj Singh		NDS 113, 1 (2012)	31-Dec-2011

Includes $^{20}\text{Ne}(^{16}\text{O}, \alpha)$ and $^{20}\text{Ne}(^{16}\text{O}, ^{15}\text{N})$ fusion reactions.

[1996Mi01](#): $^{20}\text{Ne}(^{16}\text{O}, ^{16}\text{O}), (^{16}\text{O}, ^{12}\text{C})$ $E_{\text{R}}(\text{c.m.})=16.39\text{--}41.67$ MeV. Measured $\sigma(\theta)$ and deduced ^{36}Ar resonant structures.

Others: [1988He06](#), [1984Ga22](#), [1982Sc13](#), [1982Ta02](#), [1982Xa01](#), [1979Mo14](#).

[2011Da09](#): discussion of cluster, SD and hyperdeformed shapes.

 ^{36}Ar Levels

E(level)	$J^{\pi\dagger}$	$T_{1/2}^{\dagger}$	$L^{\dagger}$	Comments
x	(10 ⁺)		(10)	$E_{\text{R}}(\text{c.m.})=17.5$ MeV (1996Mi01).
2200+x	(12 ⁺)	0.83 MeV	(12)	$E_{\text{R}}(\text{c.m.})=19.7$ MeV (1996Mi01).
4900+x	(15 ⁻)		(15)	$E_{\text{R}}(\text{c.m.})=22.4$ MeV (1996Mi01).
5600+x [‡]	(15 ⁻)		(15)	$E_{\text{R}}(\text{c.m.})=23.1$ MeV (1996Mi01).
7200+x	(17 ⁻)		(17)	$E_{\text{R}}(\text{c.m.})=24.7$ MeV (1996Mi01).
8300+x [‡]	(17 ⁻)	0.41 MeV	(17)	$E_{\text{R}}(\text{c.m.})=25.8$ MeV (1996Mi01).
11500+x [‡]	(19 ⁻)	2.5 MeV	(19)	$E_{\text{R}}(\text{c.m.})=29.0$ MeV (1996Mi01).

[†] From [1996Mi01](#), unless noted otherwise.

[‡] Band(A): tentative negative-parity rotational band ([1996Mi01](#)).

²⁰Ne(¹⁶O,¹⁶O),(¹⁶O,¹²C):fusion 1996Mi01

Band(A): Tentative
negative-parity
rotational band
(1996Mi01)

(19⁻) 11500+x

(17⁻) 8300+x

(15⁻) 5600+x