

Short-term fluctuations in vegetation and phytoplankton during the Middle Eocene
greenhouse climate: A 640 kyr record from the Messel oil shale (Germany)

by

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Supplementary material (SM)

SM Table:

Raw percentage data of the 8 clusters we used for time series analyses. For wavelet transform and spectral analyses the percentage data are subsequently detrended by subtracting mean.

Figure Captions

SM Figure 1: Wavelet analyses of elements of Cluster 1.

Continuous Wavelet Time-Frequency Spectra of *Platycaryapollenites* spp., *Plicapollis pseudoexcelsus*, Pinaceae-Pollen (*Pityosporites labdacus*) and the total percentage curve of cluster 1. It is obvious that the individual elements already show strong time series signals, which can be assigned in part to the Milankovitch frequency band. However, the sum of percentage values exhibits much more pronounced signals.

SM Figure 2: Times series analyses of Cluster 3:

a) Continuous Wavelet Time-Frequency Spectrum (Morlet wavelets) of total percentage curve of Cluster 3. The wavelet power at each period is normalized by the global wavelet spectrum. To reduce wraparound effects, the time series is padded with zeros. The hatched areas show those regions where edge effects caused by zero padding are significant. Black contours correspond to power which is significant at 90% confidence level, using a white noise background spectrum. The red and orange colored areas indicate strong effects of a cycle at a certain time interval, while blue and white areas represent little or no effect. Pronounced signals are at the time interval 150 – 550 kyr. In this interval pronounced orbital periods of precession (~ 25 kyr), obliquity (~ 40 kyr) and eccentricity (~100 kyr) are visible. Sub-Milankovitch signals around 6 – 12 kyr are indicated.

b) Global wavelet spectrum. The dashed line shows the corresponding 90 % significance level. Significant peaks are labelled with their correlation to orbital periods.

Analyses in a) and b) were undertaken using interactive software available at <http://atoc.colorado.edu/research/wavelets/> by using methods of Torrence & Compo (1998).

c) Bias corrected spectrum of the total percentage curve of Cluster 3 for the time interval 0 – 640 kyr, computed using a FFT. The spectral estimate represents the average over seven segments with 50% overlap and without tapering (rectangular window). 90%, 95%, and 99% confidence levels are shown. Detectable spectral peaks within the Milankovitch frequency band are labelled with their periods in kyr. Signals for eccentricity (~ 135 kyr) and precession

(~ 25 kyr) are significant at the 95% level. Sub-Milankovitch signals at 6.8 and 4.2 kyr are significant at the 95% and 99% level.

d) Bias corrected spectrum for the time interval 150 – 550 kyr, where the wavelet time-frequency spectrum (a) shows the strongest signals. The spectral estimate represents the average over four segments with 50% overlap and without tapering (rectangular window). A conspicuous increase of the significance for obliquity and sub-Milankovitch signals is noticeable. The spectra in c) and d) were calculated with software REDFIT 3.8.

SM Figure 3: Times series analyses of Cluster 4

a) Continuous Wavelet Time-Frequency Spectrum (Morlet wavelets) of total percentage curve of Cluster 4. Pronounced signals are at the time interval 150 – 400 kyr. In this interval orbital periods of short precession (~16 kyr), long precession (~22 kyr) and obliquity (between 32 – 48 kyr) are visible. A possible eccentricity at 100 kyr is indicated just as significant sub-Milankovitch signals around 7 – 10 kyr.

b) Global wavelet spectrum. Significant peaks are labelled with their correlation to orbital periods.

c) Bias corrected spectrum of the total percentage curve of Cluster 2 for the time interval 0 – 640 kyr, computed using a FFT. The spectral estimate represents the average over seven segments with 50% overlap and without tapering (rectangular window). Detectable spectral peaks within the Milankovitch frequency band are labelled with their periods in kyr. Only obliquity and a sub-Milankovitch signal at 8.3 kyr are significant at the 90% level.

d) Bias corrected spectrum for the time interval 150 – 400 kyr, where the wavelet time-frequency spectrum (a) shows the strongest signals. The spectral estimate represents the average over six segments with 50% overlap and without tapering (rectangular window). A conspicuous increase of the significance for obliquity, precession and the 8.3 kyr sub-Milankovitch cycle of (c) is noticeable.

For further information see caption of SM Figure 2.

SM Figure 4: Times series analyses of Cluster 6

a) Continuous Wavelet Time-Frequency Spectrum (Morlet wavelets) of total percentage curve of Cluster 6. Pronounced signals are at the time intervals 200 – 300 kyr and 420 – 640 kyr. In these intervals orbital periods of precession (~24 kyr) and obliquity (~45 kyr) are visible. A possible eccentricity signal is indicated just as significant sub-Milankovitch signals around 6 – 12 kyr.

b) Global wavelet spectrum. Significant peaks are labelled with their correlation to orbital periods.

c) Bias corrected spectrum of the total percentage curve of Cluster 6 for the time interval 0 – 640 kyr, computed using a FFT. The spectral estimate represents the average over seven segments with 50% overlap and without tapering (rectangular window). Detectable spectral peaks within the Milankovitch frequency band are labelled with their periods in kyr. Only an eccentricity signal and two sub-Milankovitch signals at 4 and 5.8 kyr are significant at the 90% level.

d) Bias corrected spectrum for the time interval 420 – 640 kyr, where the wavelet time-frequency spectrum (a) shows the strongest signals. The spectral estimate represents the average over five segments with 50% overlap and without tapering (rectangular window). Obliquity, precession, and a sub-Milankovitch signal at 4 kyr are significant at the 90% and 95% level.

For further information see caption of SM Figure 2.

SM Figure 5: Times series analyses of Cluster 7

a) Continuous Wavelet Time-Frequency Spectrum (Morlet wavelets) of total percentage curve of Cluster 7. Orbital periods of short precession (~18 kyr), long precession (~26 kyr) and obliquity (~40 kyr) are visible. Eccentricity and sub-Milankovitch signals are not indicated.

b) Global wavelet spectrum. Significant peaks are labelled with their correlation to orbital periods.

c) Bias corrected spectrum of the total percentage curve of Cluster 7 for the time interval 0 – 640 kyr, computed using a FFT. The spectral estimate represents the average over seven segments with 50% overlap and without tapering (rectangular window). Detectable spectral peaks within the Milankovitch frequency band are labelled with their periods in kyr. Only obliquity, long precession and two sub-Milankovitch signals at 6.8 and 4.1 kyr are significant at the 95% level.

d) Bias corrected spectrum for the time interval 0 – 300 kyr, where the wavelet time-frequency spectrum (a) shows the strongest signals. The spectral estimate represents the average over six segments with 50% overlap and without tapering (rectangular window). Obliquity and two sub-Milankovitch signals are significant at the 95% level.

For further information see caption of SM Figure 2.

