^{116}Sn(d,^{2}He) 2005Ra13

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 111, 717 (2010)	1-Dec-2009

E=183 MeV. Measured ^{2}He spectra using EuroSuperNova detector which consists of focal-plane detection system (two vertical drift chambers, set of four multiwire proportional chambers). The detector was placed at the focal plane of the Big-Bite spectrometer at kvi facility. Measured angular distributions from 0° to 4° (center of mass). FWHM=110-120 keV. DWBA calculations. Deduced ^{116}Cd $2\nu\beta\beta$ decay half-life=4×10^{19} y *1*. See other $T_{1/2}(\beta\beta)$ references in 2002Ba52.

^{116}In Levels

E(level)†	J$^{\pi}$†	B(Gt)‡	Comments
0	(1^{+})	0.256 *1*	B(Gt+) from ^{116}In β^{-} decay. dσ/dΩ(ΔL=0,q=0)=62 μb/sr *12*; dσ/dΩ(θ_{min})=58 μb/sr *12*.
520 *40*	(3^{+})	0	E(level): doublet: 480+560 listed by 2005Ra13. dσ/dΩ(θ_{min})=72 μb/sr *14* for doublet.
700	(1^{+})	0.07 *3*	dσ/dΩ(ΔL=0,q=0)=17 μb/sr *3*; dσ/dΩ(θ_{min})=16 μb/sr *3*.
1040	(1^{+})	0.11 *6*	dσ/dΩ(ΔL=0,q=0)=26 μb/sr *5*; dσ/dΩ(θ_{min})=24 μb/sr *5*.
16.0×10^{2} *40*		<0.37	E(level): listed as 1200-2000 by 2005Ra13. dσ/dΩ(ΔL=0,q=0)=90 μb/sr *18*; dσ/dΩ(θ_{min})=90 μb/sr *18*.
2300	(1^{+})	<0.07	dσ/dΩ(ΔL=0,q=0)=17 μb/sr *3*; dσ/dΩ(θ_{min})=16 μb/sr *3*.
3000	(1^{+})	0.21 *4*	dσ/dΩ(ΔL=0,q=0)=50 μb/sr *10*; dσ/dΩ(θ_{min})=45 μb/sr *9*.

† Intermediate states in ^{116}In.
‡ B(Gt) is the Gamow Teller strength in units in which the neutron decay has B(Gt)=3 and is ambiguous.