Table S8. Proposed position of short eccentricity cycle maxima in the depth domain of studied records. Eccentricity cycle numbers are relative to the K/Pg boundary (Paleocene) and to onset of the CIE at the PETM (Eocene).(For explanation see text)

E_{100} number for absolute age with respect to La2004		Cycle number	Site 1262	Site 1267	Site 1209	Site 1210	Site 1211	Site 1051	Site 1050	Site 1001	Zumaia	absolute age La2004		EVENT
Solution_1	Solution_2	short Eccentricity	depth mcd	depth rmcd	depth rmcd	depth rmcd	depth rmcd	depth rmcd	depth rmcd	depth rmcd	depth in m	Solution_1	Solution_2	EVENT
E_{100} 697	E_{100} 701	Maastricht$_{100}$ -15									-55.30*	66688	67060	
E_{100} 696	E_{100} 700	Maastricht$_{100}$ -14									-51.48*	66592	66956	
E_{100} 695	E_{100} 699	Maastricht$_{100}$ -13									-47.87*	66508	66860	
E_{100} 694	E_{100} 698	Maastricht$_{100}$ -12									-44.15*	66408	66780	
E_{100} 693	E_{100} 697	Maastricht$_{100}$ -11	end of splice								-39.61*	66316	66688	
E_{100} 692	E_{100} 696	Maastricht$_{100}$ -10	235.20	336.71							-35.71*	66216	66592	
E_{100} 691	E_{100} 695	Maastricht$_{100}$ -9	233.54	335.53							-31.61*	66120	66508	
E_{100} 690	E_{100} 694	Maastricht$_{100}$ -8	232.08								-28.57*	66024	66408	
E_{100} 689	E_{100} 693	Maastricht$_{100}$ -7	230.48	333.17							-24.67*	65944	66316	
E_{100} 688	E_{100} 692	Maastricht$_{100}$ -6	228.51	331.36							-20.35*	65844	66216	
E_{100} 687	E_{100} 691	Maastricht$_{100}$ -5	226.40	329.71							-16.05*	65744	66120	
E_{100} 686	E_{100} 690	Maastricht$_{100}$ -4	224.44	327.61							-12.44*	65644	66024	
E_{100} 685	E_{100} 689	Maastricht$_{100}$ -3	222.70	325.61							-9.53*	65556	65944	
E_{100} 684	E_{100} 688	Maastricht$_{100}$ -2	220.60	324.02							-6.63*	65456	65844	
E_{100} 683	E_{100} 687	Maastricht$_{100}$ -1	218.40	322.03							-2.73*	65348	65744	
		K/P	216.71	320.17	261.58	246.38	147.02				0*			**K/Pg boundary**
E_{100} 682	E_{100} 686	Paleocene$_{100}$ 1	condensed								0.30*	65248	65644	
E_{100} 681	E_{100} 685	Paleocene$_{100}$ 2	216.00	319.10							1.50*	65168	65556	
E_{100} 680	E_{100} 684	Paleocene$_{100}$ 3		318.67	260.11	245.05	145.83				2.77*	65072	65456	
E_{100} 679	E_{100} 683	Paleocene$_{100}$ 4		318.26	259.56	244.33	145.39				3.81*	64972	65348	
E_{100} 678	E_{100} 682	Paleocene$_{100}$ 5	214.81	317.80	258.79	243.23	144.76				5.09*	64880	65248	
E_{100} 677	E_{100} 681	Paleocene$_{100}$ 6	214.36	317.31	258.4	242.71	condensed				6.21*	64792	65168	
E_{100} 676	E_{100} 680	Paleocene$_{100}$ 7	213.87	316.83	258.03	242.21	condensed				7.62*	64692	65072	
E_{100} 675	E_{100} 679	Paleocene$_{100}$ 8	213.31	316.29	257.6	241.83	condensed				8.78*	64588	64972	
E_{100} 674	E_{100} 678	Paleocene$_{100}$ 9			257.16	241.51	condensed				9.96*	64496	64880	
E_{100} 673	E_{100} 677	Paleocene$_{100}$ 10	212.41	315.32	256.8	241.24	condensed				11.20*	64404	64792	
E_{100} 672	E_{100} 676	Paleocene$_{100}$ 11	211.80	314.65	256.37	240.86	condensed				11.85*	64312	64692	
E_{100} 671	E_{100} 675	Paleocene$_{100}$ 12	211.21	313.97	255.91	240.45	condensed				12.82*	64216	64588	
