

Kuroda, J., Hagino, K., Usui, Y., Bown, P.R., Hsiung, K.-H., Sakai, S., Hackney, R., Saito, S., Murayama, M., Ando, T., and Ohkouchi, N., 2021, Stratigraphy around the Cretaceous-Paleogene boundary in sediment cores from the Lord Howe Rise, Southwest Pacific: GSA Bulletin, <https://doi.org/10.1130/B36112.1>.

Supplemental Material

TABLE S1. CALCAREOUS NANNOFOSSIL OCCURRENCES AND BIO-STRATIGRAPHY.

TABLE S2. CARBONATE CARBON ISOTOPIC COMPOSITION ($\delta^{13}\text{C}_{\text{carb}}$).

TABLE S3. PALEOMAGNETIC DATA.

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Figure S1. Vector endpoint diagrams of samples from 208-29R to 208-34R.

Figure S2. Comparison of stratigraphy of this study and calcareous nannofossil biostratigraphy by The Shipboard Scientific Party et al. (1973) and Edwards (1973), and radiolarian biostratigraphy by Hollis (1993).

REFERENCES CITED

- Edwards, A.R., 1973a, Calcareous nannofossil from the Southwest Pacific, Deep Sea Drilling Project, Leg 21, in Burns, R.E., Andrews, J.E., et al., Initial Reports of the Deep Sea Drilling Project, Volume 21: Washington, D.C., U.S. Government Printing Office, p. 641–691, <https://doi.org/10.2973/dsdp.proc.21.118.1973>.
- Hollis, C.J., 1993, Latest Cretaceous to Late Paleocene radiolarian biostratigraphy: A new zonation from the New Zealand region: *Marine Micropaleontology*, v. 21, p. 295–327.
- The Shipboard Scientific Party with additional contributions from Burns, D. and Webb, P.N., 1973, Site 208, in Burns, R.E., Andrews, J.E., et al., Initial Reports of the Deep Sea Drilling Project, Volume 21: Washington, D.C., U.S. Government Printing Office, p. 271–331, <https://doi.org/10.2973/dsdp.proc.21.108.1973>.

TABLE S2. CARBONATE CARBON ISOTOPIC COMPOSITION ($\delta^{13}\text{C}_{\text{carb}}$).

Sample	Top depth (mbsf)	$\delta^{13}\text{C}_{\text{carb}}$ (‰ VPDB)	standard error
208-29R-1W, 27-30 cm	539.29	-0.339	0.018
208-29R-2W, 10-12 cm	540.61	1.420	0.015
208-29R-3W, 117-120 cm	543.19	0.776	0.006
208-29R-4W, 127-130 cm	544.79	1.431	0.029
208-29R-5W, 84-88 cm	545.86	1.609	0.037
208-30R-2W, 120-123 cm	550.72	1.645	0.040
208-30R-4W, 98-102 cm	553.50	1.350	0.009
208-30R-5W, 119-122 cm	555.21	1.060	0.022
208-30R-6W, 120-123 cm	556.72	1.459	0.003
208-31R-2W, 20-22 cm	559.71	0.796	0.015
208-31R-2W, 98-102 cm	560.50	1.148	0.020
208-31R-2W, 140-143 cm	560.92	0.992	0.014
208-31R-3W, 10-12 cm	561.11	1.298	0.029
208-31R-3W, 48-52 cm	561.50	1.458	0.034
208-31R-3W, 105-108 cm	562.07	0.753	0.015
208-31R-3W, 139-143 cm	562.41	0.745	0.006
208-33R-1W, 30-32 cm	576.31	0.554	0.006
208-33R-1W, 36-38 cm	576.37	0.326	0.008
208-33R-1W, 56-56.5 cm	576.56	0.715	0.006
208-33R-1W, 57.5-58 cm	576.57	0.675	0.003
208-33R-1W, 63-64 cm	576.64	1.036	0.009
208-33R-1W, 66-68 cm	576.67	1.047	0.008
208-33R-1W, 72-74 cm	576.73	1.068	0.008
208-33R-1W, 74-77 cm	576.76	0.868	0.007
208-33R-1W, 80-81 cm	576.80	1.038	0.003
208-33R-1W, 82-83 cm	576.82	1.185	0.006
208-33R-2W, 12-15 cm	577.64	1.382	0.010
208-33R-3W, 17-19 cm	579.18	1.454	0.004
208-34R-2W, 73-76 cm	587.25	1.005	0.006

TABLE S3. PALEOMAGNETIC DATA.

