

Target isotope:  $^{74}_{34}\text{Se}$   $I_o^\pi = 0^+$  Abundance: 0.89(4) %  $S_p = 4215(14)$  keV

**$^{75}_{35}\text{Br}(p)$**

$E_o$	$2J^\pi$	$\Gamma_p$	$\Gamma$	$E_{\text{analog}}^*$	$S_{pp}$	$S_{dp}$	$E_{\text{cm}}$	$E^*$	Ref.
[keV]		[keV]	[keV]	[keV]			[keV]	[keV]	
2918	$1^-$	0.40(4)	15.1(23)	293	0.32	0.75	2879(5)	7114(21)	84Sh05
3261	$1^+$	0.24(3)	9.0(19)	611	0.03	0.05	3217(5)	7452(21)	84Sh05
3770	$1^+$	0.13(5)	4.2(35)		0.01		3720(5)	7955(21)	84Sh05
3788	$1^-$	0.13(4)	9.5(38)	1184	0.01	0.04	3738(5)	7973(21)	84Sh05
3857	$1^+$	0.47(7)	13.5(24)		0.016		3807(5)	8042(21)	84Sh05
3885	$3^-$	0.11(3)	7.3(27)	1245	0.01	0.04	3833(5)	8088(21)	84Sh05
4028	$1^+$	5.85(32)	29.3(19)	1438	0.164	0.21	3974(5)	8209(21)	84Sh05
4180	$5^+$	0.64(3)	19.9(14)	1551	0.085	0.065	4124(5)	8359(21)	84Sh05
4258	$5^+$	0.41(4)	22.9(28)	1589	0.048	0.065	4201(5)	8436(21)	84Sh05
4379	$5^+$	0.08(3)	6.8(34)	1808	0.01	0.03	4320(5)	8555(21)	84Sh05
4423	$1^+$	0.52(7)	9.5(24)	1784	0.01	0.06	4364(5)	8599(21)	84Sh05

Additional data on this isotope can be found in [90Fa07].

These data could be compared with IAS in  $^{76}\text{Br}$  given in ENSDF:  $E^*=4900(0^+)$ ,  $5400(2^+)$ ,  $6100(0^+, 2^+, 4^+)$ ,  $6500(2^+)$ ,  $6900(4^+)$  and  $7200$  keV ( $3^-$ ).

Target isotope:  $^{76}_{34}\text{Se}$   $I_o^\pi = 0^+$  Abundance: 9.37(29) %  $S_p = 5271.3(28)$  keV

**$^{77}_{35}\text{Br}(p)$**

$E_o$	$2J^\pi$	$\Gamma_p$	$\Gamma$	$E_{\text{analog}}^*$	$S_{pp}$	$S_{dp}$	$E_{\text{cm}}$	$E^*$	Ref.
[keV]		[keV]	[keV]	[keV]			[keV]	[keV]	
3171(10)	$\langle 1^- \rangle$			0.0			3129(10)	8401(11)	97Fa12
3381(10)	$\langle 3^-, 5^- \rangle$			250			3336(10)	8608(11)	97Fa12
3699(10)	$\langle 3^- \rangle$	0.4(1)	10(2)	521	0.16(3)**	0.34	3650(10)	8922(11)	97Fa12 74Gr35
3871(10)	$\langle 5^+ \rangle$	0.3(1)	15(2)	680	0.75(20)	1.23	3820(10)	9092(11)	97Fa12 74Gr35
4146(10)	$\langle 1^+ \rangle$	3.0(2)*	23(2)	956	0.35(2)	0.25	4092(10)	9364(11)	97Fa12 74Gr35 68Ba23
4213(10)	$\langle 3^- \rangle$	0.5(1)	18(2)	1008	0.08(1)	0.17	4158(10)	9430(11)	97Fa12 74Gr35
4272(10)	1	6.2(2)*	31(2)	1126	0.63(2)	0.76	4216(10)	9488(11)	97Fa12 74Gr35 68Ba23
4418(10)	$\langle 5^+ \rangle$	1.0(2)	24(2)	1252	0.92(15)	1.11	4360(10)	9632(11)	97Fa12 74Gr35

\*  $(2J+1)\Gamma_p=4.9(20)$  and  $9.0(20)$  keV are given for these two IAR in [68Ba23].

\*\*  $(2J+1)S_{\text{analog}}$  instead of  $S_{pp}$  and  $(2J+1)S_{dp}$  instead of  $S_{dp}$  for all resonances [74Gr35].

Target isotope:  $^{78}_{34}\text{Se}$   $I_o^\pi = 0^+$  Abundance: 23.77(28) %  $S_p = 6331.3(16)$  keV

**$^{79}_{35}\text{Br}(p)$**

$E_o$	$2J^\pi$	$\Gamma_p$	$\Gamma$	$E_{\text{analog}}^*$	$S_{pp}$	$S_{dp}$	$E_{\text{cm}}$	$E^*$	Ref.
[keV]		[keV]	[keV]	[keV]			[keV]	[keV]	
4578(10)	$\langle 3^- \rangle$		28(6)	975			4520(10)	10843(11)	68Zi03 93Si28
4694(10)	$1^+$	29.4(30)*	43(5)	1145	0.98		4635(10)	10966(11)	93Si28 68Zi03 68Ba23
4808(10)	$\langle 5^+ \rangle$	13.5(60)*	24(9)	1253	0.30		4747(10)	11077(11)	93Si28 68Zi03 68Ba23

(continued)