Raw percentage data of the 8 clusters

Depth (in m)	Age (in kyr)	Cluster 1 (%)	Cluster 2 (%)	Cluster 3 (%)	Cluster 4 (%)	Cluster 5 (%)	Cluster 6 (%)	Cluster 7 (%)	Cluster 8 (%)
3,08 - 3,09	0	8.08	5.77	0.38	3.08	0.77	5	41.15	28.08
3,28 - 3,29	1.4	12.06	6.23	0.78	4.28	1.17	5.45	29.57	34.24
3,48 - 3,49	2.8	12.6	5.51	0.79	4.33	0	4.72	36.61	27.56
3,68 - 3,69	4.2	12.35	5.18	0	1.59	1.59	3.19	34.66	31.47
3,88 - 3,89	5.6	5.16	5.16	1.59	3.17	1.59	7.14	40.87	25
4,08 - 4,09	7	6.35	6.75	2.78	3.57	2.78	4.37	42.86	22.62
4,28 - 4,29	8.4	12.45	4.42	1.61	1.61	2.41	4.02	46.99	20.08
4,48 - 4,49	9.8	7.94	5.16	1.59	4.37	7.14	4.37	30.95	27.38
4,68 - 4,69	11.2	10.65	4.94	0.76	4.18	0.76	4.18	36.88	29.66
4,88 - 4,89	12.6	12.22	3.33	1.48	3.33	0.74	4.44	36.3	31.85
5,09 - 5,10	14	6.67	3.92	1.96	3.92	0.78	3.92	34.51	35.69
5,28 - 5,29	15.4	7.09	3.94	3.54	3.94	0.39	5.51	35.43	33.86
5,48 - 5,49	16.8	5.34	3.44	1.15	1.53	0.38	6.11	33.59	41.6
5,68 - 5,69	18.2	13.49	5.56	1.19	3.97	0.4	1.98	26.98	39.29
5,88 - 5,89	19.6	8.24	2.75	1.18	3.14	1.57	2.75	34.51	35.69
6,08 - 6,09	21	11.79	7.6	2.28	4.56	0.76	4.56	35.74	24.33
6,28 - 6,29	22.4	6.2	3.1	1.55	3.49	0.78	4.65	39.15	32.17
6,48 - 6,49	23.8	15.53	3.79	5.68	4.55	0	3.79	36.36	23.48
6,68 - 6,69	25.2	8.85	4.23	0	4.62	0.77	6.92	31.54	32.31
6,88 - 6,89	26.6	16.67	1.16	0.78	1.55	2.71	2.71	31.4	37.98
7,08 - 7,09	28	11.19	4.48	0.37	7.46	1.12	5.22	33.58	28.73
7,28 - 7,29	29.4	11.7	2.84	3.19	2.13	0.71	5.67	38.65	26.95
7,48 - 7,49	30.8	12.69	5.38	1.15	1.54	0.77	5.38	36.92	30
7,68 - 7,69	32.2	14.45	1.95	0	3.13	2.73	4.69	34.77	30.86
7,88 - 7,89	33.6	12.69	1.54	0.77	4.62	0	6.92	31.15	33.85
8,08 - 8,09	35	13.33	5.1	1.18	5.88	0.78	4.31	32.16	28.63
8,28 - 8,29	36.4	11.28	3.89	0.39	4.67	0	2.72	35.41	37.35
8,48 - 8,49	37.8	10	3.85	1.54	4.62	0.77	3.08	34.62	35.77
8,68 - 8,69	39.2	10.98	3.41	0.38	3.41	0.76	3.79	30.3	40.15
8,88 - 8,89	40.6	6.18	4.36	2.91	4.36	0.73	6.18	44	24.36
9,08 - 9,09	42	6.56	6.18	3.47	1.93	0.39	5.79	40.54	27.41
9,28 - 9,29	43.4	7.72	4.63	1.93	3.86	1.16	4.63	33.59	33.2
9,49 - 9,50	44.8	7.97	3.19	0.8	1.99	0	6.77	42.23	27.09
9,68 - 9,69	46.2	5.56	5.56	1.19	5.16	1.19	1.98	27.38	40.48
9,88 - 9,89	47.6	5.47	6.25	1.56	4.3	1.17	3.52	41.02	28.13
10,08 - 10,09	49	9.06	3.77	1.33	3.77	0.75	5.66	41.89	28.3
10,28 - 10,29	50.4	8.63	7.45	1.96	2.35	1.18	6.27	39.61	24.71
10,48 - 10,49	51.8	7.78	4.67	3.5	3.89	2.72	4.67	29.96	36.58
10,68 - 10,69	53.2	7	3.11	1.95	2.72	0.78	6.23	31.91	37.35
10,88 - 10,89	54.6	5.04	5.43	0.39	5.43	1.94	8.14	40.7	25.58
11,08 - 11,09	56	10.58	5.47	2.19	4.38	1.09	4.01	36.86	25.18
11,28 - 11,29	57.4	11.5	3.48	2.09	4.88	1.74	6.27	35.54	27.53
11,49 - 11,50	58.8	10.38	4.62	3.08	5	0	6.15	37.31	26.92
11,68 - 11,69	60.2	5.64	5.26	1.5	3.01	1.88	4.51	37.59	32.71
11,88 - 11,89	61.6	8.21	3.73	1.12	4.48	0	5.22	42.16	30.22
12,08 - 12,09	63	12.88	4.92	2.65	4.92	0.76	4.55	42.8	21.97
12,28 - 12,29	64.4	8.66	4.33	0.36	6.14	1.08	2.53	48.38	20.22
12,47 - 12,48	65.8	14.87	2.6	1.49	2.6	2.6	4.83	33.09	28.62
12,68 - 12,69	67.2	14.07	5.32	1.9	3.42	1.14	6.08	37.64	20.15
12,88 - 12,89	68.6	11.99	5.82	1.71	2.74	1.03	5.48	31.51	32.88
13,08 - 13,09	70	10.9	3.76	2.63	3.01	4.89	5.26	35.34	26.69
13,28 - 13,29	71.4	17.47	2.97	0.74	5.58	3.72	7.43	32.71	22.68
13,46 - 13,47	72.8	18.63	5.32	2.66	3.8	0.76	4.56	22.05	31.56
13,68 - 13,69	74.2	11.81	3.15	0.39	3.94	0.39	6.69	27.56	35.43
13,88 - 13,89	75.6	16.48	4.6	1.92	2.68	0.77	6.51	32.57	24.14
14,08 - 14,09	77	15.11	5.76	1.08	5.04	1.08	4.68	17.99	43.17
14,28 - 14,29	78.4	11.9	8.55	3.72	1.86	1.86	8.92	30.48	25.65
14,47 - 14,48	79.8	11.68	4.01	0.73	2.92	0.73	1.46	33.94	36.5
14,68 - 14,69	81.2	10.2	9.02	1.57	2.35	0.39	5.88	34.51	28.63
14,88 - 14,89	82.6	7.98	3.42	1.14	1.9	0.76	8.75	39.92	28.9
15,08 - 15,09	84	10.59	8.63	0.78	3.14	0.78	3.92	38.43	25.49
15,28 - 15,29	85.4	12.37	4.59	1.41	3.89	0.71	6.01	36.04	28.62
15,49 - 15,50	86.8	10.55	3.13	2.73	3.52	2.34	4.69	34.77	26.95
15,68 - 15,69	88.2	17.98	3.37	3.37	5.62	1.12	8.24	26.59	24.72
15,88 - 15,89	89.6	12.45	4.4	0.73	2.93	1.1	2.93	38.1	31.14
16,08 - 16,09	91	13.11	5.62	1.87	3	0	3.37	40.07	27.34
16,28 - 16,29	92.4	15.05	3.94	2.15	2.87	0.36	3.94	32.97	34.05
16,46 - 16,47	93.8	15.44	8.46	2.21	4.41	2.21	6.62	29.78	26.1
16,68 - 16,69	95.2	13.85	1.92	2.31	3.08	0.77	4.62	33.46	36.15
16,88 - 16,89	96.6	13.85	7.31	1.54	1.92	1.92	8.08	38.08	21.15
17,08 - 17,09	98	14.98	5.99	1.12	4.12	0.37	3	34.83	25.84
17,28 - 17,29	99.4	14.17	5.91	1.57	4.33	0.79	6.3	29.53	25.98
17,48 - 17,49	100.8	8.58	4.85	1.87	4.1	0.37	3.36	37.69	31.72
17,68 - 17,69	102.2	12.36	6.74	1.87	2.62	0.37	4.12	35.21	29.59
17,88 - 17,89	103.6	13.79	5.36	0.77	2.3	0.77	4.21	34.1	32.57
18,08 - 18,09	105	15.15	3.03	3.41	4.92	0.76	6.82	24.24	31.44
18,28 - 18,29	106.4	9.92	2.38	1.19	3.97	0	4.37	33.73	32.94
18,47 - 18,48	107.8	11.99	4.12	1.5	3.37	1.12	1.87	36.33	31.46
18,68 - 18,69	109.2	14.04	7.37	2.11	2.81	1.05	3.51	34.39	28.77
18,88 - 18,89	110.6	17.18	3.82	1.53	3.05	0.38	4.96	27.48	33.21
19,08 - 19,09	112	16.1	7.12	1.87	2.62	2.25	5.99	31.84	23.6
19,28 - 19,29	113.4	14.07	3.8	2.28	3.8	0	4.56	20.15	44.49
19,48 - 19,49	114.8	12.11	3.81	0.69	2.42	0	5.88	28.03	38.06
19,68 - 19,69	116.2	9.02	3.38	0	2.63	0.75	6.39	35.34	31.2
19,88 - 19,89	117.6	11.48	5.56	0.74	1.48	0.37	3.7	30	38.89
20,08 - 20,09	119	8.14	1.94	2.33	3.88	0.39	2.33	30.62	42.64
20,28 - 20,29	120.4	8.02	2.67	1.53	2.67	0.38	2.29	27.48	47.33
20,48 - 20,49	121.8	10.65	4.94	0.76	4.56	1.52	2.28	27	42.59
20,68 - 20,69	123.2	13.55	1.59	2.79	4.38	1.59	3.59	28.29	36.65
20,88 - 20,89	124.6	7.07	2.47	1.41	5.65	0.35	4.59	29.68	39.58
21,08 - 21,09	126	11.81	1.97	1.97	3.54	1.57	3.54	31.5	38.98
21,28 - 21,29	127.4	8.75	2.66	3.8	5.32	1.52	4.18	25.86	38.02
21,48 - 21,49	128.8	13.28	2.95	2.58	3.69	0.37	3.69	32.84	34.32
21,68 - 21,69	130.2	10.71	3.57	1.07	5.36	1.07	3.21	27.86	41.07
21,88 - 21,89	131.6	13.11	4.49	0.75	3	0.75	5.24	31.46	34.46

