^{115}In(^{3}He,d),(α,t) 1992Sc20,1986Va02

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

$J^{\pi}(^{115}In)=9/2^{+}$.

E(^{3}He)=50.5 MeV (1992Sc20,1990Sc12) FWHM=15 keV (1992Sc20), FWHM=35 keV (1990Sc12). Outgoing particles detected with a multiple wire drift chamber in the focal plane of the QMG/2 spectrum.

E(^{3}He)=25.3 MeV (1969Sh14) FWHM=35 keV.

E(^{3}He)=25.6 MeV (1967Bi07) FWHM=120 keV.

E(^{3}He)=50 MeV (1986Va02), FWHM≈65 estimated by evaluators spectrum. Spectra taken at θ=16° and 6°, QMG/2 magnetic spectrometer.

E(α)=65 MeV (1986Va02).

States below 3.7 MeV are excited only weakly.

DWBA analysis.

Others: 1966Co25, 1968Bi15.

^{116}Sn Levels

E(level)†	J^{π}	L‡	C^2S'	Comments
0.0	0^{+}	4		
1294		2+4		
2225		2		
2266		1+5		
2390		0+2+4		
2529		0+2+4		
2650		2+4		
2801		2+4		
2843		2+4		
2997		2+4		
3046		2		
3096		2+4		
3180		2+4		
3277		2		
3380		2		
3513				
3650		0+2		L: 1990Sc12 gives L=2.
3739		2		L: 1990Sc12 gives L=2(+0). 1992Sc20 state that any L=0 component is negligible.
3780		2	1.40	
3797		0+2		L: 1990Sc12 gives L=2(+0). 1992Sc20 state that any L=0 component is probably negligible.
3887		2		L: 1969Sh14 report L=0+2, 1986Va02 report L=4 for E=3870.
3953		2+4		
4000		2		L: 1969Sh14 report L=2 and 0+2 for 4000 level, 1986Va02 report L=4 for E=4010+4060.
4023		(2)		
4076		(2)		
4160		2	1.14	E(level),L: from 1969Sh14.
4220		0+2	0.82	
4240				
4270		2	5.03	L: L=2 (1969Sh14), L=4(2) (1967Bi07), 1986Va02 report L=4 for 4260.
4285				
4340		2	2.17	
4365		2		
4390				
4480		2	1.75	E(level),L: from 1969Sh14.
4550		0+2	1.56	E(level),L: from 1969Sh14.
4630		0+2	1.27	
4750		0+2	4.59	
4765		2		L: not in authors′ table, but mentioned in the text.

Continued on next page (footnotes at end of table)

^{115}In(^{3}He,d),(α,t) 1992Sc20,1986Va02 (continued)

^{116}Sn Levels (continued)

E(level)[†]	L[‡]	C^2S'	Comments
4840	4,5		L: L=0+2 (1969Sh14) for E=4820, 1986Va02 report L=4 for E=4850.
4890	2	2.05	
5500	5	1.62	L: from 1986Va02.
5550[#]			
5730			
5740			
5780[#@]	5	0.84	L: from 1986Va02.
5860[@]	5	0.15	L: from 1986Va02.
6295	5		L: from 1986Va02.

[†] From 1990Sc12 for E<3300, and from 1992Sc20 for higher levels, except where noted otherwise. Energies of both authors are based on their (α,tγ) data, where possible, (published in 1992Sc20 and in an earlier thesis, 1988ScZU). Most of the other values are taken from earlier versions of Nuclear Data Sheets. Values for levels (or clusters of levels) not previously reported and not from (α,tγ) are those at 4330, 4362, 4390, 5500, 5730, 5740, 5780, and 6295.

[‡] Deduced from angular distribution (θ=10°−60°) compared with DWBA prediction; L=0+2 mixtures are 10% L=0, 90% L=2 values are from 1969Sh14 below 5000 and from 1986Va02 above 5000 and from 1992Sc20 when the excitation energy is given only by 1992Sc20.

[#] From 1967Bi07.

[@] From 1986Va02.