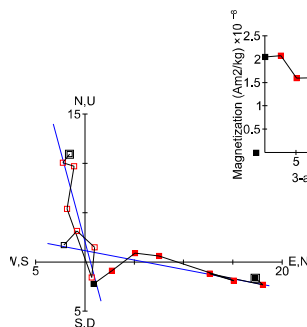
Sample number	Top depth (mbsf)	Natural Remmanent Magnetization (Am ² /kg)	PCA Declination	PCA Inclination	steps <i>n</i>	MAD	Polarity	Note
208-29R-3W, 65-69 cm	542.65	2.05E-08	100.8	-34.8	6	14.88	N	
208-30R-1W, 101-104 cm	549.01	5.39E-08	51.2	74.9	9	1.59	R	
208-30R-3W, 74-78 cm	551.74	6.53E-08	44.5	-46.5	5	7.29	N	
208-30R-3W, 74-78 cm	551.74	2.67E-08	128.8	-26.9	9	4.93	N	duplicated
208-30R-6W, 120-123 cm	556.70	6.44E-08	69.4	47.6	11	12.3	R	
208-33R-1W, 16-17 cm	576.16	4.47E-08	124.9	-30.1	7	4.9	N	
208-33R-1W, 17-19 cm	576.17	4.01E-08	173.1	47.9	7	5.94	R	
208-33R-1W, 37-39 cm	576.37	3.95E-08	19.8	-60.2	14	6.3	N	
208-33R-1W, 45-49 cm	576.45	3.75E-08	299	-72.5	10	5.5	N	
208-33R-1W, 51-53 cm	576.51	1.79E-07	117.3	-22.2	6	8.46	N	
208-33R-1W, 55-59 cm	576.55	1.16E-06	326.2	-6.36	10	14.7	N	high coercivity
208-33R-1W, 59-62 cm	576.59	4.65E-07	188.6	-18.1	9	5.94	N	high coercivity
208-33R-1W, 74-77 cm	576.74	1.15E-07	44	-36	17	6.27	N	
208-33R-1W, 86-89 cm	576.86	9.27E-08	158.3	-31.5	14	9.04	N	high coercivity
208-33R-1W, 86-90 cm	576.86	8.73E-08					N	high coercivity (acceptable)
208-33R-1W, 98-102 cm	576.98	5.98E-08	96.7	25.1	13	10.06	R	
208-33R-2W, 0-3 cm	577.50	9.76E-07					R	high coercivity (acceptable)
208-33R-2W, 6-9 cm	577.56	3.68E-08	34.4	-61.1	8	8.1	N	
208-33R-2W, 12-15 cm	577.62	2.65E-08	142.1	58.4	5	6.18	R	
208-33R-2W, 16-19 cm	577.66	9.06E-06	203.42	38.6	12	1.85	R	high coercivity
208-33R-2W, 26-30 cm	577.76	4.69E-08	329.8	28.1	8	13.73	R	
208-33R-2W, 35-38 cm	577.85	9.66E-08	66.7	-52.7	18	4	N	
208-33R-2W, 64-67 cm	578.14	1.40E-06	341.6	79.1	7	3.17	R	high coercivity
208-33R-2W, 103-105 cm	578.53	1.98E-07					R	high coercivity (acceptable)
208-33R-3W, 67-69 cm	579.67	1.05E-07					N	high coercivity (acceptable)
208-33R-3W, 121-124 cm	580.21	1.77E-08	320.2	-65.8	9	14.93	N	
208-33R-4W, 141-144 cm	581.91	1.20E-07	79.1	-74	14	10.3	N	
208-33R-5W, 68-70 cm	582.68	1.60E-08	170.6	-55	8	9.6	N	
208-33R-5W, 140-142 cm	583.40	3.55E-08	85.8	-39.4	6	9.1	N	
208-34R-2W, 14-17 cm	586.64	1.89E-08	311.4	40.9	7	8.1	R	
208-34R-3W, 63-65 cm	588.63	5.16E-08	57	39.8	12	8.9	R	

