

(HI,xn γ):SD [1993Jo09](#),[1994Jo10](#),[1998Bu03](#)

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 143, 1 (2017)	31-Mar-2017

[1998Bu03](#): $^{176}\text{Yb}(^{22}\text{Ne},5n\gamma)$ E=118 MeV. Measured γ , $\gamma\gamma$, lifetimes. Deduced SD bands and intrinsic quadrupole moments.

[1994Jo10](#), [1993Jo09](#), [1992ShZR](#), [1990Cu05](#), [1990Cu06](#): $^{150}\text{Nd}(^{48}\text{Ca},5n\gamma)$ E=205, 213 MeV. Measured γ , $\gamma\gamma$. Deduced SD bands and transitions.

[1993Fa07](#): $^{176}\text{Yb}(^{22}\text{Ne},5n\gamma)$ E=116 MeV. Measured γ , $\gamma\gamma$. Deduced SD bands and interband transitions. Intraband transitions from [1993Jo09](#), [1992ShZR](#). See also [1997Fa15](#).

Others: [1990He09](#) used reactions $^{176}\text{Yb}(^{22}\text{Ne},5n\gamma)$ E=116 MeV and $^{150}\text{Nd}(^{48}\text{Ca},5n\gamma)$ E=195-210 MeV to identify SD-2 and SD-3 bands in ^{193}Hg (see [1990He23](#) for analysis of results); [2000Zw03](#) attempt to determine whether the relative yields for the population of superdeformed states in HI-induced reactions could be enhanced by selecting the (HI, α xn) channel, rather than the pure neutron evaporation channel. The results show that the yield for those states is actually about 4 times lower in the former case. Measured $K\alpha$ x ray yield ([1993Cu02](#)).

 ^{193}Hg Levels

SD-1, SD-2 and SD-3 bands assigned on the basis of $\gamma\gamma$ evidence with known transitions (in normal bands) in ^{193}Hg . SD-4 band assigned on the basis of excitation functions.

E(level)	J^π	$T_{1/2}^\dagger$	Comments
x^\ddagger	J		Additional information 1 . J^π : $J \approx (19/2^-)$. 1993Fa07 suggested that the lowest transition in this band is 192 keV, but 1993Jo09 do not seem to confirm this.
111.8+x [#] 4	J+1		
233.20+x [‡] 20	J+2		
365.8+x [#] 4	J+3		
507.4+x [‡] 3	J+4		
660.4+x [#] 4	J+5		
821.4+x [‡] 4	J+6		
995.3+x [#] 4	J+7		
1174.7+x [‡] 4	J+8		
1369.8+x [#] 4	J+9		
1566.6+x [‡] 4	J+10		
1782.9+x [#] 5	J+11		
1995.6+x [‡] 5	J+12		
2234.0+x [#] 5	J+13		
2460.1+x [‡] 5	J+14		
2722.3+x [#] 5	J+15		
2957.5+x [‡] 5	J+16		
3247.2+x [#] 6	J+17		
3485.7+x [‡] 6	J+18	0.132 ps 14	
3807.1+x [#] 6	J+19		
4044.2+x [‡] 6	J+20	0.104 ps 7	
4402.0+x [#] 6	J+21		
4634.2+x [‡] 6	J+22	0.083 ps +7-14	
5030.8+x [#] 7	J+23		
5256.8+x [‡] 7	J+24	0.062 ps 7	

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(HI,xn γ):SD 1993Jo09,1994Jo10,1998Bu03 (continued) ^{193}Hg Levels (continued)

E(level)	J $^{\pi}$	T $_{1/2}^{\dagger}$	Comments
5692.5+x [#] 7	J+25		
5912.5+x [‡] 7	J+26		
6386.6+x [#] 7	J+27		
6601.0+x [‡] 7	J+28		
7112.2+x [#] 8	J+29		
7322.3+x [‡] 8	J+30		
7868.8+x [#] 8	J+31		
8075.5+x [‡] 8	J+32		
8656.1+x [#] 8	J+33		
8860.4+x [‡] 8	J+34		
9473.8+x [#] 9	J+35		
9677.0+x [‡] 9	J+36		
10321.3+x [#] 10	J+37		
10524.8+x [‡] 10	J+38		
11197.4+x [#] 11	J+39		
11405.7+x [‡] 11	J+40		
y [@]	J1		Additional information 2. J $^{\pi}$: J $_1 \approx (19/2^+)$.
111.9+y ^{&} 4	J1+1		
233.50+y [@] 20	J1+2		
366.1+y ^{&} 4	J1+3		
508.5+y [@] 3	J1+4		
660.9+y ^{&} 4	J1+5		
823.5+y [@] 4	J1+6		
996.0+y ^{&} 4	J1+7		
1178.3+y [@] 4	J1+8		
1370.6+y ^{&} 4	J1+9		
1572.1+y [@] 4	J1+10		
1783.9+y ^{&} 4	J1+11		
2004.2+y [@] 5	J1+12		
2235.0+y ^{&} 5	J1+13		
2474.0+y [@] 5	J1+14		
2723.3+y ^{&} 5	J1+15		
2980.2+y [@] 5	J1+16		
3248.2+y ^{&} 6	J1+17	0.146 ps +14-21	
3521.7+y [@] 6	J1+18		
3808.1+y ^{&} 6	J1+19	0.076 ps +7-14	
4098.5+y [@] 6	J1+20		
4403.0+y ^{&} 6	J1+21	0.083 ps 7	
4709.8+y [@] 7	J1+22		
5031.8+y ^{&} 7	J1+23		
5354.1+y [@] 7	J1+24		
5693.5+y ^{&} 7	J1+25		
6031.9+y [@] 7	J1+26		
6387.6+y ^{&} 7	J1+27		

