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Erratum

On the cessation of seismicity at the base of the transition zone

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Due to an unfortunate technical error, the captions in Table 3 appeared incorrectly in issue 1. Overleaf we now present the complete Table as it should have appeared.

Table 3. Deepest events in Deep Wadati-Benioff Zones (1962–1995)

Date		Magnitude	Depth (km)							Remarks
D M Y	[hh:mm]	m_b	NEIC	ISS/ISC (Inverted)	ISS/ISC pP	CMT (†)	This Study	Monte Carlo	EHB (†)	
			Java [10° S–3° S; 105° E–115° E]							
09 08 1983		5.2	655	658 ± 3		656 D			646	
04 10 1994		5.0	652	648 ± 13						
15 12 1963		6.4	650	654		661 H				
08 06 1977		5.1	643	637 ± 4	634				639	
18 10 1986		5.7	643	655 ± 6	648	645 D			646	
28 09 1994		5.9	637	660 ± 6	635	653 D				
			Conclusion: Seismicity stops around 660 km							
		East Sunda including Banda Sea [10° S–3° S; 115° E–130° E]								
06 02 1963			665				609	512–673		
14 06 1966		5.4	660	617					635	
26 10 1992		4.7	657	650 ± 10						
01 08 1984		5.1	657	657 ± 3		656 D			639	
16 02 1967		4.7	652	663 ± 11			663	637–700	641	
21 11 1987		5.1	651	651		609 D			634	
30 05 1995		5.3	630	650 ± 5		670 D				Deepest CMT solution (6.6×10^{23})
11 05 1955			700				684	627–753		Rees and Okal (1987): 691 km
		Conclusion: Seismicity stops around 660 km								
		Solomon Islands [8° S–3° S; 150° E–160° E]								
22 04 1991		4.8	626	624 ± 24			627	580–656		Only event below 620 km
15 12 1976		4.9	608	608 ± 3					603	
23 06 1982		4.4	599	597 ± 3					590	
12 07 1995		4.8	595							
03 10 1993		4.5	590	584 ± 7						
10 08 1994		4.8	590	590 ± 7						
		Conclusion: Seismicity stops around 605 km								
		Sangihe–South Philippines [2° N–10° N; 120°–128° E]								
25 04 1969		4.8	660	664 ± 4			662	646–676	651	Deepest NEIC-reported
19 08 1988		4.6	658	660 ± 23			633	601–658		
25 01 1993		4.6	656	657 ± 13			661	640–678		
05 03 1984		6.5	649	656 ± 2	665	644 D			658	Deepest large event
		Conclusion: Seismicity stops around 660 km								
		Mariana Islands [10° N–20° N; 140° E–150° E]								
07 03 1962		7.0	685	689		661 H	672	654–688		Stark and Frohlich: 655–680 km
12 11 1993		4.6	656	659 ± 5						
12 10 1963		4.0	638				578	539–608		
19 11 1978		4.3	621	629 ± 9			617	585–643		
23 02 1968		4.8	620	625 ± 4					626	
		Conclusion: Seismicity stops around 660 km								

Table 3. (continued)

Date		Magnitude	Depth (km)							Remarks
D M Y	[hh:mm]	m_b	NEIC	ISS/ISC (Inverted)	ISS/ISC pP	CMT (†)	This Study	Monte Carlo	EHB (†)	
		Kuriles–Kamchatka [42° N–55° N; 140° E–160° E]								
14 08 1988		5.4	645	632 ± 5	645	649 D			651	
30 08 1970		6.6	645	643 ± 3	648	650 H			640	
02 04 1986		4.4	630	618 ± 16			612	593–644	602	
22 08 1966		5.1	630	626 ± 2	637				639	
27 11 1982		5.6	622	619 ± 2	638	628 D			641	
		Conclusion: Seismicity stops around 650 km								
			Argentina [30° S–13° S; 66° W–55° W]							
01 01 1968		3.9	641	599 ± 12			609	576–632		
26 04 1984		5.3	623	623 ± 3					614	
03 12 1972		4.5	621	628 ± 8			623	595–645		
08 12 1962		6.5	620	582		589 H			600	
		Conclusion: Seismicity stops around 620 km								
			Bolivia [15° S–12° S; 71° W–66° W]							
09 06 1994	01:15	6.1	650							
23 06 1994		4.4	642	655 ± 8	640					
10 01 1969		4.0	636	661 ± 5			664	645–686		
09 06 1994	00:33	7.0	631	640 ± 4	713	647 D				
09 06 1994	05:26	5.2	630	664 ± 5						
10 06 1994		4.3	629	636 ± 8						
		88 aftershocks located by Myers et al. (1995) from 622 to 660 km, plus one at 665 km								
		Conclusion: Seismicity stops around 660 km								
			Peru–Brazil [12° S–7° S; 73° W–70° W]							
23 04 1987		3.7	674	672 ± 27			665	613–696		
28 11 1964		5.6	655	650 ± 5	638	627 H			642	
11 07 1978		5.8	645	643 ± 3	636	628 D			634	
28 11 1964		5.4	626	651 ± 4	637				641	
09 07 1950		7.0	650	667		649 H				Significant historical event
			Conclusion: Seismicity stops around 650 km							
			Tonga [35° S–15° S; 175° E–175° W]							
07 05 1971				848 ± 0.2			624	577–657		All-time deepest ISC solution
25 10 1972				806 ± 0.8			433	400–463		Second-deepest ISC solution
31 10 1977			734	734			738	44–800		Deepest NEIC-reported; no depth control
08 11 1989			707		See Table 1					
22 10 1985	19:29		707		See Table 1					
10 01 1985			701		See Table 1					
22 10 1985	19:14	5.5	700		See Table 1					
12 01 1969		4.2	697	697 ± 17			689	544–773		
19 05 1992		4.5	696		See Table 1					
07 12 1978			695	625 ± 6			626	607–641		