TABLE S4. RHENIUM AND OSMIUM CONCENTRATIONS AND MEASURED AND AGE-CORRECTED $^{187}\text{Os}/^{188}\text{Os}$ VALUES

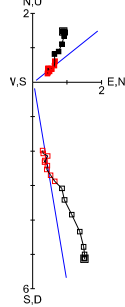
Sample	Top depth (mbsf)	Os concentration (pg g ⁻¹)	2 S.D.	Re concentration (pg g ⁻¹)	2 S.D.	$^{187}\text{Os}/^{188}\text{Os}$ measured	2 S.D.	$^{187}\text{Re}/^{188}\text{Os}$ measured	2 S.D.	Age (Ma)	$^{187}\text{Os}/^{188}\text{Os}_i$ Age corrected	2 S.D.
208-33R-1W, 17-18 cm	576.17	126	4	6715	1653	0.78	0.03	278	69	65.55	0.48	0.08
208-33R-1W, 30-32 cm	576.30	131.9	1.6	5552	144	0.655	0.016	217	6	65.57	0.418	0.018
208-33R-1W, 36-38 cm	576.36	314	9	21101	1299	0.81	0.02	353	24	65.58	0.43	0.03
208-33R-1W, 51-53 cm	576.51	299	4	37666	5511	1.71	0.04	732	107	65.60	0.91	0.12
208-33R-1W, 56-56.5 cm	576.56	395	3	37971	6818	1.12	0.02	523	94	65.60	0.55	0.11
208-33R-1W, 57.5-58 cm	576.58	581	3	107518	53800	2.449	0.018	1162	581	65.61	1.2	0.6
208-33R-1W, 63-64 cm	576.63	125.8	1.7	15242	1458	0.974	0.019	648	63	65.61	0.27	0.07
208-33R-1W, 66-68 cm	576.66	86	3	8575	180	0.85	0.05	528	20	65.62	0.27	0.05
208-33R-1W, 72-74 cm	576.72	176.5	1.1	14385	635	1.071	0.011	441	20	65.63	0.59	0.03
208-33R-1W, 74-77 cm	576.74	161	2	14761	554	0.89	0.02	486	19	65.63	0.35	0.03
208-33R-1A, 80-83 cm	576.80	75.5	1.4	7745	307	0.74	0.02	534	23	65.64	0.16	0.04
208-33R-1A, 80-83 cm (duplicate)	576.80	72.8	0.7	8018	337	0.747	0.018	573	25	65.64	0.12	0.04
208-33R-1W, 86-90 cm	576.86	254	9	10135	423	0.61	0.04	204	11	65.65	0.39	0.04
208-33R-1W, 86-90 cm (duplicate)	576.86	290	5	11120	573	0.612	0.007	196	11	65.65	0.397	0.015
208-33R-1W, 91.5-93 cm	576.92	120	2	2289	121	0.461	0.009	96	5	65.65	0.356	0.011
208-33R-1W, 98-102 cm	576.98	179	5	4569	227	0.422	0.009	127	7	65.66	0.282	0.012
208-33R-2W, 0-3 cm	577.50	104	9	2690	130	0.48	0.05	130	12	65.79	0.34	0.05
208-33R-2W, 0-3 cm (duplicate)	577.50	103	10	2678	106	0.48	0.04	131	13	65.79	0.34	0.04
208-33R-2W, 12-15 cm	577.62	83.7	1.5	3101	78	0.512	0.008	187	6	65.83	0.307	0.011