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(HI,xn γ):SD 1993Jo09,1994Jo10,1998Bu03 (continued) ^{193}Hg Levels (continued)

E(level)	J $^{\pi}$	Comments
6741.8+y [@] 7	J1+28	
7113.2+y ^{&} 8	J1+29	
7484.0+y [@] 8	J1+30	
7869.8+y ^{&} 8	J1+31	
8255.2+y [@] 8	J1+32	
8657.1+y ^{&} 8	J1+33	
9057.4+y [@] 9	J1+34	
9474.8+y ^{&} 9	J1+35	
9889.5+y [@] 11	J1+36	
10322.3+y ^{&} 10	J1+37	
10750.0+y [@] 12	J1+38	
11198.4+y ^{&} 11	J1+39	
z ^a	J2	Additional information 3. J $^{\pi}$: J ₂ ≈(27/2 ⁻).
291.00+z ^a 20	J2+2	
619.8+z ^a 3	J2+4	
986.4+z ^a 4	J2+6	
1391.4+z ^a 4	J2+8	
1835.6+z ^a 5	J2+10	
2319.9+z ^a 5	J2+12	
2845.8+z ^a 6	J2+14	
3412.5+z ^a 6	J2+16	
4017.5+z ^a 6	J2+18	
4658.0+z ^a 7	J2+20	
5332.5+z ^a 7	J2+22	
6040.0+z ^a 7	J2+24	
6779.3+z ^a 8	J2+26	
7549.0+z ^a 9	J2+28	
8350.3+z ^a 10	J2+30	
9181.6+z ^a 11	J2+32	
10042.6+z ^a	J2+34	
u ^b	J3	Additional information 4. J $^{\pi}$: J ₃ ≈(21/2 ⁻), from 1994Jo10.
240.51+u ^b 20	J3+2	
522.4+u ^b 3	J3+4	
845.9+u ^b 4	J3+6	
1211.3+u ^b 4	J3+8	
1617.8+u ^b 5	J3+10	
2065.3+u ^b 5	J3+12	
2553.4+u ^b 6	J3+14	
3081.4+u ^b 6	J3+16	
3648.6+u ^b 6	J3+18	
4254.9+u ^b 7	J3+20	
4899.4+u ^b 7	J3+22	
5581.3+u ^b 7	J3+24	
6299.9+u ^b 8	J3+26	
7054.4+u ^b 8	J3+28	

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(HI,xny):SD 1993Jo09,1994Jo10,1998Bu03 (continued) ^{193}Hg Levels (continued)

E(level)	J^π
7844.2+u ^b 8	J3+30
8668.5+u ^b 9	J3+32
9526.4+u ^b 10	J3+34

[†] From line-shape analysis (1998Bu03).

[‡] Band(A): SD-1 Band (1998Bu03,1994Jo10,1993Jo09,1990Cu05). Q(intrinsic)=18.4 +8-9 (1998Bu03). Percent population=1.6 3 (1990Cu05). g factor (intrinsic)=-0.65 14 (1993Jo09). This is deduced from the ratio of interband (M1) and intraband (E2) transition intensities. Possible configuration: [512]5/2⁻, $\alpha=-1/2$ below $E_\gamma \approx 400$ and $j_{15/2}$ above $E_\gamma \approx 600$ keV.

[#] Band(B): SD-2 Band (1998Bu03,1994Jo10,1993Jo09,1990Cu05). Q(intrinsic)=17.3 +11-9 (1998Bu03). Percent population=2.1 3 (1990Cu05). The relative intensity of this band is anomalously high (≈ 2 times that of its signature partner SD-3 band) which leads to suggestion that this band may be composed of two SD bands, the other being the signature partner of SD-3 band. Possible configuration: [512]5/2⁻, $\alpha=+1/2$. Signature partner of SD-1 band.

[@] Band(C): SD-3 Band (1998Bu03,1994Jo10,1993Jo09,1990Cu05). Q(intrinsic)=16.1 +15-14 (1998Bu03). Percent population=0.9 3 (1990Cu05) Possible configuration: [624]9/2⁺, $\alpha=-1/2$.

[&] Band(D): SD-4 Band (1998Bu03,1994Jo10,1993Jo09,1990Cu05). Q(intrinsic)=17.3 +11-9 (1998Bu03). Possible configuration: [624]9/2⁺, $\alpha=+1/2$. Signature partner of SD-3 band. SD-2 and SD-4 bands are unresolved but FWHM of lines is consistently greater than that for lines in SD-1 band (from (HI,xny):SD).

^a Band(E): SD-5 Band (1998Bu03,1994Jo10,1993Jo09,1990Cu05). Q(intrinsic)=16.7 10 (1998Bu03). Percent population=1.1 3 (1990Cu05). $j_{15/2}$, $\alpha=-1/2$ intruder band below $E_\gamma \approx 400$ keV and [512]5/2 $\alpha=-1/2$ above $E_\gamma \approx 600$ keV. Configuration: (N=7, $\alpha=-1/2$)(1994Jo10).

^b Band(F): SD-6 Band (1998Bu03,1994Jo10). Q(intrinsic)=16.7 +14-13 (1998Bu03). Percent population ≈ 0.6 (1994Jo10). Configuration: (N=7, $\alpha=+1/2$), unfavored signature partner (1994Jo10).

