

$^{181}\text{Ta}(\gamma, n)$ 1984Co03

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 126, 151 (2015)	1-Feb-2015

Capture γ -rays from (n, γ) on Al ($E_\gamma=7724$ MeV), Cu ($E_\gamma=7915$ MeV), Cr ($E_\gamma=7939, 8485, 8512, 8884, \text{ and } 9720$ MeV), and Ni ($E_\gamma=8121, 8533, \text{ and } 8999$ MeV). Measured neutron energies and intensities using a high-resolution gridded ^3He ionization chamber (FWHM=13-20 keV). Earlier result from same group given in [1981Co17](#).

Others: [1974Ba68](#), [1974La21](#), [1975Wo07](#), [1976ShZR](#), [1976LoZW](#), [1976Ha32](#), [1984Be25](#), [1984Be55](#), [1984Wo04](#), [1984Le09](#), [1985Be55](#), [1985Le24](#), [1987Da29](#), [1990GoZK](#), [1994Ka38](#), [1995KaZT](#), [1996BeZZ](#), [1996KaZP](#), [1998Le39](#), [2000Le02](#), [2000To02](#), [2003Ut01](#), [2003Ut02](#), [2006Go17](#), [2007GoZZ](#), [2012Is03](#).

A Q value of 7579 keV 2 was determined in [1981Co17](#). Using this value, and 7652.3 keV 5 for the Q value of the $^{180}\text{Ta}(n, \gamma)^{181}\text{Ta}$ reaction, also measured in [1981Co17](#), the energy of the long-lived ^{180}Ta isomer can be calculated at 73 keV 2.

 ^{180}Ta Levels

<u>E(level)</u>	<u>E(level)</u>	<u>E(level)</u>	<u>E(level)</u>
0.0	413 2	666 3	1205 2
39 2	442 2	720 2	1247 3
109 2	466 3	793 2	1307 2
179 2	514 3	820 2	1351 2
231 2	542 2	857 2	1427 4
258 2	571 2	897 3	1740 3
309 2	624 2	959 3	1822 3
365 3	643 2	1122 2	1866 3