208-33R-2W, 26-30 cm	577.76	167.1	18	3681	181	0.43	0.04	110	13	65.88	0.31	0.04
208-33R-2W, 26-30 cm (duplicate)	577.76	183	4	3823	174	0.435	0.004	105	5	65.88	0.320	0.008
208-33R-2W, 57-59 cm	578.07	121.6	1.3	2515	89	0.501	0.007	104.5	3.8	66.00	0.386	0.008
208-33R-2W, 80-83 cm	578.30	80.1	1.2	2058	87	0.544	0.007	131	6	66.08	0.400	0.010
208-33R-2W, 103-105 cm	578.53	77	2	1365	49	0.482	0.015	90	4	66.17	0.383	0.016
208-33R-2W, 122-125 cm	578.72	70	8	1933	58	0.59	0.11	141	17	66.24	0.44	0.12
208-33R-2W, 122-125 cm (duplicate)	578.72	74.4	1.2	1970	52	0.581	0.008	135	4	66.24	0.432	0.010
208-33R-3W, 17-19 cm	579.17	73.6	0.6	1792	51	0.499	0.008	122.9	3.6	66.40	0.363	0.009
208-33R-3W, 17-19 cm (duplicate)	579.17	73	11	1094	29	0.49	0.07	76	11	66.40	0.41	0.07
208-33R-3W, 37-38.5 cm	579.37	138	4	1763	135	0.560	0.017	65	5	66.46	0.488	0.018
208-33R-3W, 67-69 cm	579.67	63	2	985	28	0.45	0.03	78.4	3.8	66.55	0.36	0.03
208-33R-3W, 67-69 cm (duplicate)	579.67	71	6	1081	27	0.44	0.03	76	7	66.55	0.36	0.03
208-33R-3W, 121-124 cm	580.21	70.7	0.7	1116	47	0.488	0.009	79.6	3.4	66.72	0.399	0.010
208-33R-4W, 20-23 cm	580.70	57.9	0.7	2331	81	0.595	0.008	206	8	66.86	0.365	0.013
208-33R-4W, 48-51 cm	580.98	65.9	0.7	2038	67	0.562	0.011	157	5	66.95	0.386	0.013
208-33R-5W, 42-44 cm	582.42	119	5	9973	841	1.08	0.06	454	43	67.39	0.57	0.08
208-33R-5W, 42-44 cm (duplicate)	582.42	123	13	10210	388	1.09	0.09	450	51	67.39	0.59	0.11
208-33R-5W, 140-142 cm	583.40	31.3	0.5	2549	68	0.85	0.03	429	13	67.68	0.365	0.031
208-34R-2W, 14-17 cm	586.64	52.0	0.4	8738	496	1.50	0.02	955	55	68.67	0.41	0.07
208-34R-2W, 73-76 cm	587.23	71.9	0.8	3694	150	0.87	0.01	271	11	68.85	0.554	0.019
208-34R-3W, 93-95 cm	588.93	64	3	3694	151	0.75	0.07	300	18	69.36	0.40	0.08
208-34R-3W, 130-133 cm	589.30	37.2	0.8	1738	44	0.72	0.02	242	8	69.48	0.44	0.02
208-34R-3W, 130-133 cm (duplicate)	589.30	40	3	1044	26	0.74	0.07	135	9	69.48	0.59	0.07
208-34R-3W, 130-133 cm (triplicate)	589.30	40.3	1.0	1774	40	0.73	0.02	229	8	69.48	0.46	0.02