 $\gamma(^{193}\text{Hg})$

E_γ [†]	E_i (level)	J_i^π	E_f	J_f^π	Comments
121.1 [#] 5	233.20+x	J+2	111.8+x	J+1	
122.6 [#] 5	233.50+y	J1+2	111.9+y	J1+1	
132.2 ^{@#} 5	365.8+x	J+3	233.20+x	J+2	
132.2 ^{@#} 5	366.1+y	J1+3	233.50+y	J1+2	
141.6 [#] 5	507.4+x	J+4	365.8+x	J+3	
142.7 [#] 5	508.5+y	J1+4	366.1+y	J1+3	
152.9 ^{@#} 5	660.4+x	J+5	507.4+x	J+4	
152.9 ^{@#} 5	660.9+y	J1+5	508.5+y	J1+4	
160.7 [#] 5	821.4+x	J+6	660.4+x	J+5	
162.5 [#] 5	823.5+y	J1+6	660.9+y	J1+5	
173.7 ^{@#} 5	995.3+x	J+7	821.4+x	J+6	
173.7 ^{@#} 5	996.0+y	J1+7	823.5+y	J1+6	
179.3 [#] 5	1174.7+x	J+8	995.3+x	J+7	
182.6 [#] 5	1178.3+y	J1+8	996.0+y	J1+7	
192.3 [#] 5	1370.6+y	J1+9	1178.3+y	J1+8	1993Fa07 suggested that this transition is also the lowest member of SD-1 band, but results of 1993Jo09 do not seem to confirm this placement.
196.9 [#] 5	1566.6+x	J+10	1369.8+x	J+9	
201.9 [#] 5	1572.1+y	J1+10	1370.6+y	J1+9	

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(HI,xny):SD 1993Jo09,1994Jo10,1998Bu03 (continued) $\gamma(^{193}\text{Hg})$ (continued)

E_γ^\dagger	I_γ^\ddagger	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Comments
212.3 [#] 5		1995.6+x	J+12	1782.9+x	J+11	This γ is a member of an unresolved doublet (the other member is 212.9 keV, from level 1783.9+Y).
212.9 [#] 5		1783.9+y	J1+11	1572.1+y	J1+10	This γ is a member of an unresolved doublet (the other member is 212.3 keV, from level 1995.6+X).
220.5 [#] 5		2004.2+y	J1+12	1783.9+y	J1+11	
226.4 [#] 5		2460.1+x	J+14	2234.0+x	J+13	
233.2 2	0.37 3	233.20+x	J+2	x	J	
233.5 2	0.21 3	233.50+y	J1+2	y	J1	
240.5 2	0.58 5	240.51+u	J3+2	u	J3	
254.0 ^{&} 2	0.12 ^{&} 5	365.8+x	J+3	111.8+x	J+1	
254.0 ^{&} 2	0.12 ^{&} 5	366.1+y	J1+3	111.9+y	J1+1	
274.2 2	0.48 3	507.4+x	J+4	233.20+x	J+2	
275.2 2	0.30 5	508.5+y	J1+4	233.50+y	J1+2	
281.9 2	0.80 5	522.4+u	J3+4	240.51+u	J3+2	
291.0 2	0.17 3	291.00+z	J2+2	z	J2	
294.6 ^{&} 2	0.38 ^{&} 8	660.4+x	J+5	365.8+x	J+3	
294.6 ^{&} 2	0.38 ^{&} 8	660.9+y	J1+5	366.1+y	J1+3	
314.0 2	0.75 5	821.4+x	J+6	507.4+x	J+4	
315.2 2	0.53 5	823.5+y	J1+6	508.5+y	J1+4	
323.5 2	0.90 5	845.9+u	J3+6	522.4+u	J3+4	
328.8 2	0.72 4	619.8+z	J2+4	291.00+z	J2+2	
334.9 ^{&} 2	0.61 ^{&} 9	995.3+x	J+7	660.4+x	J+5	
334.9 ^{&} 2	0.61 ^{&} 9	996.0+y	J1+7	660.9+y	J1+5	
353.4 2	0.90 5	1174.7+x	J+8	821.4+x	J+6	
354.9 2	0.78 5	1178.3+y	J1+8	823.5+y	J1+6	
365.4 2	1.00 5	1211.3+u	J3+8	845.9+u	J3+6	
366.6 2	0.87 5	986.4+z	J2+6	619.8+z	J2+4	
374.5 ^{&} 2	0.73 ^{&} 18	1369.8+x	J+9	995.3+x	J+7	
374.5 ^{&} 2	0.73 ^{&} 16	1370.6+y	J1+9	996.0+y	J1+7	
391.9 2	0.96 5	1566.6+x	J+10	1174.7+x	J+8	
393.8 2	0.95 5	1572.1+y	J1+10	1178.3+y	J1+8	
405.0 2	0.98 7	1391.4+z	J2+8	986.4+z	J2+6	
406.5 2	1.00 5	1617.8+u	J3+10	1211.3+u	J3+8	
413.1 ^{&} 2	1.00 ^{&} 12	1782.9+x	J+11	1369.8+x	J+9	
413.1 ^{&} 2	1.00 ^{&} 12	1783.9+y	J1+11	1370.6+y	J1+9	
429.0 2	1.00 5	1995.6+x	J+12	1566.6+x	J+10	
432.1 2	1.02 8	2004.2+y	J1+12	1572.1+y	J1+10	
444.2 2	1.00 7	1835.6+z	J2+10	1391.4+z	J2+8	
447.5 2	0.98 5	2065.3+u	J3+12	1617.8+u	J3+10	
451.1 [@] 2		2234.0+x	J+13	1782.9+x	J+11	
451.1 [@] 2		2235.0+y	J1+13	1783.9+y	J1+11	
464.4 2	0.98 3	2460.1+x	J+14	1995.6+x	J+12	
469.8 2	1.00 8	2474.0+y	J1+14	2004.2+y	J1+12	
484.3 2	1.00 5	2319.9+z	J2+12	1835.6+z	J2+10	
488.1 2	0.95 5	2553.4+u	J3+14	2065.3+u	J3+12	
488.3 ^{&} 2	0.96 ^{&} 18	2722.3+x	J+15	2234.0+x	J+13	
488.3 ^{&} 2	0.96 ^{&} 18	2723.3+y	J1+15	2235.0+y	J1+13	
497.4 2	1.00 3	2957.5+x	J+16	2460.1+x	J+14	
506.2 2	1.00 14	2980.2+y	J1+16	2474.0+y	J1+14	
524.9 ^{&} 2	0.98 ^{&} 20	3247.2+x	J+17	2722.3+x	J+15	
524.9 ^{&} 2	0.98 ^{&} 20	3248.2+y	J1+17	2723.3+y	J1+15	