E_{100} 670	E_{100} 674	Paleocene$_{100}$ 13	210.50	313.19	255.62	240.19	condensed				13.80*	64136	64496	
E_{100} 669	E_{100} 673	Paleocene$_{100}$ 14	209.82	312.42			condensed				~14.80$^{\#}$	64036	64404	
E_{100} 668	E_{100} 672	Paleocene$_{100}$ 15	209.20	311.81			condensed				~16.00$^{\#}$	63952	64312	
E_{100} 667	E_{100} 671	Paleocene$_{100}$ 16	208.76	311.39	254.56	239.2	condensed				~17.25$^{\#}$	63864	64216	
E_{100} 666	E_{100} 670	Paleocene$_{100}$ 17	208.22		254.22	238.96	condensed				~18.35$^{\#}$	63764	64136	
E_{100} 665	E_{100} 669	Paleocene$_{100}$ 18	207.66	310.31			condensed		379.29		~19.60$^{\#}$	63656	64036	
E_{100} 664	E_{100} 668	Paleocene$_{100}$ 19	207.22		253.72	238.61	condensed		378.09		~20.40$^{\#}$	63568	63952	
E_{100} 663	E_{100} 667	Paleocene$_{100}$ 20	206.68	309.22	253.39	238.36	condensed		376.74		~21.40$^{\#}$	63484	63864	
E_{100} 662	E_{100} 666	Paleocene$_{100}$ 21	206.18	308.64	253.12	238.19	condensed		375.69		~22.20$^{\#}$	63380	63764	
E_{100} 661	E_{100} 665	Paleocene$_{100}$ 22	205.62	308.10	condensed	condensed	condensed		374.59		~22.90$^{\#}$	63272	63656	
E_{100} 660	E_{100} 664	Paleocene$_{100}$ 23	205.12		condensed	condensed	condensed		373.29	339.25	~23.80$^{\#}$	63168	63568	
E_{100} 659	E_{100} 663	Paleocene$_{100}$ 24	204.68		condensed	condensed	condensed		372.04	338.77	~24.60$^{\#}$	63096	63484	
E_{100} 658	E_{100} 662	Paleocene$_{100}$ 25	204.14	306.93	252.52	condensed	condensed		370.55	338.31	~25.20$^{\#}$	62996	63380	
E_{100} 657	E_{100} 661	Paleocene$_{100}$ 26	203.72	missing	252.22	237.72	condensed		368.50	337.79	~25.80$^{\#}$	62892	63272	
E_{100} 656	E_{100} 660	Paleocene$_{100}$ 27	203.20	306.72	251.9	237.44	condensed		366.30	336.89	~26.40$^{\#}$	62796	63168	
E_{100} 655	E_{100} 659	Paleocene$_{100}$ 28	202.52	306.04			condensed		364.10	336.11	~27.05$^{\#}$	62704	63096	
E_{100} 654	E_{100} 658	Paleocene$_{100}$ 29	201.60	305.20	251.326	236.95	condensed		361.82	335.27	~28.00$^{\#}$	62608	62996	
E_{100} 653	E_{100} 657	Paleocene$_{100}$ 30	200.90	304.54	251.02	236.7	condensed		359.37	334.35	~29.10$^{\#}$	62512	62892	
E_{100} 652	E_{100} 656	Paleocene$_{100}$ 31	200.22	303.80	condensed	condensed	condensed		356.52	333.38	~30.20$^{\#}$	62412	62796	
E_{100} 651	E_{100} 655	Paleocene$_{100}$ 32			condensed	condensed	condensed		353.23	332.42	~31.50$^{\#}$	62320	62704	
E_{100} 650	E_{100} 654	Paleocene$_{100}$ 33	199.12	302.49	250.26	condensed	condensed		350.13	331.66	~32.80$^{\#}$	62240	62608	
E_{100} 649	E_{100} 653	Paleocene$_{100}$ 34	198.38	301.78	250.09	235.97	142.97		347.33	331.04	~34.20$^{\#}$	62144	62512	
E_{100} 648	E_{100} 652	Paleocene$_{100}$ 35	197.57	301.19	249.69	235.69	142.78		345.03	330.28	~35.40$^{\#}$	62040	62412	
E_{100} 647	E_{100} 651	Paleocene$_{100}$ 36	196.78	300.62	249.15	235.2	142.52		342.38	329.48	~36.60$^{\#}$	61952	62320	
E_{100} 646	E_{100} 650	Paleocene$_{100}$ 37			248.6	234.79	142.26		338.33	328.76	~37.75$^{\#}$	61864	62240	
E_{100} 645	E_{100} 649	Paleocene$_{100}$ 38	195.37	299.33	248.12	234.39	142.02		334.34	327.92	~39.20$^{\#}$	61764	62144	**Chron 27n event**