PCA

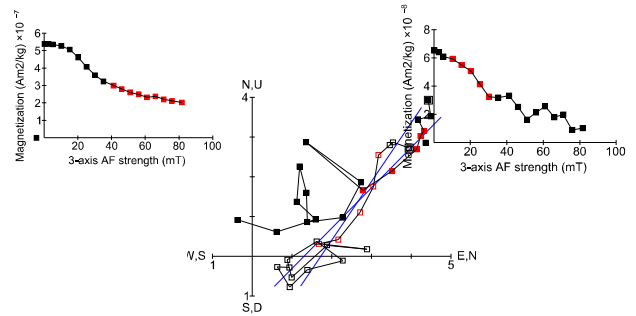
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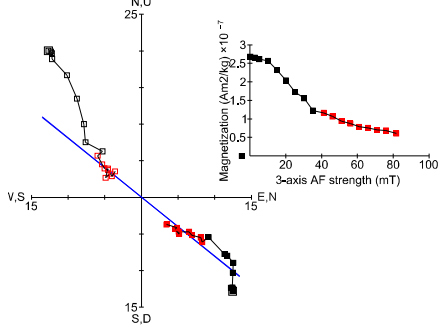
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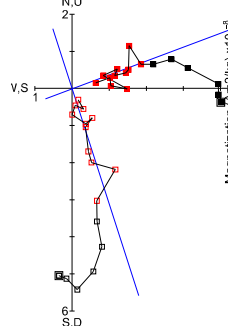
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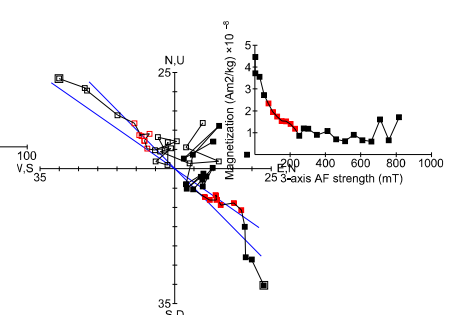
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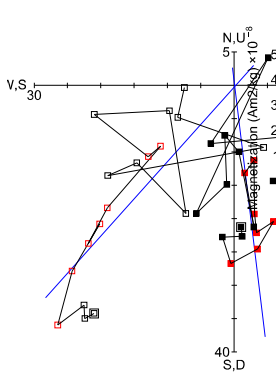
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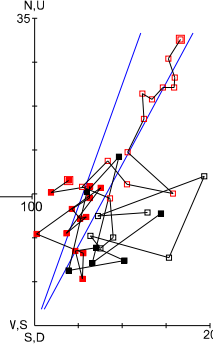
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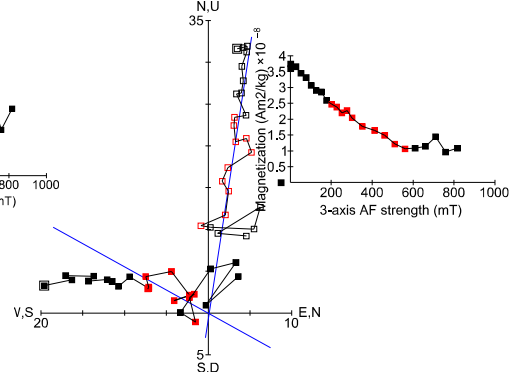
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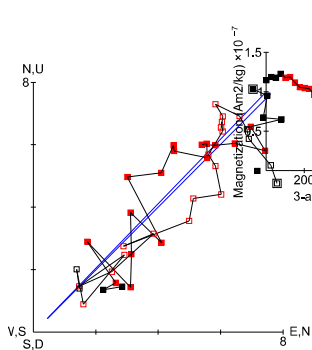
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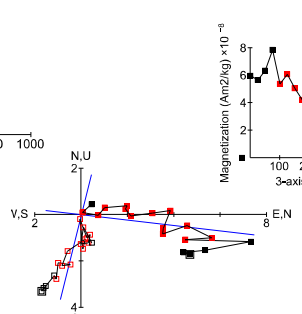
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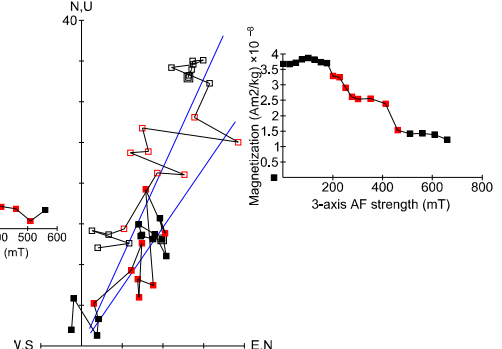
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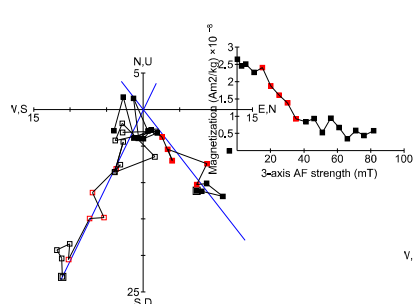
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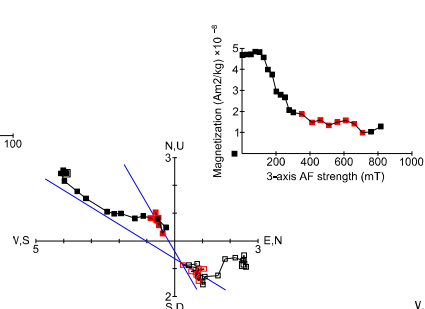
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Sample: 33R2W12-15



