

$^{44}\text{Ca}(^{18}\text{O}, ^{18}\text{O}')$ 1984De38,1972Ei07

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh		NDS 190,1 (2023)	20-Jun-2023

1984De38: E=30-60 MeV ^{18}O beam was produced from the 9 MV Van de Graaff tandem accelerator of DPh-N/BE at ce(N) Saclay. Target was $179 \mu\text{g}/\text{cm}^2$ (98.55%) on 0.2 mm sandwich backing of Pb+Cu+Pb. γ rays were detected with a Ge(Li) and HPGe. Measured E_γ , fusion cross-section. Deduced barrier parameters.

Other:

1972Ei07: ($^{18}\text{O}, ^{18}\text{O}$) E=25-42 MeV ^{18}O beam. Targets were $20\text{-}30 \mu\text{g}/\text{cm}^2$ enriched ^{44}Ca on carbon or gold backings. Scattered particles were detected with particle detectors. Measured $\sigma(E(^{18}\text{O}), \theta)$ at backward angles. Deduced differences between ^{16}O and ^{18}O . Incoming-wave boundary-condition method (IWB).

 ^{44}Ca Levels

<u>E(level)[†]</u>	<u>J^π[‡]</u>
0	0 ⁺
1157	2 ⁺

[†] From 1984De38.

[‡] From the Adopted Levels.

 $\gamma(^{44}\text{Ca})$

<u>E_γ</u>	<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>
1157	1157	2 ⁺	0	0 ⁺

 $^{44}\text{Ca}(^{18}\text{O}, ^{18}\text{O}')$ 1984De38,1972Ei07Level Scheme