Raw percentage data of the 8 clusters

Depth (in m)	Age (in kyr)	Cluster 1 (%)	Cluster 2 (%)	Cluster 3 (%)	Cluster 4 (%)	Cluster 5 (%)	Cluster 6 (%)	Cluster 7 (%)	Cluster 8 (%)
22,08 - 22,09	133	6.27	5.17	2.21	1.11	0.37	7.01	31.73	36.16
22,28 - 22,29	134.4	11.72	6.96	2.2	1.47	0.73	4.03	25.64	39.56
22,48 - 22,49	135.8	15.92	5.19	1.38	5.19	0.35	4.15	23.88	40.48
22,68 - 22,69	137.2	14.72	7.17	2.26	3.4	2.26	2.26	29.06	34.34
22,88 - 22,89	138.6	11.94	5.22	0.75	4.48	1.49	4.85	25.75	38.43
23,08 - 23,09	140	9.62	3.85	1.15	2.31	1.92	6.15	28.85	40.77
23,28 - 23,29	141.4	13.18	6.59	0.78	3.88	1.16	4.65	26.36	35.27
23,48 - 23,49	142.8	10.76	4.17	1.74	2.08	1.04	3.13	31.25	40.28
23,68 - 23,69	144.2	9.25	4.45	1.03	1.71	0	5.14	27.05	45.21
23,88 - 23,89	145.6	13.55	6.23	1.47	1.83	0.73	5.49	22.34	42.12
24,08 - 24,09	147	8.27	7.52	0	3.76	1.5	7.52	25.94	39.85
24,28 - 24,29	148.4	12.37	5.65	2.83	2.83	0.35	3.18	30.39	38.16
24,47 - 24,48	149.8	8.58	6.72	1.87	2.99	1.12	6.72	23.88	36.94
24,68 - 24,69	151.2	12.06	1.95	1.56	3.11	0.78	4.28	21.79	48.64
24,88 - 24,89	152.6	9.61	7.47	1.78	3.91	0	3.56	26.33	41.28
25,08 - 25,09	154	19.64	8	1.45	1.45	0	3.64	17.82	40.73
25,28 - 25,29	155.4	13.7	13.36	3.77	3.08	1.71	6.16	25.34	24.66
25,48 - 25,49	156.8	8.85	9.23	0.77	4.23	1.54	3.08	28.08	36.92
25,68 - 25,69	158.2	6.94	7.64	0	2.78	1.74	4.51	31.25	39.93
25,88 - 25,89	159.6	9.78	8.33	0.72	2.17	0.36	3.26	27.9	38.04
26,08 - 26,09	161	10.91	6.91	2.18	2.91	0	6.91	31.27	33.82
26,28 - 26,29	162.4	14.18	11.64	0	1.45	0.36	4.73	26.18	33.82
26,48 - 26,49	163.8	8	6.33	2.67	3.67	0	7	25	37.67
26,68 - 26,69	165.2	11.96	5.8	0	2.54	0.36	4.71	33.7	36.59
26,78 - 26,79	166.6	8.65	8.65	1.88	4.51	0.75	5.26	20.68	39.47
27,08 - 27,09	168	6.2	11.31	1.09	3.28	0.73	3.28	27.01	35.77
27,28 - 27,29	169.4	13.13	8.44	2.19	3.44	0.63	5.94	31.25	28.75
27,30 - 28,00 (~27,50)	170.8	7.87	5.12	3.15	5.51	0.79	3.54	25.98	40.16
27,30 - 28,00 (~27,75)	172.2	11.42	6.3	1.97	1.97	0	3.94	35.43	33.46
28,08 - 28,09	173.6	10.37	7.41	0	1.85	0.37	5.93	31.48	35.56
28,28 - 28,29	175	9.92	6.49	1.91	3.82	0.76	7.25	29.39	32.44
28,48 - 28,49	176.4	7.64	8.73	1.09	4.36	2.55	5.45	33.09	30.18
28,68 - 28,69	177.8	10.82	5.97	1.49	3.36	1.12	4.48	28.73	38.06
28,88 - 28,89	179.2	5.3	7.2	2.65	3.79	0.38	3.79	32.2	37.88
29,08 - 29,09	180.6	6.82	4.92	1.52	2.65	0.76	4.55	31.06	36.74
29,28 - 29,29	182	6.06	6.44	1.89	4.17	1.14	5.68	31.82	32.95
29,48 - 29,49	183.4	6.23	11.28	2.33	3.11	0.39	3.89	24.9	41.25
29,68 - 29,69	184.8	6.91	6.91	2.55	0.73	0.73	4.73	30.55	42.91
29,88 - 29,89	186.2	9.85	5.68	1.14	0.38	1.89	5.3	42.8	27.65
30,08 - 30,09	187.6	8.75	2.66	1.52	3.04	2.28	6.46	33.46	33.84
30,28 - 30,29	189	9.4	8.65	1.13	1.5	0.75	7.14	31.2	33.08
30,48 - 30,49	190.4	9.96	12.64	1.15	3.83	2.3	4.21	26.05	35.63
30,68 - 30,69	191.8	10.27	9.89	0.76	1.9	1.9	3.8	28.14	36.5
30,88 - 30,89	193.2	11.34	7.22	0.69	2.41	1.37	6.87	29.55	32.65
31,08 - 31,09	194.6	12.55	11.79	0.76	1.52	0.38	2.66	29.28	34.98
31,28 - 31,29	196	8.4	9.92	1.15	3.05	0.38	3.82	21.37	42.75
31,48 - 31,49	197.4	7.49	8.61	0.75	3	0.37	5.24	26.97	41.57
31,68 - 31,69	198.8	7.66	9.2	0.77	3.45	0.77	3.83	27.2	39.85
31,88 - 31,89	200.2	7.33	5.13	0.73	0.73	1.83	5.13	21.61	53.11
32,08 - 32,09	201.6	8.27	8.27	1.5	0.75	0.75	4.89	25.56	42.86
32,28 - 32,29	203	10.94	8.2	0.39	2.34	1.56	5.08	26.56	39.45
32,48 - 32,49	204.4	12.95	5.76	1.44	2.88	1.8	5.4	30.22	32.73
32,68 - 32,69	205.8	12.32	9.51	0.7	3.87	1.76	3.52	28.17	28.87
32,88 - 32,89	207.2	8.65	10.03	1.73	2.77	1.04	8.65	28.03	31.83
33,08 - 33,09	208.6	8.52	13.33	0.74	3.33	0.37	4.44	27.78	34.81
33,28 - 33,29	210	8.36	9.7	2.01	2.68	1	6.69	30.77	31.77
33,48 - 33,49	211.4	9.09	12.12	0.38	1.52	0.38	3.03	27.27	36.36
33,68 - 33,69	212.8	4.89	13.53	0.75	3.76	0.38	4.51	31.58	33.46
33,88 - 33,89	214.2	9.13	9.92	1.59	3.57	1.98	3.97	24.21	33.33
34,08 - 34,09	215.6	7.78	10.51	1.56	4.28	0.39	7	21.79	37.74
34,28 - 34,29	217	11.46	12.15	1.39	1.39	1.04	4.86	23.61	37.15
34,48 - 34,49	218.4	11.52	9.29	0.74	1.86	0.37	5.58	31.97	33.83
34,68 - 34,69	219.8	14.23	10.38	0.77	1.15	0.38	5	27.69	35.38
34,88 - 34,89	221.2	14.74	8.07	1.4	1.4	1.4	7.37	31.58	26.32
35,08 - 35,09	222.6	15.73	4.87	0.37	1.12	0.75	8.24	28.84	32.58
35,28 - 35,29	224	8.66	5.12	1.97	2.76	1.97	7.87	25.98	39.37
35,48 - 35,49	225.4	10.49	11.24	0.75	1.87	0.75	2.25	28.84	37.83
35,68 - 35,69	226.8	4.85	6.72	1.87	1.87	0.37	5.6	38.81	30.97
35,88 - 35,89	228.2	8.52	7.41	1.48	0.74	1.48	7.04	31.11	32.22
36,08 - 36,09	229.6	6.51	11.88	0	2.3	0.77	4.98	33.33	32.18
36,28 - 36,29	231	4.91	11.7	0.38	3.02	2.64	5.28	29.43	34.72
36,48 - 36,49	232.4	4.91	9.81	0	3.4	0.38	4.91	33.21	32.45
36,68 - 36,69	233.8	7.36	9.3	0	0.78	0.78	6.59	32.56	34.11
36,88 - 36,89	235.2	7.84	14.18	1.87	0.75	0.75	7.46	33.21	28.36
37,08 - 37,09	236.6	8.98	12.89	2.73	1.95	0	5.47	20.7	36.72
37,28 - 37,29	238	9.43	10.57	2.26	2.64	0.38	8.3	34.34	25.66
37,48 - 37,49	239.4	10.53	11.28	1.5	3.01	0.38	6.02	33.08	25.19
37,68 - 37,69	240.8	6.79	17.74	0.38	3.4	1.13	10.19	31.7	20.38
37,88 - 37,89	242.2	15.33	16.48	3.07	2.68	0.77	5.75	27.97	20.31
38,08 - 38,09	243.6	6.82	12.12	2.27	2.65	0.76	16.29	29.17	20.83
38,28 - 38,29	245	11.45	13.74	2.29	2.29	1.91	7.63	26.72	24.81
38,48 - 38,49	246.4	6.18	13.82	1.45	4.36	0	9.45	26.91	29.82
38,68 - 38,69	247.8	12.41	17.52	0.73	1.09	1.09	6.2	24.09	29.2
38,88 - 38,89	249.2	6.08	6.84	3.8	2.66	1.14	13.69	31.56	24.33
39,08 - 39,09	250.6	8.11	12.36	1.93	1.93	2.7	6.56	30.5	25.87
39,28 - 39,29	252	6.77	13.15	2.39	2.39	0	3.98	30.28	33.07
39,48 - 39,49	253.4	1.51	8.3	1.51	2.64	4.15	6.04	34.34	33.58
39,68 - 39,69	254.8	11.41	8.75	1.52	3.42	2.66	7.98	31.56	24.33
39,88 - 39,89	256.2	10.12	10.89	0.39	5.45	1.17	8.17	28.02	26.07
40,08 - 40,09	257.6	6.43	12.86	0.71	6.43	1.79	8.21	21.79	35.36
40,28 - 40,29	259	9.92	9.54	1.53	1.53	0.76	6.49	32.44	29.01
40,48 - 40,49	260.4	3.76	10.15	0	3.76	3.76	7.89	34.21	27.44
40,68 - 40,69	261.8	6.39	12.03	1.13	3.38	2.63	12.03	34.59	20.3
40,88 - 40,89	263.2	6.2	16.67	1.55	6.2	2.71	8.14	30.23	16.28
41,08 - 41,09	264.6	5.06	15.18	1.17	3.5	1.95	7.39	36.19	21.01