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(HI,xny):SD 1993Jo09,1994Jo10,1998Bu03 (continued) $\gamma(^{193}\text{Hg})$ (continued)

E_γ †	I_γ ‡	$E_i(\text{level})$	J_i^π	E_f	J_f^π
525.9 2	0.98 6	2845.8+z	J2+14	2319.9+z	J2+12
527.9 2	1.05 6	3081.4+u	J3+16	2553.4+u	J3+14
528.2 2	1.11 10	3485.7+x	J+18	2957.5+x	J+16
541.5 2	0.82 32	3521.7+y	J1+18	2980.2+y	J1+16
558.5 2	0.94 14	4044.2+x	J+20	3485.7+x	J+18
559.9& 2	1.08& 10	3807.1+x	J+19	3247.2+x	J+17
559.9& 2	1.08& 10	3808.1+y	J1+19	3248.2+y	J1+17
566.7 2	0.98 8	3412.5+z	J2+16	2845.8+z	J2+14
567.2 2	1.00 6	3648.6+u	J3+18	3081.4+u	J3+16
576.8 2	0.63 24	4098.5+y	J1+20	3521.7+y	J1+18
590.0 2	0.73 20	4634.2+x	J+22	4044.2+x	J+20
594.9@ 2		4402.0+x	J+21	3807.1+x	J+19
594.9@ 2		4403.0+y	J1+21	3808.1+y	J1+19
605.0 2		4017.5+z	J2+18	3412.5+z	J2+16
606.3 2		4254.9+u	J3+20	3648.6+u	J3+18
611.3 2	0.43 28	4709.8+y	J1+22	4098.5+y	J1+20
622.6 2		5256.8+x	J+24	4634.2+x	J+22
628.8& 2	0.85& 8	5030.8+x	J+23	4402.0+x	J+21
628.8& 2	0.85& 8	5031.8+y	J1+23	4403.0+y	J1+21
640.5 2	0.82 7	4658.0+z	J2+20	4017.5+z	J2+18
644.3 2		5354.1+y	J1+24	4709.8+y	J1+22
644.5 2	0.90 10	4899.4+u	J3+22	4254.9+u	J3+20
655.7 2	0.40 16	5912.5+x	J+26	5256.8+x	J+24
661.7& 2	0.52& 12	5692.5+x	J+25	5030.8+x	J+23
661.7& 2	0.52& 12	5693.5+y	J1+25	5031.8+y	J1+23
674.5 2	0.80 7	5332.5+z	J2+22	4658.0+z	J2+20
677.8 2		6031.9+y	J1+26	5354.1+y	J1+24
681.9 2	0.70 6	5581.3+u	J3+24	4899.4+u	J3+22
688.5 2	0.18 10	6601.0+x	J+28	5912.5+x	J+26
694.1& 2	0.56& 15	6386.6+x	J+27	5692.5+x	J+25
694.1& 2	0.56& 15	6387.6+y	J1+27	5693.5+y	J1+25
707.5 2	0.72 7	6040.0+z	J2+24	5332.5+z	J2+22
709.9 2		6741.8+y	J1+28	6031.9+y	J1+26
718.6 2	0.60 6	6299.9+u	J3+26	5581.3+u	J3+24
721.3 2	0.39 10	7322.3+x	J+30	6601.0+x	J+28
725.6& 2	0.45& 19	7112.2+x	J+29	6386.6+x	J+27
725.6& 2	0.45& 19	7113.2+y	J1+29	6387.6+y	J1+27
739.3 2	0.61 7	6779.3+z	J2+26	6040.0+z	J2+24
742.2 2		7484.0+y	J1+30	6741.8+y	J1+28
753.2 2	0.55 16	8075.5+x	J+32	7322.3+x	J+30
754.5 2		7054.4+u	J3+28	6299.9+u	J3+26
756.6& 2	0.38& 10	7868.8+x	J+31	7112.2+x	J+29
756.6& 2	0.38& 10	7869.8+y	J1+31	7113.2+y	J1+29
769.7 4	0.46 4	7549.0+z	J2+28	6779.3+z	J2+26
771.2 3		8255.2+y	J1+32	7484.0+y	J1+30
784.9 2		8860.4+x	J+34	8075.5+x	J+32
787.3@ 2		8656.1+x	J+33	7868.8+x	J+31
787.3@ 2		8657.1+y	J1+33	7869.8+y	J1+31
789.8 2	0.42 5	7844.2+u	J3+30	7054.4+u	J3+28
801.3 5	0.36 3	8350.3+z	J2+30	7549.0+z	J2+28
802.2 4		9057.4+y	J1+34	8255.2+y	J1+32
816.6 3		9677.0+x	J+36	8860.4+x	J+34

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(HI,xn γ):SD 1993Jo09,1994Jo10,1998Bu03 (continued) $\gamma(^{193}\text{Hg})$ (continued)