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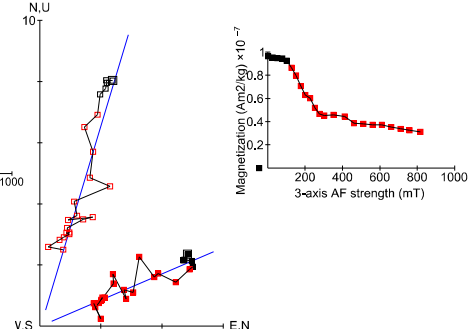
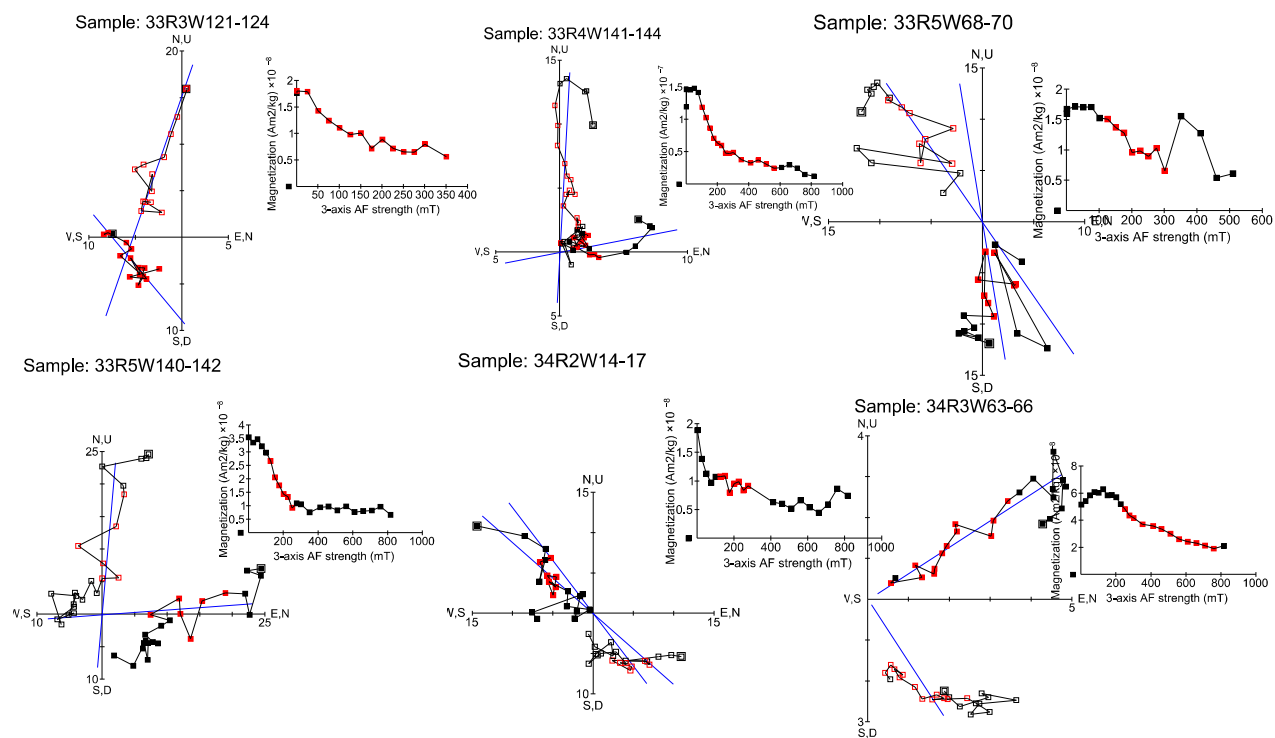
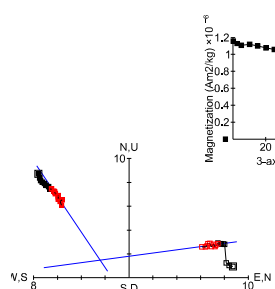