Table 3. (continued)

Date		Magnitude	Depth (km)							Remarks
D M Y	[hh:mm]	m_b	NEIC	ISS/ISC (Inverted)	ISS/ISC pP	CMT (†)	This Study	Monte Carlo	EHB (†)	
		Tonga (continued)								
11 12 1978		4.8	695	608 ± 9			608	581–631		
25 09 1971		4.6	695	694 ± 7			694	671–715	687	Deepest event in Engdahl et al.
29 12 1992		4.4	695	See Table 1						
12 04 1984		4.6	694	See Table 1						
09 05 1989		4.5	692	See Table 1						
17 01 1975		4.6	692	602 ± 7			603	585–627	586	
17 06 1977		5.7	690	673 ± 6	684				679	
10 10 1984		5.6	676	676 ± 3	679	691 D			670	
22 10 1985	19:13	5.0	686	690 ± 9	690	684 D			676	
		Conclusion: Seismicity reaches 690 km								
		Northern Peru–Colombia [5° S–1° S; 75° W–70° W]								
18 12 1921		7.9 GR	650	540			630			(Okal and Bina, 1994)
17 01 1922		7.6 GR	650	0		664 H	660			(Okal and Bina, 1994)
31 07 1970		7.1	651	653 ± 3	645	623 R				
		Conclusion: Seismicity stops around 660 km								
		Spain [35° N–40° N; 5° W–0° W]								
29 03 1954		7.0	640	603			627	616–637		Rupture propagated 20 km downwards (Chung and Kanamori, 1976)
30 01 1973		4.0	634	636 ± 3			633	623–644		
31 07 1993		3.9	626	631 ± 21						
08 03 1990		4.1	625	624 ± 4						
			Conclusion: Seismicity stops around 650 km							
		Vityaz Cluster [16° S–11° S; 167° E–177° E]								
28 08 1961		$6\frac{1}{2}$	640				664	641–696		
24 04 1966		4.4	660	663 ± 6					656	
20 05 1976		4.3	661	661 ± 4			662	642–681		
17 03 1977	09:17	4.9	657	663 ± 7			661	643–676	642	
17 03 1977	09:18	4.8	652	664 ± 8			660	644–674	648	
17 03 1977	12:42	5.0	649	662 ± 5					645	
12 08 1979		4.2	650	673 ± 10			674	642–705	653	
14 12 1979		4.6	683	664 ± 5					649	
23 01 1981		4.4	654	660 ± 5					641	
03 11 1981		4.8	654	660 ± 5					647	
09 07 1984		4.7	669	670 ± 5			670	649–685	651	
08 09 1984		4.1	681				681	570–727		
13 11 1984		4.0	676	672 ± 10			670	604–719		
01 12 1984	14:13	4.8	677	679			677	659–702	654	
01 12 1981	14:18	5.1	673	675			672	653–689	651	
23 01 1985		4.6	663	662 ± 14			661	583–717		
24 01 1986		5.2	663	660 ± 7					641	

Table 3. (continued)

Date		Magnitude	Depth (km)							Remarks
D M Y	[hh:mm]	m_b	NEIC	ISS/ISC (Inverted)	ISS/ISC pP	CMT (†)	This Study	Monte Carlo	EHB (†)	
		Vityaz Cluster (continued)								
07 09 1986		4.9	665	664 ± 7		671 D			652	
08 09 1986		4.8	641	664 ± 7					650	
06 08 1987	09:52	4.9	659	660 ± 9					644	
06 08 1987	11:39	4.8	654	683			664	466–753		
11 12 1988		4.2	613	666 ± 45			666	564–740		
24 01 1990		4.6	680	609 ± 49			683	633–776	666	
		Conclusion: Seismicity stops around 672 km								
		Other event								
16 12 1977		(Japan Sea)	637	380			540	325–800		No depth resolution NEIC probably erroneous

† D: Harvard CMT (Dziewonski et al., 1983 and subsequent quarterly updates); H: Huang et al. (1997); R: Russakoff et al. (1997). EHB: Engdahl et al. (1997).