E_γ^\dagger	I_γ^\ddagger	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Comments
817.7@ 3		9473.8+x	J+35	8656.1+x	J+33	
817.7@ 3		9474.8+y	J1+35	8657.1+y	J1+33	
824.3 3	0.26 5	8668.5+u	J3+32	7844.2+u	J3+30	
831.3 5	0.21 4	9181.6+z	J2+32	8350.3+z	J2+30	
832.1 5		9889.5+y	J1+36	9057.4+y	J1+34	
847.5@ 4		10321.3+x	J+37	9473.8+x	J+35	
847.5@ 4		10322.3+y	J1+37	9474.8+y	J1+35	
847.8 4		10524.8+x	J+38	9677.0+x	J+36	
857.9 5	0.24 5	9526.4+u	J3+34	8668.5+u	J3+32	
860.5 5		10750.0+y	J1+38	9889.5+y	J1+36	
861 ^a	0.15 3	10042.6+z?	J2+34	9181.6+z	J2+32	E_γ : estimated (1998Ar07) from intensity plot (fig.1 in 1994Jo10).
876.1@ 5		11197.4+x	J+39	10321.3+x	J+37	
876.1@ 5		11198.4+y	J1+39	10322.3+y	J1+37	
880.9 5		11405.7+x	J+40	10524.8+x	J+38	

[†] From 1994Jo10, unless otherwise noted.

[‡] Relative intensity within each band, read off intensity plots given by 1992ShZR for SD-1 to SD-4 and by 1994Jo10 for SD-5 and SD-6.

From 1993Jo09.

@ Multiply placed.

& Multiply placed with undivided intensity.

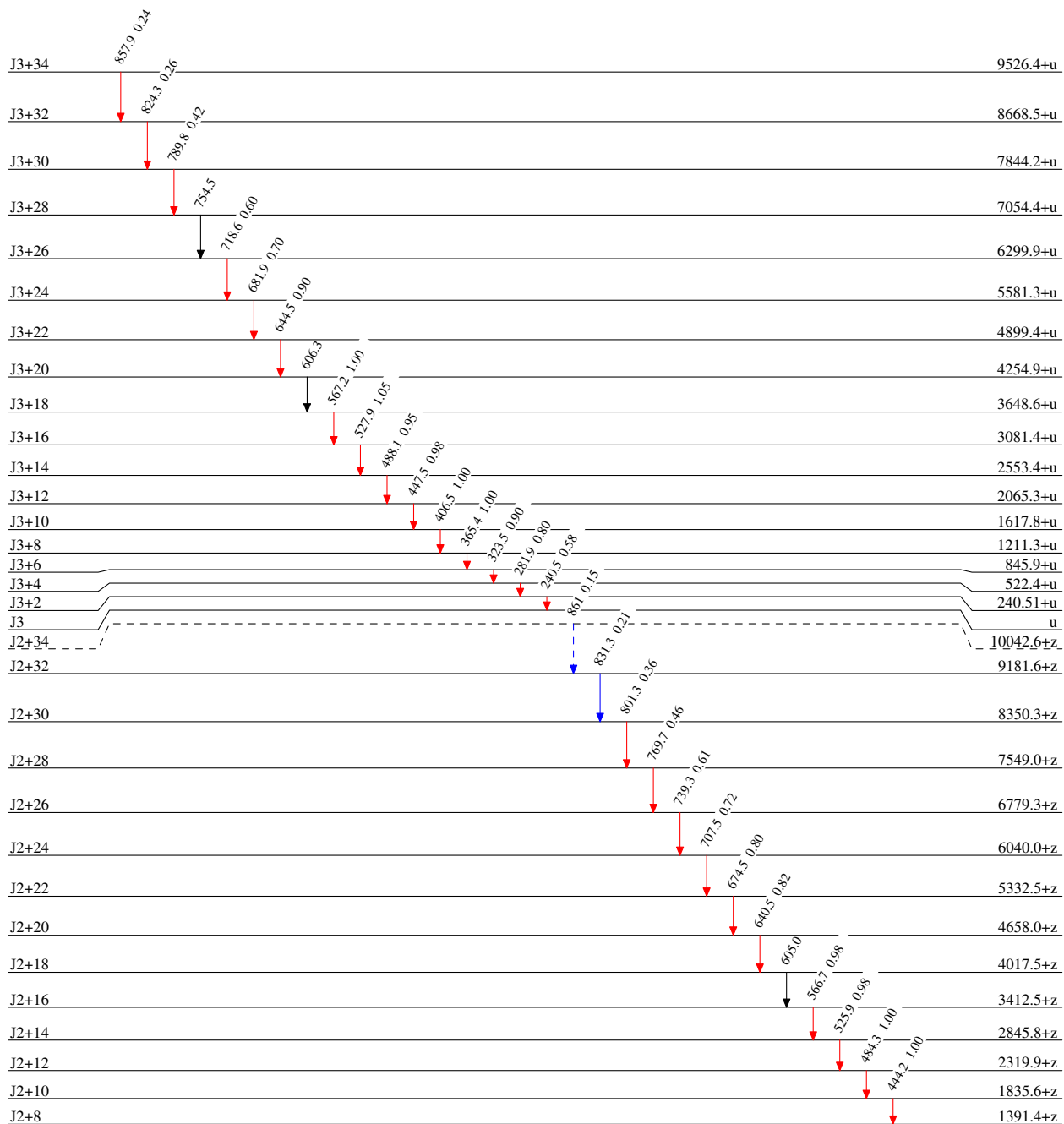
^a Placement of transition in the level scheme is uncertain.