E_{100} 644	E_{100} 648	Paleocene$_{100}$ 39	194.51	298.37	247.746	234	141.71		329.99		~40.50$^{\#}$	61660	62040	

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E_{100} number for absolute age with respect to La2004		**Cycle number**	**Site 1262**	**Site 1267**	**Site 1209**	**Site 1210**	**Site 1211**	**Site 1051**	**Site 1050**	**Site 1001**	**Zumaia**	**absolute age La2004**		**EVENT**
Solution_1	**Solution_2**	**short Eccentricity**	**depth mcd**	**depth rmcd**	**depth rmcd**	**depth rmcd**	**depth rmcd**	**depth rmcd**	**depth rmcd**	**depth rmcd**	**depth in m**	**Solution_1**	**Solution_2**	**EVENT**
E_{100} 643	E_{100} 647	Paleocene$_{100}$ 40	193.74		247.17	233.52	141.28				?~41.40$^{\#}$	61564	61952	
E_{100} 642	E_{100} 646	Paleocene$_{100}$ 41	192.94		246.63	233.04					~42.10$^{\#}$	61484	61864	
E_{100} 641	E_{100} 645	Paleocene$_{100}$ 42	192.07	296.25	missing	232.53	140.33				~43.75$^{\#}$	61384	61764	
E_{100} 640	E_{100} 644	Paleocene$_{100}$ 43	191.25	295.79	245.35	231.89	139.99				~44.90$^{\#}$	61280	61660	
E_{100} 639	E_{100} 643	Paleocene$_{100}$ 44	190.25	295.21	problematic	231.6	condensed				~45.90$^{\#}$	61176	61564	
E_{100} 638	E_{100} 642	Paleocene$_{100}$ 45	189.58	294.80	problematic	condensed	condensed				~47.60$^{\#}$	61116	61484	
E_{100} 637	E_{100} 641	Paleocene$_{100}$ 46	188.90	294.16	problematic	condensed	condensed				~48.90$^{\#}$	61012	61384	
E_{100} 636	E_{100} 640	Paleocene$_{100}$ 47	188.04	293.11	243.66	230.35	139?				~50.00$^{\#}$	60908	61280	
E_{100} 635	E_{100} 639	Paleocene$_{100}$ 48			243.05	229.75	condensed				~51.10$^{\#}$	60804	61176	
E_{100} 634	E_{100} 638	Paleocene$_{100}$ 49	186.97	291.90	condensed	condensed	condensed				~52.40$^{\#}$	60720	61116	
E_{100} 633	E_{100} 637	Paleocene$_{100}$ 50	186.23	290.90	condensed	condensed	condensed					60624	61012	
E_{100} 632	E_{100} 636	Paleocene$_{100}$ 51	185.52	289.92	condensed	condensed	condensed					60520	60908	
E_{100} 631	E_{100} 635	Paleocene$_{100}$ 52	184.46	288.65	condensed	condensed	condensed					60416	60804	
E_{100} 630	E_{100} 634	Paleocene$_{100}$ 53	183.55	287.56	condensed	condensed	condensed					60324	60720	
E_{100} 629	E_{100} 633	Paleocene$_{100}$ 54	182.68	286.54	241.25	228.25	condensed					60248	60624	
E_{100} 628	E_{100} 632	Paleocene$_{100}$ 55	181.64	285.58	240.87	227.93	condensed					60144	60520	
E_{100} 627	E_{100} 631	Paleocene$_{100}$ 56	180.92	284.80	240.46	227.6	condensed	561.54				60040	60416	
E_{100} 626	E_{100} 630	Paleocene$_{100}$ 57	180.06	284.01	239.84		condensed	560.72				59944	60324	
E_{100} 625	E_{100} 629	Paleocene$_{100}$ 58	179.28		239.16		condensed	559.92				59860	60248	
E_{100} 624	E_{100} 628	Paleocene$_{100}$ 59	178.48	282.55	238.78	225.99	condensed	559.08				59760	60144	
E_{100} 623	E_{100} 627	Paleocene$_{100}$ 60	177.78	281.76	238.36	225.65	condensed	558.22				59656	60040	
E_{100} 622	E_{100} 626	Paleocene$_{100}$ 61	177.00	280.88	237.83		condensed	557.2				59556	59944	