Raw percentage data of the 8 clusters

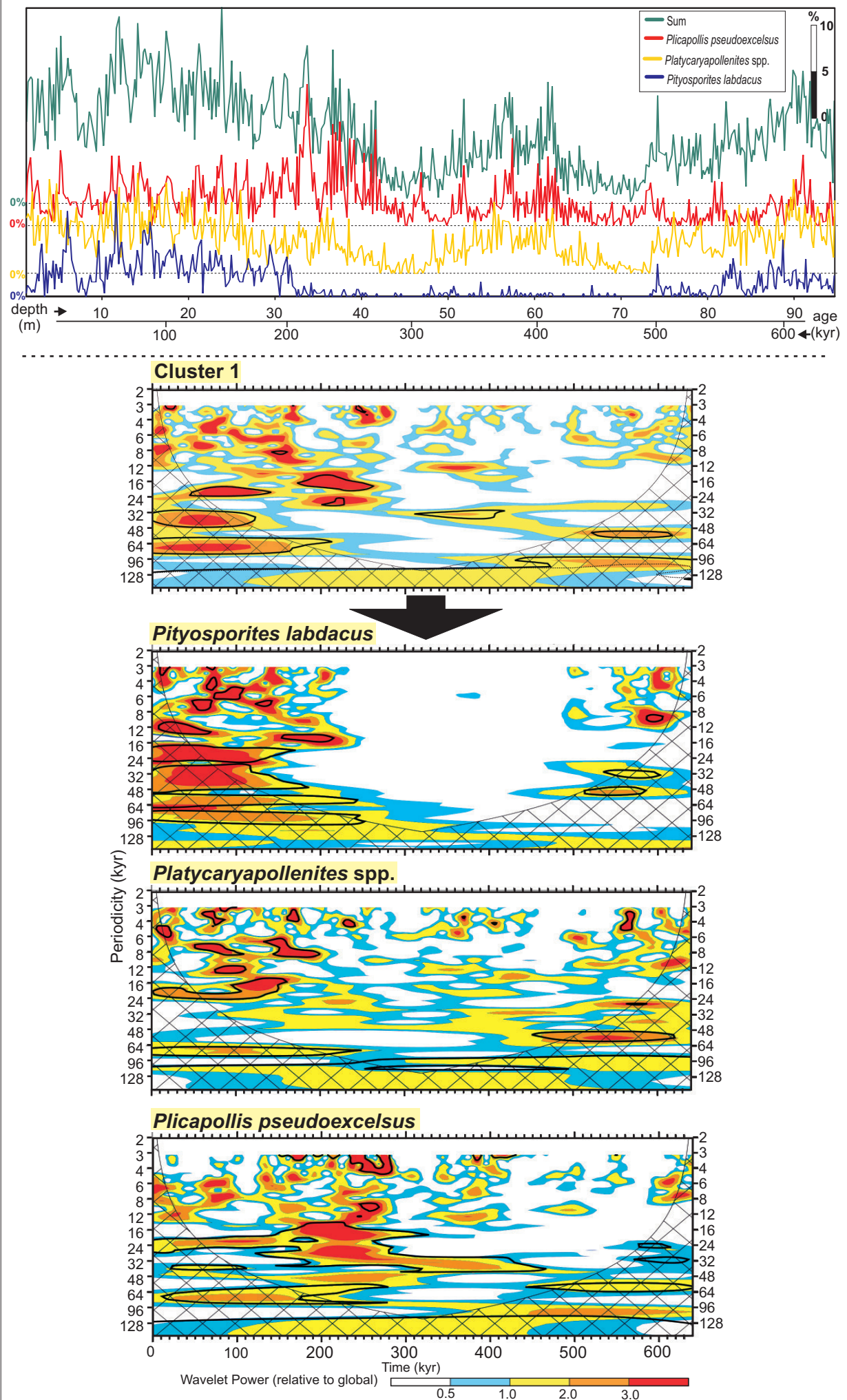
Depth (in m)	Age (in kyr)	Cluster 1 (%)	Cluster 2 (%)	Cluster 3 (%)	Cluster 4 (%)	Cluster 5 (%)	Cluster 6 (%)	Cluster 7 (%)	Cluster 8 (%)
41,28 - 41,29	266	3.95	8.7	2.77	3.56	3.16	10.28	38.74	16.21
41,48 - 41,49	267.4	7.91	5.53	3.95	2.77	1.58	8.7	47.83	12.65
41,68 - 41,69	268.8	3.98	3.59	0	1.59	2.79	13.94	37.45	25.1
41,88 - 41,89	270.2	5.58	9.16	3.59	3.98	1.99	7.97	33.47	20.72
42,08 - 42,09	271.6	3.1	8.14	1.94	3.88	1.94	7.36	31.78	32.95
42,28 - 42,29	273	9.26	7.41	1.48	8.15	1.85	6.3	26.3	29.26
42,47 - 42,48	274.4	1.91	8.4	0.76	5.34	1.53	10.69	26.34	33.59
42,68 - 42,69	275.8	10.15	10.15	0.75	4.51	1.88	7.14	24.44	33.46
42,88 - 42,89	277.2	2.6	10.04	0.37	4.09	3.72	5.95	20.07	44.98
43,08 - 43,09	278.6	4.25	6.95	1.93	1.93	2.7	6.95	24.32	40.93
43,28 - 43,29	280	4.56	10.65	0	5.7	4.18	4.94	19.77	39.54
43,47 - 43,48	281.4	1.91	8.02	1.53	3.82	2.67	5.34	29.01	38.55
43,68 - 43,69	282.8	4.48	9.33	1.12	2.24	2.61	7.09	25	36.19
43,88 - 43,89	284.2	3.32	7.01	1.11	0.74	2.21	7.38	29.52	40.59
44,08 - 44,09	285.6	1.85	8.12	0.37	3.69	6.27	8.86	23.25	39.85
44,28 - 44,29	287	2.75	10.59	1.57	1.96	1.96	7.84	27.84	37.25
44,48 - 44,49	288.4	1.13	9.43	0.75	3.77	2.26	8.3	29.43	32.83
44,68 - 44,69	289.8	2.45	16.08	1.75	4.2	1.05	5.24	27.27	35.31
44,88 - 44,89	291.2	1.1	6.25	4.41	4.41	4.41	6.62	32.35	29.04
45,08 - 45,09	292.6	3.5	4.67	0.39	2.33	1.95	6.23	31.13	42.8
45,28 - 45,29	294	1.49	10.04	1.86	5.58	1.49	9.67	47.58	11.52
45,48 - 45,49	295.4	1.67	7	3	8	3.33	8.33	26	31
45,68 - 45,69	296.8	1.15	12.64	4.6	10.73	3.45	8.43	33.72	11.11
45,88 - 45,89	298.2	3.13	10.16	4.69	7.42	3.91	9.77	36.72	14.45
46,08 - 46,09	299.6	1.5	10.49	2.62	10.11	4.12	4.87	35.96	16.48
46,28 - 46,29	301	0.37	5.22	3.36	7.46	5.22	7.09	39.93	19.4
46,48 - 46,49	302.4	0.77	3.85	3.08	3.85	5	8.85	32.31	36.92
46,68 - 46,69	303.8	1.95	5.08	2.73	7.03	3.13	6.64	32.42	30.86
46,88 - 46,89	305.2	2.3	5.75	5.36	4.98	3.07	7.28	37.16	23.37
47,08 - 47,09	306.6	3.08	15.38	1.54	4.23	6.54	4.23	15	38.08
47,28 - 47,29	308	1.77	19.86	2.48	5.32	3.55	6.03	24.11	27.3
47,48 - 47,49	309.4	2.29	12.98	4.2	3.05	9.16	5.34	20.61	32.44
47,68 - 47,69	310.8	3.49	9.69	3.1	6.2	7.75	6.2	19.77	31.78
47,88 - 47,89	312.2	5.58	14.87	2.97	4.46	16.36	7.43	15.99	21.56
48,08 - 48,09	313.6	1.49	8.96	0	6.34	4.85	4.1	22.39	41.04
48,28 - 48,29	315	3.03	23.48	0.8	4.55	4.17	5.3	20.45	30.3
48,48 - 48,49	316.4	2.28	15.59	1.14	5.32	3.04	4.18	28.14	31.94
48,68 - 48,69	317.8	2.66	12.17	0.76	3.42	3.8	5.7	33.84	30.8
48,88 - 48,89	319.2	1.14	11.74	1.14	1.89	3.79	2.65	22.73	45.08
49,08 - 49,09	320.6	3.5	6.61	0	2.33	2.33	4.28	33.85	38.13
49,28 - 49,29	322	5.43	5.43	2.33	3.88	2.33	8.53	33.33	30.62
49,48 - 49,49	323.4	2.3	8.05	1.53	3.45	0	4.21	30.27	45.59
49,68 - 49,69	324.8	2.2	5.86	4.4	4.4	2.56	5.13	28.94	34.8
49,88 - 49,89	326.2	0.39	7.78	2.33	5.06	3.89	6.61	24.9	38.52
50,08 - 50,09	327.6	2.33	4.67	0.78	5.06	3.5	4.67	28.4	40.08
50,28 - 50,29	329	1.19	4.76	2.78	3.57	2.38	5.16	26.19	42.86