(HI,xn γ):SD 1993Jo09,1994Jo10,1998Bu03

Legend

Level SchemeIntensities: Relative I(γ +ce) within each band

- $I_{\gamma} < 2\% \times I_{\gamma}^{max}$
- $I_{\gamma} < 10\% \times I_{\gamma}^{max}$
- $I_{\gamma} > 10\% \times I_{\gamma}^{max}$
- - - - - γ Decay (Uncertain)

 $^{193}_{80}\text{Hg}_{113}$

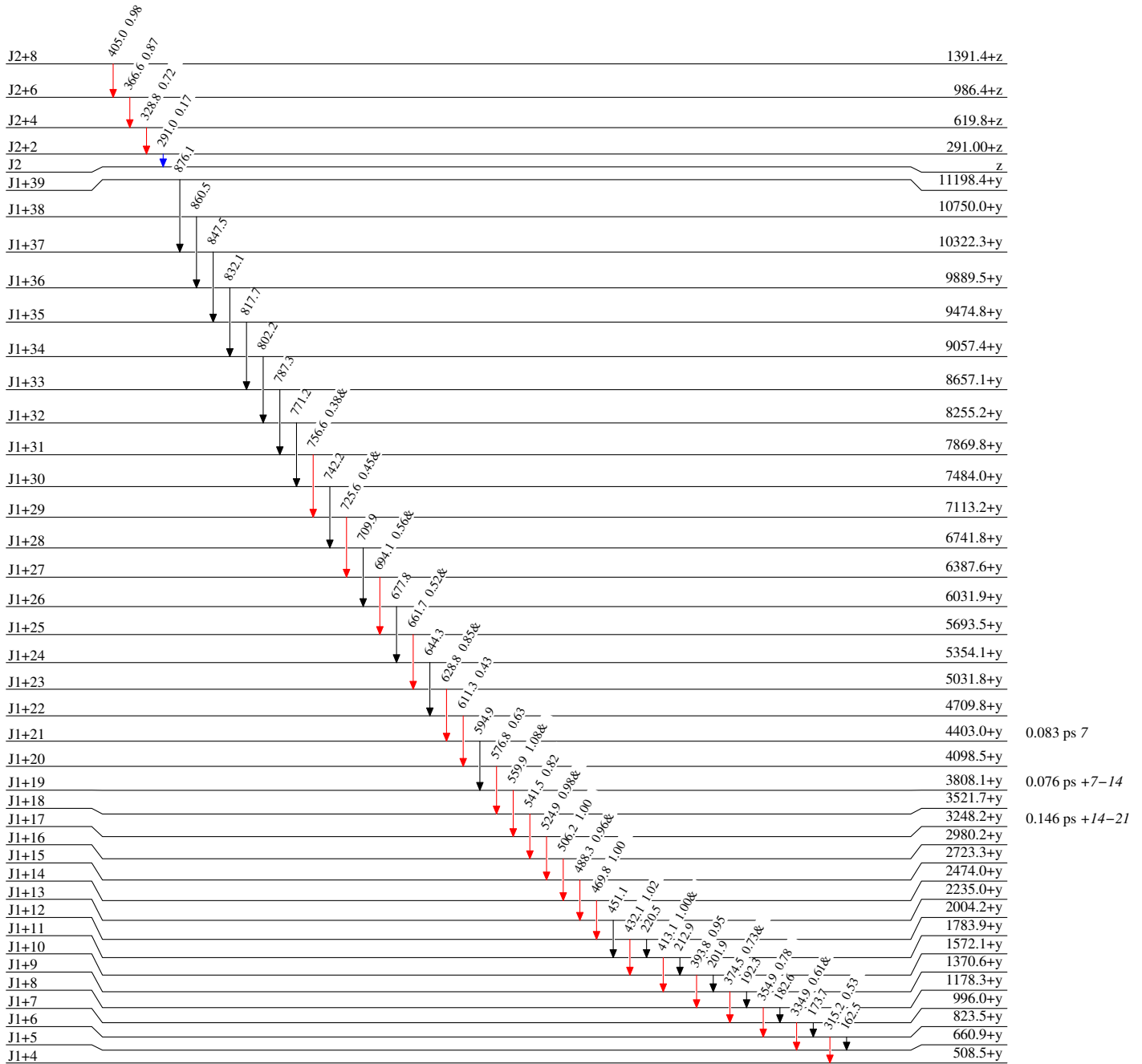
(HL,xn γ):SD 1993Jo09,1994Jo10,1998Bu03

Level Scheme (continued)

Intensities: Relative I(γ +ce) within each band & Multiply placed: undivided intensity given

Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$



¹⁹³Hg₈₀113

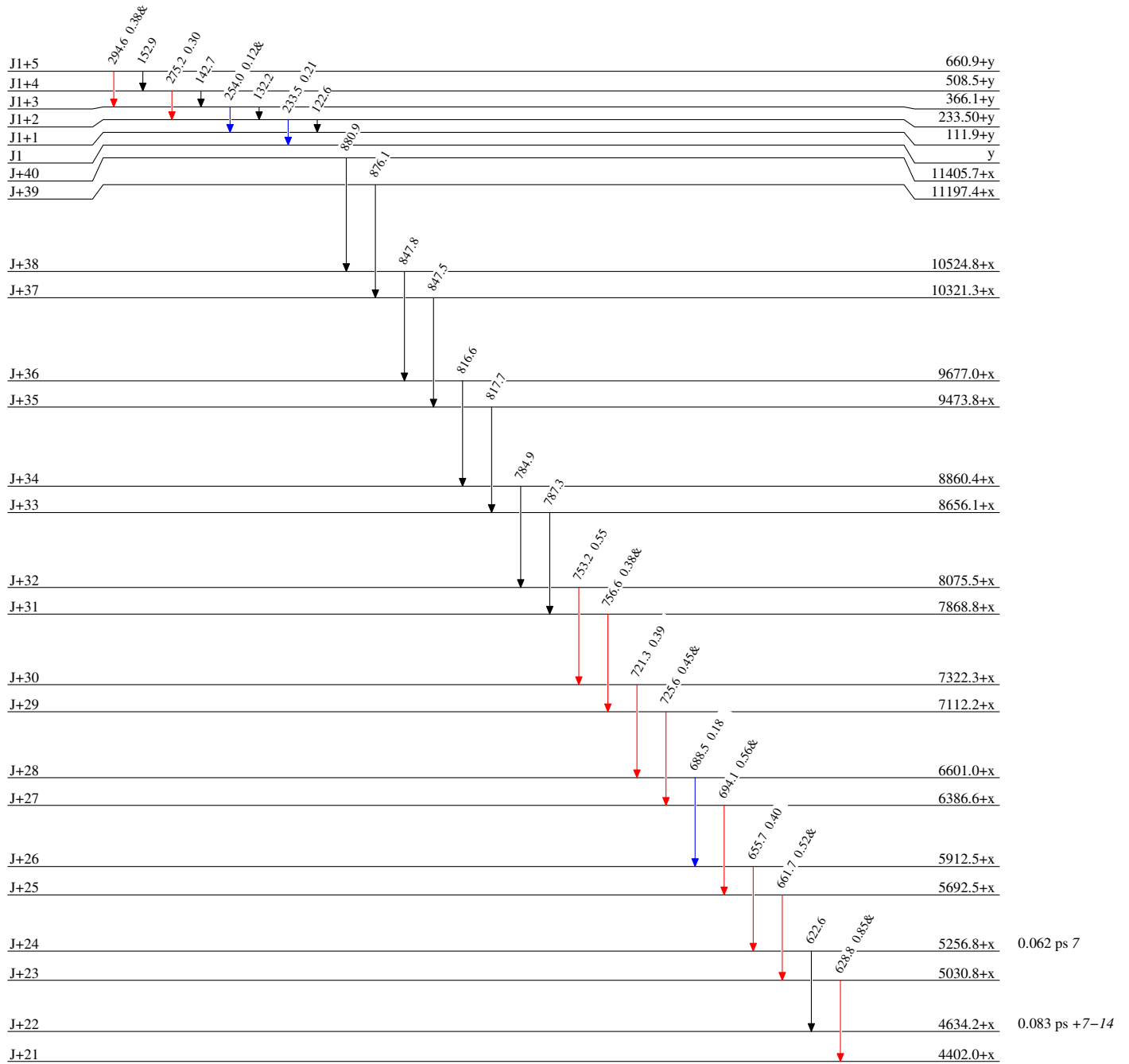
(HI,xn γ):SD 1993Jo09,1994Jo10,1998Bu03

Level Scheme (continued)

Intensities: Relative I(γ +ce) within each band
& Multiply placed: undivided intensity given

Legend




- $I_{\gamma} < 2\% \times I_{\gamma}^{max}$
- $I_{\gamma} < 10\% \times I_{\gamma}^{max}$
- $I_{\gamma} > 10\% \times I_{\gamma}^{max}$

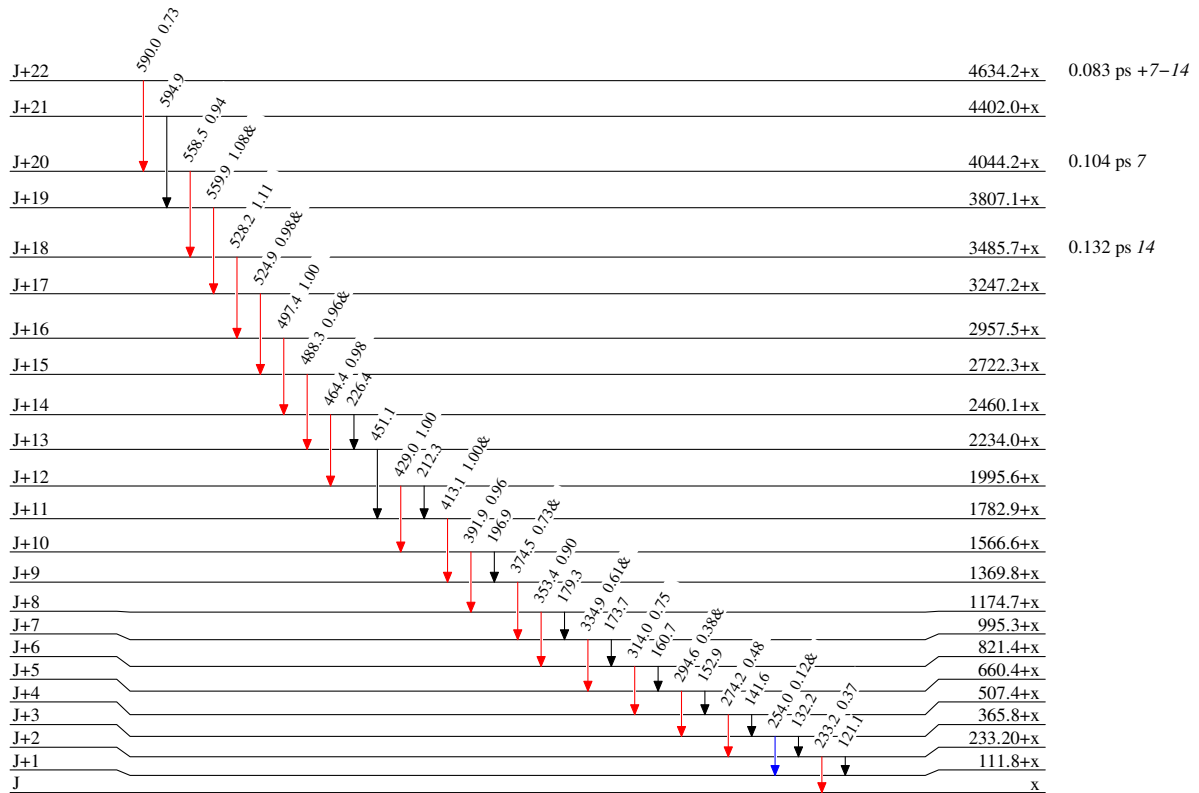


$^{193}_{80}\text{Hg}_{113}$

(HL,xn γ):SD 1993Jo09,1994Jo10,1998Bu03**Level Scheme (continued)****Legend**

Intensities: Relative I(γ +ce) within each band
& Multiply placed: undivided intensity given