E_{100} 621	E_{100} 625	Paleocene$_{100}$ 62	176.10	280.02	237.32	224.87	condensed	556.36				59400	59860	
E_{100} 620	E_{100} 624	Paleocene$_{100}$ 63	175.41	279.41		224.59	condensed	555.74				59320	59760	
E_{100} 619	E_{100} 623	Paleocene$_{100}$ 64	175.01	279.05	236.49	224.27	condensed	555.1				59220	59656	
E_{100} 618	E_{100} 622	Paleocene$_{100}$ 65	174.53	278.62	235.95		condensed	554.22				59124	59556	
E_{100} 617	E_{100} 621	Paleocene$_{100}$ 66	174.07	missing	235.37	condensed	condensed	553.04				59028	59400	
E_{100} 616	E_{100} 620	Paleocene$_{100}$ 67	173.60	277.76	235.021	223.49	137.39	552.14				58928	59320	**ELPE**
E_{100} 615	E_{100} 619	Paleocene$_{100}$ 68	173.15	277.13	condensed	condensed	condensed	550.86				58832	59220	
E_{100} 614	E_{100} 618	Paleocene$_{100}$ 69	172.51	276.53	condensed	condensed	condensed	549.7				58732	59124	
E_{100} 613	E_{100} 617	Paleocene$_{100}$ 70	171.95	275.94	condensed	condensed	condensed	548.38				58644	59028	
E_{100} 612	E_{100} 616	Paleocene$_{100}$ 71	171.47	275.42	234	223.04	condensed	546.9				58544	58928	
E_{100} 611	E_{100} 615	Paleocene$_{100}$ 72	170.75	274.62			condensed	545.3				58440	58832	
E_{100} 610	E_{100} 614	Paleocene$_{100}$ 73	170.08	273.39			condensed	544.08				58344	58732	
E_{100} 609	E_{100} 613	Paleocene$_{100}$ 74	169.48	272.26	232.56	221.84	136.58	542.84				58264	58644	
E_{100} 608	E_{100} 612	Paleocene$_{100}$ 75	168.68	270.56	231.863	221.24	136.28	541.54				58152	58544	
E_{100} 607	E_{100} 611	Paleocene$_{100}$ 76	167.94	269.04	231.2	220.64		540.38				58044	58440	
E_{100} 606	E_{100} 610	Paleocene$_{100}$ 77	167.24	268.25	230.9	220.36		539.04				57940	58344	
E_{100} 605	E_{100} 609	Paleocene$_{100}$ 78	166.58		230.45	219.93		537.26				57836	58264	
E_{100} 604	E_{100} 608	Paleocene$_{100}$ 79	165.82	265.87	230.083	219.58	135.27	536.26				57728	58152	
For 1262 and 1267 the following from Westerhold et al. in press														
E_{100} 603	E_{100} 607	Paleocene$_{100}$ 80	164.50	263.77	229.33	218.83	134.64	535.26				57640	58044	
E_{100} 602	E_{100} 606	Paleocene$_{100}$ 81	163.23		228.86	218.36	134.24	534.54				57540	57940	
E_{100} 601	E_{100} 605	Paleocene$_{100}$ 82	162.28		228.29	217.79	133.76	533.64				57440	57836	
E_{100} 600	E_{100} 604	Paleocene$_{100}$ 83	161.14	259.61	227.57	217.07	133.16	532.54				57332	57728	
E_{100} 599	E_{100} 603	Paleocene$_{100}$ 84	159.82	257.69	226.8	216.35	132.7	531.42				57224	57640	
E_{100} 598	E_{100} 602	Paleocene$_{100}$ 85	158.85	256.36	226.12			530.34				57120	57540	
E_{100} 597	E_{100} 601	Paleocene$_{100}$ 86	158.00		225.18			529.48				57028	57440	
E_{100} 596	E_{100} 600	Paleocene$_{100}$ 87	157.10	253.74	224.68	214.55	131.43	528.36				56924	57332	
E_{100} 595	E_{100} 599	Paleocene$_{100}$ 88	155.59	251.41	224.02	213.84	130.93	527.08				56824	57224	
E_{100} 594	E_{100} 598	Paleocene$_{100}$ 89	154.01	249.53	223.42	213.29	130.41	525.88				56720	57120	
E_{100} 593	E_{100} 597	Paleocene$_{100}$ 90	153.06	248.35	222.87	212.79	129.94	524.86				56636	57028	
E_{100} 592	E_{100} 596	Paleocene$_{100}$ 91	151.85	246.94	222.222	212.2	129.38	523.84				56540	56924	