50,48 - 50,49	330.4	3.01	7.52	2.26	2.63	2.63	3.01	32.71	35.34
50,68 - 50,69	331.8	4.65	7.75	2.71	1.94	0.78	7.75	25.19	43.41
50,88 - 50,89	333.2	2.72	8.95	3.5	4.28	3.11	6.23	35.02	28.79
51,08 - 51,09	334.6	2.66	9.89	1.52	4.94	1.52	7.22	30.8	31.18
51,28 - 51,29	336	4.31	10.98	1.96	5.49	3.53	3.14	22.75	37.65
51,47 - 51,48	337.4	7.25	11.07	1.53	1.53	1.53	5.73	16.41	45.04
51,68 - 51,69	338.8	3.3	7.33	1.83	5.13	1.83	6.59	25.64	37
51,88 - 51,89	340.2	2.38	21.43	0.4	1.19	2.78	2.38	11.11	50.79
52,08 - 52,09	341.6	4.21	9.58	0.77	2.3	1.92	4.98	30.27	39.08
52,28 - 52,29	343	6.39	9.4	1.13	3.38	1.5	6.02	21.05	39.47
52,48 - 52,49	344.4	2.52	7.55	0.72	4.32	3.6	3.96	26.98	42.81
52,68 - 52,69	345.8	10.33	2.95	1.48	1.85	1.85	4.43	32.47	35.42
52,88 - 52,89	347.2	3.95	7.11	1.19	3.95	1.98	4.35	26.48	41.9
53,08 - 53,09	348.6	4.25	12.74	0	1.54	0.39	4.63	30.5	37.84
53,28 - 53,29	350	2.51	8.24	1.43	4.3	1.79	6.09	30.47	35.13
53,48 - 53,49	351.4	4.96	9.92	0.76	2.67	1.53	7.25	27.48	33.97
53,68 - 53,69	352.8	3.42	7.98	0.76	4.18	0.76	5.7	33.84	35.36
53,88 - 53,89	354.2	7.11	5.93	0.79	1.58	0.4	5.93	26.48	39.13
54,08 - 54,09	355.6	5.26	7.14	0.75	3.01	0.75	6.02	22.56	42.86
54,28 - 54, 29	357	4.48	5.22	1.87	2.99	1.12	4.48	32.09	38.81
54,48 - 54,49	358.4	4.58	8.78	1.15	2.29	1.15	3.05	21.37	46.56
54,68 - 54,69	359.8	6.27	7.45	1.96	3.92	2.35	6.67	22.75	40.39
54,88 - 54,89	361.2	3.03	7.2	1.14	2.65	1.14	7.58	31.82	36.36
55,08 - 55,09	362.6	3.46	7.31	1.92	0.77	3.08	5.38	27.31	40.77
55,28 - 55,29	364	3.16	3.16	3.16	3.95	1.19	7.11	18.18	50.2
55,48 - 55,49	365.4	6.27	9.41	1.57	1.18	1.96	7.84	17.65	43.53
55,68 - 55,69	366.8	4.33	9.84	1.57	3.54	1.18	5.51	19.69	44.88
55,88 - 55,89	368.2	4.71	11.76	0.78	5.1	0.78	4.71	20.39	39.61
56,08 - 56,09	369.6	8.14	7.36	1.16	2.33	0	6.2	22.87	41.09
56,28 - 56,29	371	9.86	8.45	2.46	2.82	2.46	6.69	23.59	35.56
56,48 - 56,49	372.4	4.28	8.95	6.23	1.95	1.17	7.78	23.74	35.02
56,68 - 56,69	373.8	7.66	9.58	2.68	3.07	0.77	8.05	23.75	33.33
56,88 - 56,89	375.2	4.37	9.92	0.4	3.57	1.59	5.95	19.44	45.63
57,08 - 57,09	376.6	7.91	13.44	1.58	1.19	0.79	5.93	22.92	41.11
57,28 - 57,29	378	8.37	7.97	0	1.99	3.59	6.77	15.94	45.02
57,48 - 57,49	379.4	10.55	13.45	0.73	2.18	2.18	9.09	18.91	34.55
57,68 - 57,69	380.8	8.45	6.42	3.04	3.04	1.01	5.74	26.69	39.19
57,88 - 57,89	382.2	11.07	12.55	1.11	1.48	1.11	4.8	24.72	35.79
58,08 - 58,09	383.6	6.84	9.13	2.28	3.04	0.76	11.03	21.67	39.16
58,28 - 58,29	385	10.51	10.51	1.95	3.5	2.72	6.23	17.51	40.47
58,48 - 58,49	386.4	3.53	9.41	1.57	1.96	1.18	9.41	27.06	39.22
58,68 - 58,69	387.8	7.72	9.19	1.1	2.94	2.21	5.51	26.84	35.29
58,88 - 58,89	389.2	2.76	5.12	1.57	2.36	1.18	9.84	25.2	42.52
59,08 - 59,09	390.6	7.2	9.85	1.89	3.79	1.52	6.44	21.97	38.26
59,28 - 59,29	392	4.63	10.04	1.54	1.54	1.54	8.11	31.27	31.66
59,48 - 59,49	393.4	5.77	11.15	3.46	1.92	1.15	5.77	25.38	37.69
59,68 - 59,69	394.8	3.69	11.81	2.21	4.8	1.11	7.38	32.1	25.46
59,88 - 59,89	396.2	7.72	10.66	0.74	2.57	3.31	7.35	25.37	33.82
60,08 - 60,09	397.6	3.89	10.12	0.78	3.11	1.56	7.78	28.79	36.96