 $I_{\gamma} < 2\% \times I_{\gamma}^{max}$
 $I_{\gamma} < 10\% \times I_{\gamma}^{max}$
 $I_{\gamma} > 10\% \times I_{\gamma}^{max}$

 $^{193}_{80}\text{Hg}_{113}$

(HI,xn γ):SD 1993Jo09,1994Jo10,1998Bu03

Band(A): SD-1 Band		Band(B): SD-2 Band		Band(C): SD-3 Band		Band(D): SD-4 Band	
J+40	11405.7+x	J+39	11197.4+x	J1+38	10750.0+y	J1+39	11198.4+y
J+38	881 10524.8+x	J+37	876 10321.3+x	J1+36	860 9889.5+y	J1+37	876 10322.3+y
J+36	848 9677.0+x	J+35	848 9473.8+x	J1+34	832 9057.4+y	J1+35	848 9474.8+y
J+34	817 8860.4+x	J+33	818 8656.1+x	J1+32	802 8255.2+y	J1+33	818 8657.1+y
J+32	785 8075.5+x	J+31	787 7868.8+x	J1+30	771 7484.0+y	J1+31	787 7869.8+y
J+30	753 7322.3+x	J+29	757 7112.2+x	J1+28	742 6741.8+y	J1+29	757 7113.2+y
J+28	721 6601.0+x	J+27	726 6386.6+x	J1+26	710 6031.9+y	J1+27	726 6387.6+y
J+26	688 5912.5+x	J+25	694 5692.5+x	J1+24	678 5354.1+y	J1+25	694 5693.5+y
J+24	656 5256.8+x	J+23	662 5030.8+x	J1+22	644 4709.8+y	J1+23	662 5031.8+y
J+22	623 4634.2+x	J+21	629 4402.0+x	J1+20	611 4098.5+y	J1+21	629 4403.0+y
J+20	590 4044.2+x	J+19	595 3807.1+x	J1+18	577 3521.7+y	J1+19	595 3808.1+y
J+18	558 3485.7+x	J+17	560 3247.2+x	J1+16	542 2980.2+y	J1+17	560 3248.2+y
J+16	528 2957.5+x	J+15	525 2722.3+x	J1+14	506 2474.0+y	J1+15	525 2723.3+y
J+14	497 2460.1+x	J+13	488 2234.0+x	J1+12	470 2004.2+y	J1+13	488 2235.0+y
J+12	464 1995.6+x	J+11	451 1782.9+x	J1+10	432 1572.1+y	J1+11	451 1783.9+y
J+10	429 1566.6+x	J+9	413 1369.8+x	J1+8	394 1178.3+y	J1+9	413 1370.6+y
J+8	392 1174.7+x	J+7	374 995.3+x	J1+6	355 823.5+y	J1+7	374 996.0+y
J+6	353 821.4+x	J+5	335 660.4+x	J1+4	315 508.5+y	J1+5	335 660.9+y
J+4	314 507.4+x	J+3	295 365.8+x	J1+2	275 233.50+y	J1+3	295 366.1+y
J+2	274 233.20+x	J+1	254 111.8+x	J1	234 y	J1+1	254 111.9+y
J	233 x						

(HL,xn γ):SD 1993Jo09,1994Jo10,1998Bu03 (continued)

		Band(F): SD-6 Band (1998Bu03,1994Jo10)
		J3+34 9526.4+u
	858	↓
		J3+32 8668.5+u
	824	↓
		J3+30 7844.2+u
	790	↓
		J3+28 7054.4+u
	754	↓
		J3+26 6299.9+u
	719	↓
		J3+24 5581.3+u
	682	↓
		J3+22 4899.4+u
	644	↓
		J3+20 4254.9+u
	606	↓
		J3+18 3648.6+u
	567	↓
		J3+16 3081.4+u
	528	↓
		J3+14 2553.4+u
	488	↓
		J3+12 2065.3+u
	448	↓
		J3+10 1617.8+u
	406	↓
		J3+8 1211.3+u
	365	↓
		J3+6 845.9+u
	324	↓
		J3+4 522.4+u
	282	↓
		J3+2 240.51+u
	240	↓
		J3 u
		Band(E): SD-5 Band (1998Bu03,1994Jo10, 1993Jo09,1990Cu05)
J2+34	10042.6+z	
	861	↓
J2+32	9181.6+z	
	831	↓
J2+30	8350.3+z	
	801	↓
J2+28	7549.0+z	
	770	↓
J2+26	6779.3+z	
	739	↓
J2+24	6040.0+z	
	708	↓
J2+22	5332.5+z	
	674	↓
J2+20	4658.0+z	
	640	↓
J2+18	4017.5+z	
	605	↓
J2+16	3412.5+z	
	567	↓
J2+14	2845.8+z	
	526	↓
J2+12	2319.9+z	
	484	↓
J2+10	1835.6+z	
	444	↓
J2+8	1391.4+z	
	405	↓
J2+6	986.4+z	
	367	↓
J2+4	619.8+z	
	329	↓
J2+2	291.00+z	
J2	291 z	