

$^{166}\text{Ho}(\text{n},\gamma),(\text{n},\text{n}):$ resonances [2018MuZZ,1992Ma66](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen		NDS 191,1 (2023)	22-Aug-2023

Target= $^{166\text{m}}\text{Ho}$, with level energy=5.969 keV *12*, $J^\pi=7^-$ from ^{166}Ho Adopted Levels in the ENSDF database (March 2008 update); and $T_{1/2}=1132.6$ y *39* ([2012Ne05](#)).

[1992Ma66](#): measured neutron resonances in $^{166\text{m}}\text{Ho}$ using time-of-flight method with a mechanical neutron selector placed in the horizontal beam of an SM-2 reactor at the V.I. Lenin Scientific Research Institute of Atomic Reactors. Deduced resonance parameters.

[2023Po08](#): $^{166}\text{Ho}(\text{n},\gamma),E(\text{n})=0.001\text{-}10$ MeV; and the Maxwellian-averaged cross sections (MACS) for $kT<105$ keV were deduced from the determination of nuclear level density (NLD) and γ -strength function (GSF) from an experiment using $^{164}\text{Dy}(\alpha,\text{p}\gamma)$ reaction at $E\alpha=26$ MeV at the University of Oslo cyclotron facility. Relevance to astrophysical s-process.

 ^{167}Ho Levels

All data are from [2018MuZZ](#) evaluation, based on data in [1992Ma66](#).

E(level) [†]	J^π	Γ	L	Comments
S(n)+0.00027	13/2 ⁻ ,15/2 ⁻	0.146 eV <i>5</i>	0	E(n)=0.274 eV <i>1</i> , $2g\Gamma_n=1.26$ meV <i>8</i> , $\Gamma_\gamma=0.145$ eV <i>5</i> (2018MuZZ).
S(n)+0.00850 <i>1</i>	13/2 ⁻ ,15/2 ⁻	0.098 eV <i>29</i>	0	$2g\Gamma_n=10.6$ meV <i>8</i> , $\Gamma_\gamma=0.092$ eV <i>30</i> (2018MuZZ).
S(n)+0.0574 <i>3</i>	13/2 ⁻ ,15/2 ⁻	0.113 eV <i>28</i>	0	$2g\Gamma_n=66$ meV <i>20</i> (2018MuZZ).

[†] S(n)($^{166\text{m}}\text{Ho}$)+E(n), where S(n)=7281 *5*, E(n)=neutron energy in lab system taken from [2018MuZZ](#) evaluation.