Raw percentage data of the 8 clusters

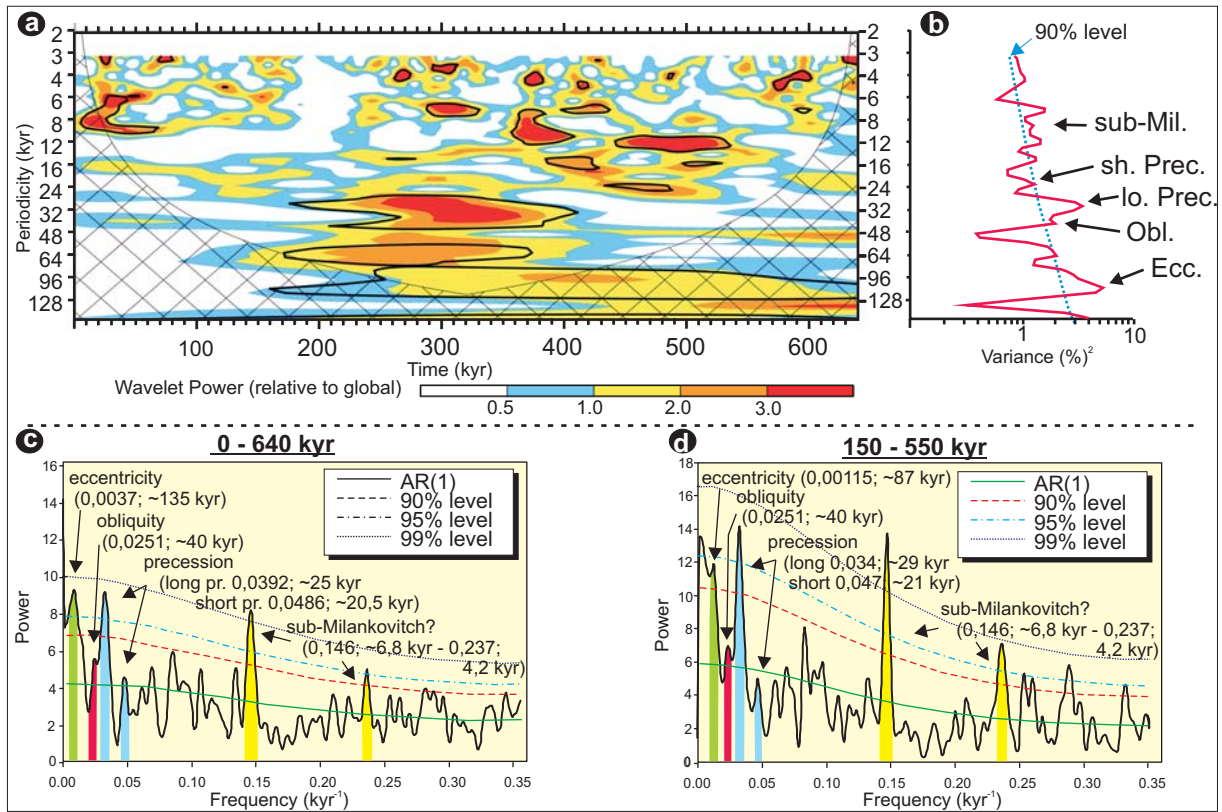
Depth (in m)	Age (in kyr)	Cluster 1 (%)	Cluster 2 (%)	Cluster 3 (%)	Cluster 4 (%)	Cluster 5 (%)	Cluster 6 (%)	Cluster 7 (%)	Cluster 8 (%)
60,28 - 60,29	399	6.2	8.14	2.71	1.16	1.16	8.53	26.74	37.21
60,48 - 60,49	400.4	5.43	12.79	3.1	3.1	0	9.3	24.81	30.23
60,67 - 60,68	401.8	5.84	13.23	2.72	2.72	1.56	6.23	26.46	31.52
60,88 - 60,89	403.2	5.38	8.46	2.69	4.23	2.69	5	33.08	31.15
61,08 - 61,09	404.6	8.4	7.25	1.53	1.53	1.53	7.25	31.3	34.35
61,28 - 61,29	406	2.66	8.75	3.42	3.8	2.66	6.08	26.24	35.74
61,48 - 61,49	407.4	9.58	9.2	1.15	3.07	1.92	9.58	27.97	26.44
61,68 - 61,69	408.8	4.26	13.18	0.39	3.49	1.94	8.14	22.87	35.27
61,88 - 61,89	410.2	6.61	14.01	1.95	1.56	0.78	7.39	36.96	24.9
62,08 - 62,09	411.6	5.1	12.94	0.78	3.92	2.35	11.76	24.71	27.84
62,28 - 62,29	413	12.08	14.34	1.51	3.4	0.75	10.19	20.75	30.94
62,48 - 62,49	414.4	6.18	8.49	4.63	2.32	2.7	9.65	19.31	34.75
62,68 - 62,69	415.8	11.61	16.1	2.62	2.62	0.75	8.99	22.85	22.47
62,88 - 62,89	417.2	4.83	14.13	1.86	2.97	2.23	7.81	27.14	30.86
63,08 - 63,09	418.6	7.95	10.61	1.52	2.65	0.38	7.2	23.86	37.12
63,28 - 63,29	420	1.99	6.77	4.38	3.59	3.98	6.77	28.29	32.67
63,48 - 63,49	421.4	5.77	10.77	1.54	0.77	1.15	6.54	28.08	35.38
63,68 - 63,69	422.8	2.34	10.94	1.95	5.47	1.95	5.86	27.34	34.38
63,88 - 63,89	424.2	4.43	14.76	0.37	4.06	2.21	7.38	29.52	26.2
64,08 - 64,09	425.6	1.14	8.71	1.14	1.52	1.14	5.3	31.44	40.91
64,28 - 64,29	427	4.4	13.6	0.8	2.4	5.6	8	24.8	30.8
64,47 - 64,48	428.4	0.79	8.73	1.98	2.78	3.97	7.14	26.59	34.13
64,68 - 64,69	429.8	5.1	11.37	1.57	3.14	5.49	7.84	25.1	29.41
64,88 - 64,89	431.2	3.56	11.86	0.4	2.77	1.19	5.14	25.3	38.34
65,08 - 65,09	432.6	3.69	16.97	4.06	1.11	3.32	6.27	28.41	29.15
65,28 - 65,29	434	2.36	9.06	2.36	3.15	3.94	7.48	26.77	34.25
65,48 - 65,49	435.4	3.14	9.41	2.35	2.75	0.39	6.67	35.69	31.76
65,68 - 65,69	436.8	1.11	12.92	0.37	3.32	0.37	6.27	26.57	37.27
65,88 - 65,89	438.2	5.66	10.19	0.38	3.4	2.64	4.91	31.32	32.83
66,08 - 66,09	439.6	1.59	13.1	1.98	3.17	4.37	5.16	20.24	39.29
66,28 - 66,29	441	4.23	13.46	1.54	3.46	3.85	5.77	30	30
66,48 - 66,49	442.4	3.32	8.64	0.66	1.33	2.99	5.65	35.22	36.21
66,68 - 66,69	443.8	2.99	8.58	1.87	2.24	1.49	3.73	31.34	40.3
66,88 - 66,89	445.2	1.53	12.26	0.38	1.15	2.3	3.83	19.16	45.21
67,08 - 67,09	446.6	3.21	8.84	0.4	2.41	4.42	4.82	29.72	36.55
67,28 - 67,29	448	1.99	3.59	1.99	2.39	4.38	2.79	27.89	41.04
67,48 - 67,49	449.4	0.75	5.28	0.38	1.13	1.89	6.42	29.06	48.68
67,68 - 67,69	450.8	1.15	8.08	0.77	1.92	6.15	3.85	28.85	40.77
67,88 - 67,89	452.2	4.09	7.43	0.74	3.35	4.83	4.83	28.62	35.69
68,08 - 68,09	453.6	1.86	4.83	1.86	3.35	2.23	6.32	27.51	41.26
68,28 - 68,29	455	2.79	6.37	2.79	2.79	4.38	3.98	32.27	37.05
68,48 - 68,49	456.4	1.57	6.69	3.15	3.94	2.76	3.94	37.8	30.31
68,68 - 68,69	457.8	1.94	4.65	1.94	2.33	2.71	3.1	38.76	34.88
68,88 - 68,89	459.2	1.12	7.09	1.87	2.24	3.73	4.48	29.1	40.67
69,08 - 69,09	460.6	1.59	3.97	1.19	4.76	2.78	5.95	34.13	39.68
69,28 - 69,29	462	1.6	5.6	0.4	3.6	2.8	3.6	25.2	43.6
69,47 - 69,48	463.4	2.66	5.7	1.52	1.9	2.28	7.22	28.52	42.97
69,68 - 69,69	464.8	0.82	4.92	3.69	4.1	6.97	5.74	27.87	32.38
69,88 - 69,89	466.2	0.74	4.83	1.49	2.97	4.09	4.46	30.11	43.49
70,08 - 70,09	467.6	0.79	3.16	1.98	4.35	3.56	4.35	29.25	41.9
70,28 - 70,29	469	1.94	5.81	1.94	3.1	3.88	2.33	26.36	44.57
70,48 - 70,49	470.4	0.79	4.33	1.18	4.72	3.15	3.15	28.35	44.09
70,68 - 70,69	471.8	1.52	6.06	0.76	1.89	2.65	3.79	29.55	42.8
70,88 - 70,89	473.2	2.73	3.91	0.78	4.69	3.52	3.91	23.44	48.44
71,08 - 71,09	474.6	1.56	9.38	3.13	1.95	5.47	5.86	23.44	40.23
71,28 - 71,29	476	1.2	14.8	2.4	3.2	2.8	4.8	17.6	39.2
71,48 - 71,49	477.4	2.28	7.6	2.66	5.7	5.32	6.46	25.48	33.46
71,67 - 71,68	478.8	0	9.52	2.78	3.17	8.73	5.16	15.48	43.25
71,87 - 71,88	480.2	0.78	11.72	1.95	3.91	2.73	5.08	28.52	39.84
72,08 - 72,09	481.6	2.39	14.74	1.99	3.19	4.78	3.19	23.9	33.07
72,28 - 72,29	483	1.15	8.85	2.69	4.23	5	5	30.38	33.85
72,47 - 72,48	484.4	1.15	15	1.15	5	8.46	4.23	18.08	35.38
72,68 - 72,69	485.8	1.87	11.99	3.37	3	7.12	3	22.1	37.08
72,88 - 72,89	487.2	1.95	11.28	4.28	3.5	6.23	3.11	22.18	35.8
73,08 - 73,09	488.6	2.26	9.4	1.88	3.38	7.89	4.14	21.43	39.47
73,28 - 73,29	490	1.92	14.56	2.68	4.98	5.36	6.9	29.12	27.2
73,48 - 73,49	491.4	3.8	13.69	3.04	3.04	7.98	7.22	21.29	31.18
73,68 - 73,69	492.8	3.54	13.39	0.79	1.57	7.09	6.3	17.32	36.61
73,69 - 73,70	494.2	5.7	4.56	1.52	4.56	3.8	5.7	28.52	38.4
74,08 - 74,09	495.6	6	18	0.8	2.8	6.8	5.6	19.6	27.6
74,28 - 74,29	497	4.25	10.42	1.16	3.47	5.41	4.25	32.43	30.5
74,48 - 74,49	498.4	4	9.2	3.2	4.8	4.4	5.6	28.4	29.2
74,68 - 74,69	499.8	10.69	9.16	3.82	3.44	5.34	8.02	28.63	19.85
74,87 - 74,88	501.2	5.08	7.42	5.86	1.95	3.13	7.03	32.81	25.39
75,08 - 75,09	502.6	4.98	8.81	3.83	4.6	3.45	5.75	34.87	24.9
75,28 - 75,29	504	4.76	9.13	2.38	6.75	1.59	9.92	31.35	25
75,48 - 75,49	505.4	4.72	12.99	1.97	3.54	1.57	9.84	25.2	30.31
75,68 - 75,69	506.8	4.96	9.16	2.29	3.05	4.2	6.87	27.48	27.86
75,88 - 75,89	508.2	3.05	15.27	3.05	2.29	1.53	9.92	29.77	27.1
76,08 - 76,09	509.6	4.23	15	2.69	1.92	1.15	8.46	23.46	31.15
76,28 - 76,29	511	4.74	14.62	3.16	3.56	1.98	5.14	33.2	22.13
76,48 - 76,49	512.4	6.75	14.68	0.79	3.57	1.59	10.32	24.21	23.81
76,68 - 76,69	513.8	5.2	8.55	3.35	1.49	2.6	7.81	32.34	31.23
76,88 - 76,89	515.2	1.6	9.6	2	4.8	1.6	6.8	30.8	29.2
77,08 - 77,09	516.6	3.89	8.17	1.56	1.56	4.67	7.39	22.57	40.86
77,28 - 77,29	518	3.57	7.54	1.59	1.98	3.17	5.95	24.6	37.7
77,48 - 77,49	519.4	6.59	7.36	1.94	2.71	1.55	3.49	28.29	40.31
77,68 - 77,69	520.8	3.6	10.4	1.6	4.8	2.4	5.6	27.6	28.4
77,88 - 77,89	522.2	3.77	6.04	2.26	6.04	4.91	3.4	26.04	40.75
78,08 - 78,09	523.6	4.37	6.35	2.78	1.98	1.98	7.14	23.02	37.7
78,28 - 78,29	525	6.3	9.26	2.22	2.96	1.48	5.93	30	29.26
78,47 - 78,48	526.4	2.79	3.19	0.8	3.98	1.59	6.77	17.13	48.61
78,68 - 78,69	527.8	5.58	6.77	0.8	4.38	1.99	5.58	23.51	44.22
78,88 - 78,89	529.2	3.6	7.6	1.2	2	2	4	11.6	53.6
79,07 - 79,08	530.6	6.92	7.69	1.92	4.23	3.46	7.31	23.85	33.85