 **$^{79}_{35}\text{Br}(\text{p})$** 

$E_{\text{o}}$	$2J^{\pi}$	$\Gamma_{\text{p}}$	$\Gamma$	$E_{\text{analog}}^*$	$S_{\text{pp}}$	$S_{\text{dp}}$	$E_{\text{cm}}$	$E^*$	Ref.
[keV]		[keV]	[keV]	[keV]			[keV]	[keV]	
5089(10)	$1^+$	3.6(10)*	16(5)	1491	0.81		5025(10)	11352(11)	93Si28 68Zi03 68Ba23
5168(10)	$\langle 3^+ \rangle$		35(10)	1589			5103(10)	11431(11)	93Si28 68Zi03 68Ba23
5296(10)	$\langle 5^+ \rangle$			1667			5229(10)	11557(11)	93Si28 68Zi03 68Ba23
5363(10)	$\langle 3^+ \rangle$			1738			5295(10)	11623(11)	93Si28 68Zi03 68Ba23
5608(10)	$\langle 1^- 3^- \rangle$			2062			5537(10)	11831(11)	93Si28 68Zi03

Additional data on this isotope can be found in [82Si21].

\*  $(2J+1)\Gamma_{\text{p}}$  are given instead of  $\Gamma_{\text{p}}$  [68Ba23].Target isotope:  $^{80}_{34}\text{Se}$   $I_{\text{o}}^{\pi} = 0^+$  Abundance: 49.61(41) %  $S_{\text{p}} = 7503.9(25)$  keV **$^{81}_{35}\text{Br}(\text{p})$** 

$E_{\text{o}}$	$2J^{\pi}$	$2T$	$\Gamma_{\text{p}}$	$\Gamma$	$E_{\text{analog}}^*$	$S_{\text{pp}}$	$S_{\text{dp}}$	$E_{\text{cm}}$	$E^*$	Ref.
[keV]			[keV]	[keV]	[keV]			[keV]	[keV]	
3817(10)	$1^-$		1.9(6)*	18.7(23)	0.0	0.093		3780(10)	11274(10)	96Ba89 68Ba23 68Zi03 67Co04
3934(10)	$7^+$				103			3885(10)	11389(10)	96Ba89 68Ba23 67Co04
4293(10)	$3^-$			18(3)	468			4249(10)	11744(10)	96Ba89 68Ba23 68Zi03 67Co04
4847(10)	$5^+$		8.8(30)*	18.1(24)	1053	0.18		4791(10)	12291(10)	96Ba89 68Ba23 68Zi03
4982(10)	$1^+$		37.6(40)*	48(4)	1233	0.85		4922(10)	12424(10)	96Ba89 68Ba23 68Zi03
5060(10)	$5^+$		27.6(40)*	32(3)	1304	0.41		5003(10)	12501(10)	96Ba89 68Ba23 68Zi03
5227(10)	$3^-$			24(4)	1406			5162(10)	12666(10)	96Ba89 68Zi03

\*  $(2J+1)\Gamma_{\text{p}}$  are given instead of  $\Gamma_{\text{p}}$  [68Ba23].Target isotope:  $^{82}_{34}\text{Se}$   $I_{\text{o}}^{\pi} = 0^+$  Abundance: 8.73(22) %  $S_{\text{p}} = 8704.6(42)$  keV **$^{83}_{35}\text{Br}(\text{p})$** 

$E_{\text{o}}$	$2J^{\pi}$	$2T$	$\Gamma_{\text{p}}$	$\Gamma$	$E_{\text{analog}}^*$	$S_{\text{pp}}$	$S_{\text{dp}}$	$E_{\text{cm}}$	$E^*$	Ref.
[keV]			[keV]	[keV]	[keV]			[keV]	[keV]	
4899(10)				28(6)	360			4861(21)	13566(10)	92Br16
4977(10)				25(6)	430			4917(7)	13622(10)	92Br16
5148(10)	$1^+$		35.2(35)*	38(1)	539			5079(6)	13784(10)	92Br16 68Ba23
5190(10)	$5^+$		43.8(120)*	37(2)	582			5121(6)	13826(10)	92Br16 68Ba23
5466(10)					doubt			5400(10)	14105(10)	92Br16
5709(10)	$\langle 5^+ \rangle$			45(1)	1100			5640(7)	14345(10)	92Br16
5975(10)	$5^+$			14(2)	1330			5903(19)	14608(10)	92Br16 77Ta09
6309(10)	$5^+$			33(2)	1665			6233(10)	14938(10)	92Br16 77Ta09
6343(10)	$1^+$			32(1)	1710			6267(10)	14972(10)	92Br16 77Ta09
7001(10)	$5^+$			20(6)	doubt			6917(10)	15622(10)	92Br16 77Ta09
7142(10)	$\langle 3^+ \rangle$			58(3)	2536			7056(10)	15761(10)	92Br16 77Ta09
7161(10)	$\langle 1^+ \rangle$			64(4)				7075(10)	15780(10)	92Br16 77Ta09

(continued)

 $^{83}_{35}\text{Br}(\text{p})$ 

$E_{\circ}$	$2J^{\pi}$	$2T$	$\Gamma_{\text{p}}$	$\Gamma$	$E_{\text{analog}}^*$	$S_{\text{pp}}$	$S_{\text{dp}}$	$E_{\text{cm}}$	$E^*$	Ref.
[keV]			[keV]	[keV]	[keV]			[keV]	[keV]	
7431(10)	$5^+$			23(4)	2858			7341(10)	16046(10)	92Br16 77Ta09
7551(10)					3023			7460(10)	16165(10)	92Br16 77Ta09
7623(10)	$5^+$			42(22)	3106			7531(10)	16236(10)	92Br16 77Ta09

Additional data on this isotope can be found in [86Mu09, 68Ba23, 68Zi03].

\*  $(2J+1)\Gamma_{\text{p}}$  are given instead of  $\Gamma_{\text{p}}$  [68Ba23].