E_{100} 591	E_{100} 595	Paleocene$_{100}$ 92	150.60	245.38	221.382	211.43	128.75	522.52				56436	56824	
E_{100} 590	E_{100} 594	Paleocene$_{100}$ 93	149.52	244.06	220.67	condensed	condensed	521.1				56344	56720	
E_{100} 589	E_{100} 593	Paleocene$_{100}$ 94	148.30	242.49	condensed	condensed	condensed	519.56				56260	56636	
E_{100} 588	E_{100} 592	Paleocene$_{100}$ 95	147.13	241.06	condensed	condensed	condensed	518.32				56156	56540	
E_{100} 587	E_{100} 591	Paleocene$_{100}$ 96	145.94	239.45	condensed	condensed	condensed	517.04				56052	56436	

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E_{100} number for absolute age with respect to La2004		Cycle number	Site 1262	Site 1267	Site 1209	Site 1210	Site 1211	Site 1051	Site 1050	Site 1001	Zumaia	absolute age La2004		EVENT
Solution_1	Solution_2	short Eccentricity	depth mcd	depth rmcd	depth rmcd	depth rmcd	depth rmcd	depth rmcd	depth rmcd	depth rmcd	depth in m	Solution_1	Solution_2	EVENT
E_{100} 586	E_{100} 590	$Paleocene_{100}$ 97	144.60	237.42	condensed	condensed	condensed	515.72				55976	56344	
E_{100} 585	E_{100} 589	$Paleocene_{100}$ 98	143.10	235.44	219.141	209.06	condensed	514.8				55820	56260	
E_{100} 584	E_{100} 588	$Paleocene_{100}$ 99	141.95	233.94	218.581	208.52	126.87	513.5				55716	56156	
E_{100} 583	E_{100} 587	$Paleocene_{100}$ 100	140.84	232.62	218.221	207.94	condensed	slump				55608	56052	
E_{100} 582	E_{100} 586	$Paleocene_{100}$ 101	140.12	231.76	218.001	207.49	126.47	slump				55504	55976	**PETM (ETM-1)**
E_{100} 581	E_{100} 585	$Eocene_{100}$ 1										55436	55820	
E_{100} 580	E_{100} 584	$Eocene_{100}$ 2	138.51	230.05								55336	55716	
E_{100} 579	E_{100} 583	$Eocene_{100}$ 3	137.20	228.57								55228	55608	
E_{100} 578	E_{100} 582	$Eocene_{100}$ 4	136.09	227.33								55128	55504	
E_{100} 577	E_{100} 581	$Eocene_{100}$ 5	135.04	226.13								55044	55436	
E_{100} 576	E_{100} 580	$Eocene_{100}$ 6	133.78	224.51								54952	55336	
E_{100} 575	E_{100} 579	$Eocene_{100}$ 7	132.34	222.81								54848	55228	
E_{100} 574	E_{100} 578	$Eocene_{100}$ 8	130.94	221.14								54744	55128	
E_{100} 573	E_{100} 577	$Eocene_{100}$ 9										54640	55044	
E_{100} 572	E_{100} 576	$Eocene_{100}$ 10	128.68	218.38								54572	54952	
E_{100} 571	E_{100} 575	$Eocene_{100}$ 11	127.38	216.80								54468	54848	
E_{100} 570	E_{100} 574	$Eocene_{100}$ 12	125.91	215.03								54364	54744	
E_{100} 569	E_{100} 573	$Eocene_{100}$ 13	124.42	213.22								54264	54640	
E_{100} 568	E_{100} 572	$Eocene_{100}$ 14	123.30	212.00								54180	54572	
E_{100} 567	E_{100} 571	$Eocene_{100}$ 15	121.96	210.55								54088	54468	
E_{100} 566	E_{100} 570	$Eocene_{100}$ 16	120.53	209.02								53984	54364	
E_{100} 565	E_{100} 569	$Eocene_{100}$ 17	119.15	207.50								53884	54264	
E_{100} 564	E_{100} 568	$Eocene_{100}$ 18										53800	54180	
E_{100} 563	E_{100} 567	$Eocene_{100}$ 19	117.13	205.11	212.55	210.62						53712	54088	**Elmo (ETM-2)**
E_{100} 562	E_{100} 566	$Eocene_{100}$ 20	116.12	203.87								53608	53984	

*TenKate & Sprenger 1993

[#] Dinarés-Turell et al. 2003