Raw percentage data of the 8 clusters

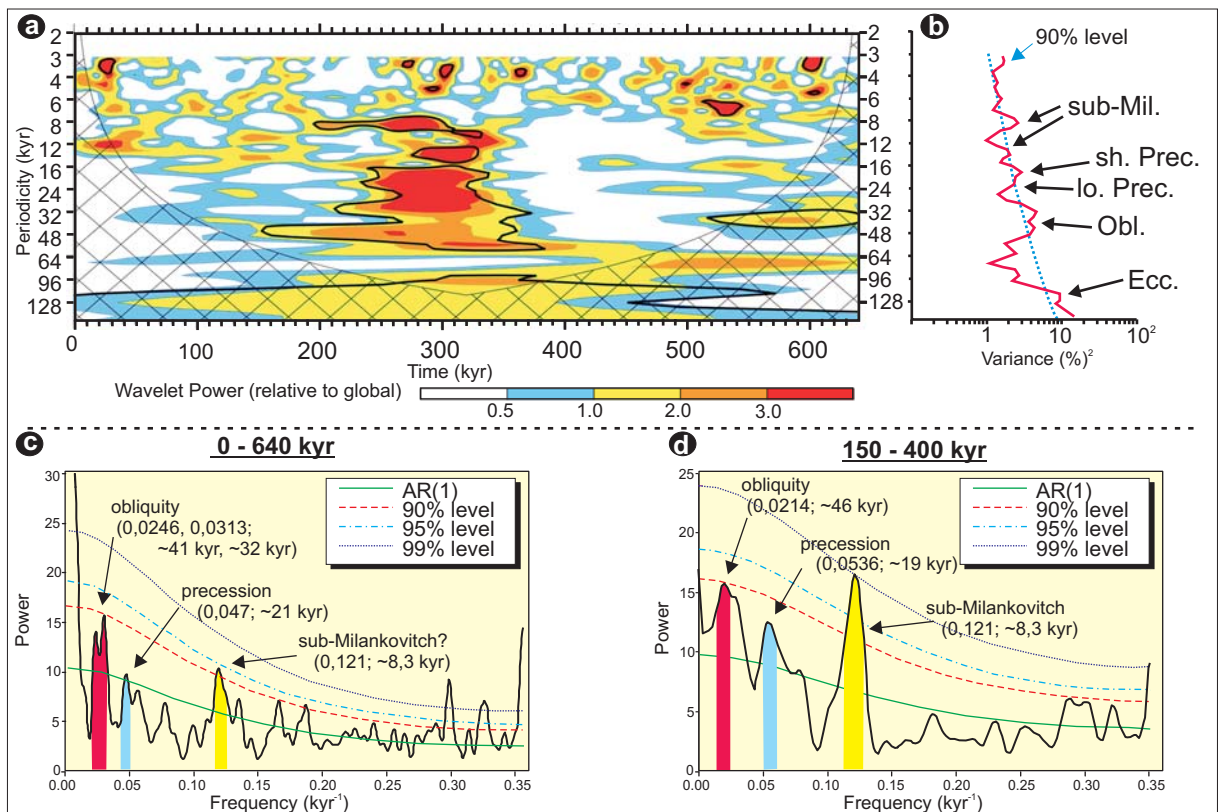
Depth (in m)	Age (in kyr)	Cluster 1 (%)	Cluster 2 (%)	Cluster 3 (%)	Cluster 4 (%)	Cluster 5 (%)	Cluster 6 (%)	Cluster 7 (%)	Cluster 8 (%)
79,28 - 79,29	532	4.21	8.81	2.3	3.07	1.92	7.28	21.84	37.55
79,47 - 79,48	533.4	6.77	7.52	3.38	4.51	3.01	6.39	28.2	32.33
79,68 - 79,69	534.8	2.29	10.31	3.05	6.49	2.67	9.54	11.83	38.17
79,88 - 79,89	536.2	3.16	9.49	1.58	3.16	3.56	5.14	24.51	39.92
80,08 - 80,09	537.6	2.77	5.53	1.98	1.98	6.32	2.77	22.53	37.94
80,28 - 80,29	539	3.52	9.38	1.17	2.73	3.91	5.08	22.27	43.75
80,47 - 80,48	540.4	2.8	6.4	1.6	6.4	4	10	18	34.4
80,68 - 80,69	541.8	4.38	9.85	0.73	2.55	8.39	8.03	23.36	35.77
80,88 - 80,89	543.2	1.95	15.18	1.17	2.72	14.79	6.23	10.89	33.07
81,08 - 81,09	544.6	7.91	10.28	3.16	1.98	4.35	6.32	17.79	38.74
81,28 - 81,29	546	4.3	9.38	0.78	2.34	5.47	7.81	17.19	37.11
81,48 - 81,49	547.4	5.66	13.58	1.13	3.77	4.91	5.28	26.79	30.57
81,68 - 81,69	548.8	2.34	17.19	2.34	3.91	6.25	9.77	19.14	25
81,88 - 81,89	550.2	6.27	15.29	0.78	4.71	1.96	8.24	24.71	29.41
82,07 - 82,08	551.6	5.08	8.2	2.34	3.91	2.34	7.03	21.48	35.55
82,28 - 82,29	553	6.51	8.81	0.38	4.21	3.07	5.75	21.84	39.46
82,48 - 82,49	554.4	10.08	15.89	1.55	2.33	3.1	4.26	13.18	30.62
82,67 - 82,68	555.8	5.32	15.97	0.38	1.52	2.66	3.42	25.86	36.5
82,88 - 82,89	557.2	6.04	10.57	0.38	3.02	1.89	6.42	22.64	35.85
83,08 - 83,09	558.6	6.74	13.11	1.87	4.12	3.75	3.75	20.97	39.7
83,28 - 83,29	560	7.01	13.65	2.58	1.48	3.32	5.17	15.87	37.27
83,48 - 83,49	561.4	7.28	7.66	1.92	3.83	3.07	3.07	20.31	44.44
83,68 - 83,69	562.8	4.8	4.4	2	2.4	4	3.6	12.8	50
83,88 - 83,89	564.2	7.91	8.3	1.58	3.16	0.4	5.14	23.72	43.08
84,08 - 84,09	565.6	4.72	4.72	1.57	5.12	1.97	7.87	20.08	40.94
84,28 - 84,29	567	5.51	7.87	1.97	3.15	0.79	3.15	20.87	45.67
84,48 - 84,49	568.4	5	2.31	0.77	4.62	1.15	5.77	26.15	43.46
84,68 - 84,69	569.8	1.53	8.78	1.15	2.67	1.53	6.11	16.41	54.96
84,88 - 84,89	571.2	8.52	10	3.7	6.67	4.07	3.33	25.19	31.48
85,08 - 85,09	572.6	6.2	7.3	1.09	3.65	1.09	3.65	22.99	46.72
85,28 - 85,29	574	3.98	9.96	1.2	2.79	1.59	5.18	23.9	42.63
85,48 - 85,49	575.4	5.19	7.04	1.85	2.96	1.85	2.59	23.33	44.44
85,68 - 85,69	576.8	4.71	6.27	3.53	3.14	2.75	4.71	24.31	40.39
85,88 - 85,89	578.2	7.33	10.26	0.73	1.1	1.47	4.76	23.81	42.49
86,08 - 86,09	579.6	6.18	8.11	1.93	3.86	5.79	4.25	25.87	32.05
86,28 - 86,29	581	6.82	9.47	2.27	3.41	3.41	3.41	20.45	44.32
86,47 - 86,48	582.4	7.66	6.85	0.4	2.42	6.05	6.05	21.77	35.48
86,68 - 86,69	583.8	5.86	7.42	1.56	2.73	1.56	1.95	25.78	42.19
86,88 - 86,89	585.2	4.12	6.74	2.25	3	11.61	7.12	28.84	28.46
87,07 - 87,08	586.6	5.93	9.26	0.74	1.85	7.78	3.33	14.07	50
87,28 - 87,29	588	9.38	7.81	1.56	3.13	5.86	8.59	17.19	36.72
87,48 - 87,49	589.4	10.34	7.28	3.07	2.68	4.6	6.51	21.07	35.63
87,68 - 87,69	590.8	6.74	12.41	2.48	1.06	8.87	7.8	20.57	30.5
87,87 - 87,88	592.2	6.02	11.65	2.26	1.13	6.02	6.39	30.08	30.45
88,05 - 88,06	593.6	7.34	10.04	1.54	1.54	4.25	11.97	16.99	36.29
88,25 - 88,26	595	9.09	4.74	0.4	4.35	2.77	2.77	29.64	34.39
88,45 - 88,46	596.4	7.54	10.32	5.56	1.98	6.35	6.35	21.83	30.56
88,65 - 88,66	597.8	8.99	8.27	2.16	0.72	2.88	4.32	24.82	42.81
88,85 - 88,86	599.2	9.56	11.95	1.99	3.59	3.59	5.98	17.53	34.66
88,95 - 88,96	600.6	5.17	11.44	1.48	1.85	2.21	4.06	27.68	40.96
89,19 - 89,20	602	8.76	3.59	1.2	6.37	3.59	6.37	17.93	39.84
89,39 - 89,40	603.4	9.52	7.69	0.73	1.47	1.1	7.33	23.81	42.86
89,59 - 89,60	604.8	10	7.04	2.96	7.41	0.74	6.67	13.7	42.96
89,79 - 89,80	606.2	9.42	6.82	1.95	3.25	1.62	4.87	23.38	45.13
89,99 - 90,00	607.6	13.31	7.22	0.76	3.04	0.76	3.8	24.71	35.74
90,19 - 90,20	609	12.54	9.06	1.39	4.53	1.39	2.44	19.51	41.46
90,39 - 90,40	610.4	7.87	9.06	1.57	6.69	2.36	14.17	18.9	31.1
90,58 - 90,60	611.8	11.74	6.44	1.89	4.55	1.14	3.03	30.3	33.71
90,79 - 90,80	613.2	7.98	6.08	2.28	3.42	3.8	12.55	22.81	33.84
90,99 - 91,00	614.6	13.19	8.79	1.47	4.03	1.83	6.59	26.37	30.04
91,19 - 91,20	616	10.55	6.64	3.52	3.91	4.3	12.5	24.22	26.56
91,39 - 91,40	617.4	10.63	8.66	1.18	2.76	1.18	3.54	25.2	37.8
91,59 - 91,60	618.8	5.88	7.84	1.57	3.53	2.35	10.2	27.45	30.2
91,79 - 91,80	620.2	12.12	7.95	1.14	2.27	1.89	4.55	25.38	37.5
91,99 - 92,00	621.6	5.51	7.48	0.79	1.97	4.72	5.91	20.47	38.98
92,19 - 92,20	623	7.53	7.53	1.79	3.58	1.08	6.45	22.22	41.58
92,39 - 92,40	624.4	7.39	9.73	2.72	3.89	2.33	6.61	20.23	37.35
92,59 - 92,60	625.8	8.4	11.83	1.91	3.05	1.15	2.67	23.28	38.93
92,79 - 92,80	627.2	7.17	5.58	1.99	3.98	5.18	7.57	17.93	42.23
92,99 - 93,00	628.6	7.91	8.3	1.19	2.37	1.19	2.77	13.04	52.96
93,19 - 93,20	630	5.18	7.97	4.38	4.78	6.77	8.76	21.12	33.07
93,39 - 93,40	631.4	5.09	9.45	0.73	4	1.09	3.64	20.73	48.73
93,59 - 93,60	632.8	4.33	6.3	3.54	2.36	2.36	7.87	16.54	41.34
93,79 - 93,80	634.2	9.36	8.24	1.87	2.62	1.12	4.49	19.85	46.82
93,99 - 94,00	635.6	7.84	7.84	3.92	3.14	7.06	13.33	20.39	27.06
94,19 - 94,20	637	9.3	5.04	1.16	3.49	3.88	6.2	25.58	38.37
94,39 - 94,40	638.4	1.92	10.38	6.15	5	9.23	8.08	23.46	21.54
94,59 - 94,60	639.8	10.15	10.15	2.26	6.02	3.76	5.64	27.07	24.06



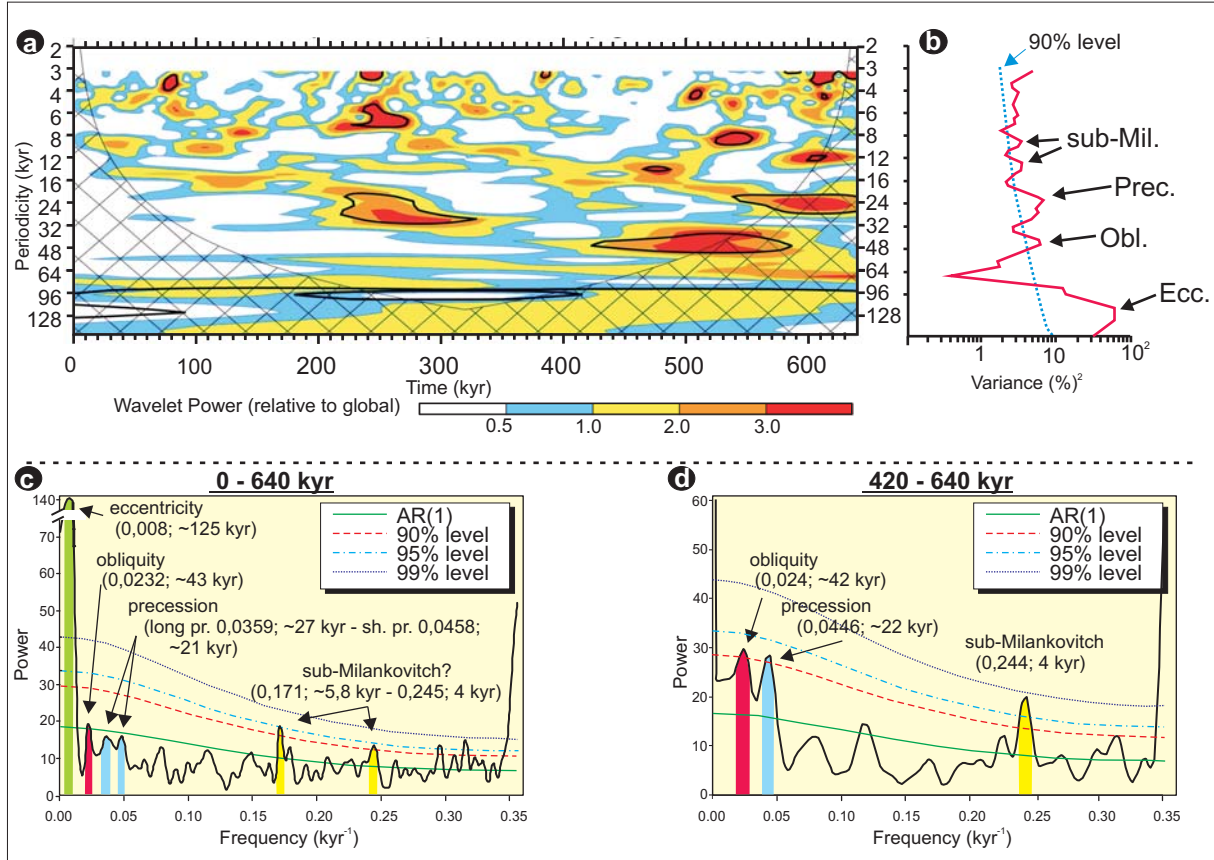
SM Figure 2: Cluster 3



SM Figure 3: Cluster 4



SM Figure 4: Cluster 6



SM Figure 5: Cluster 7