Figure S1

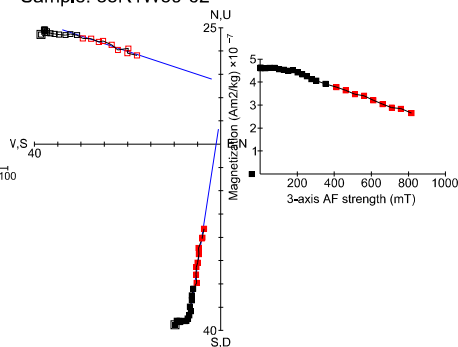


High coercivity

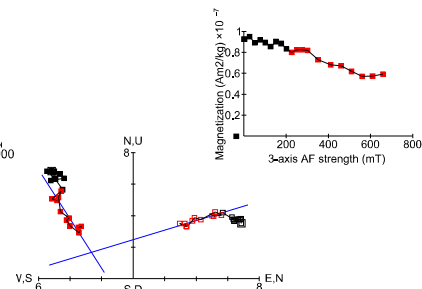
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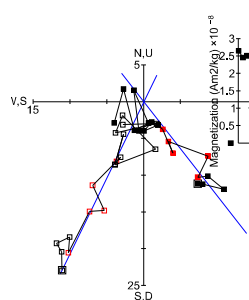
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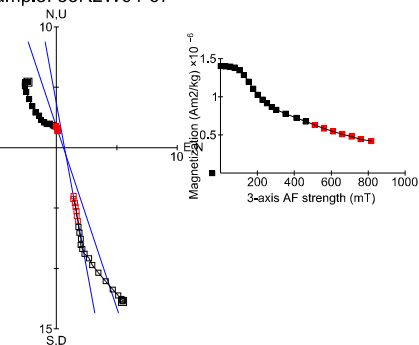
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Sample: 33R2W12-15

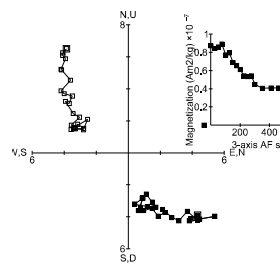


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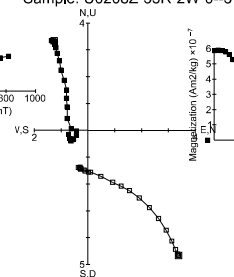


High coercivity with end point data.

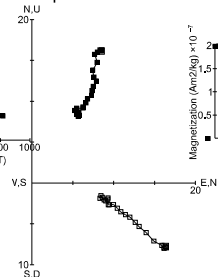
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Sample: U0208Z-33R-2W-103-105



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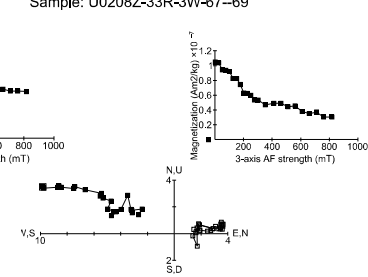


Figure S1
(continued)

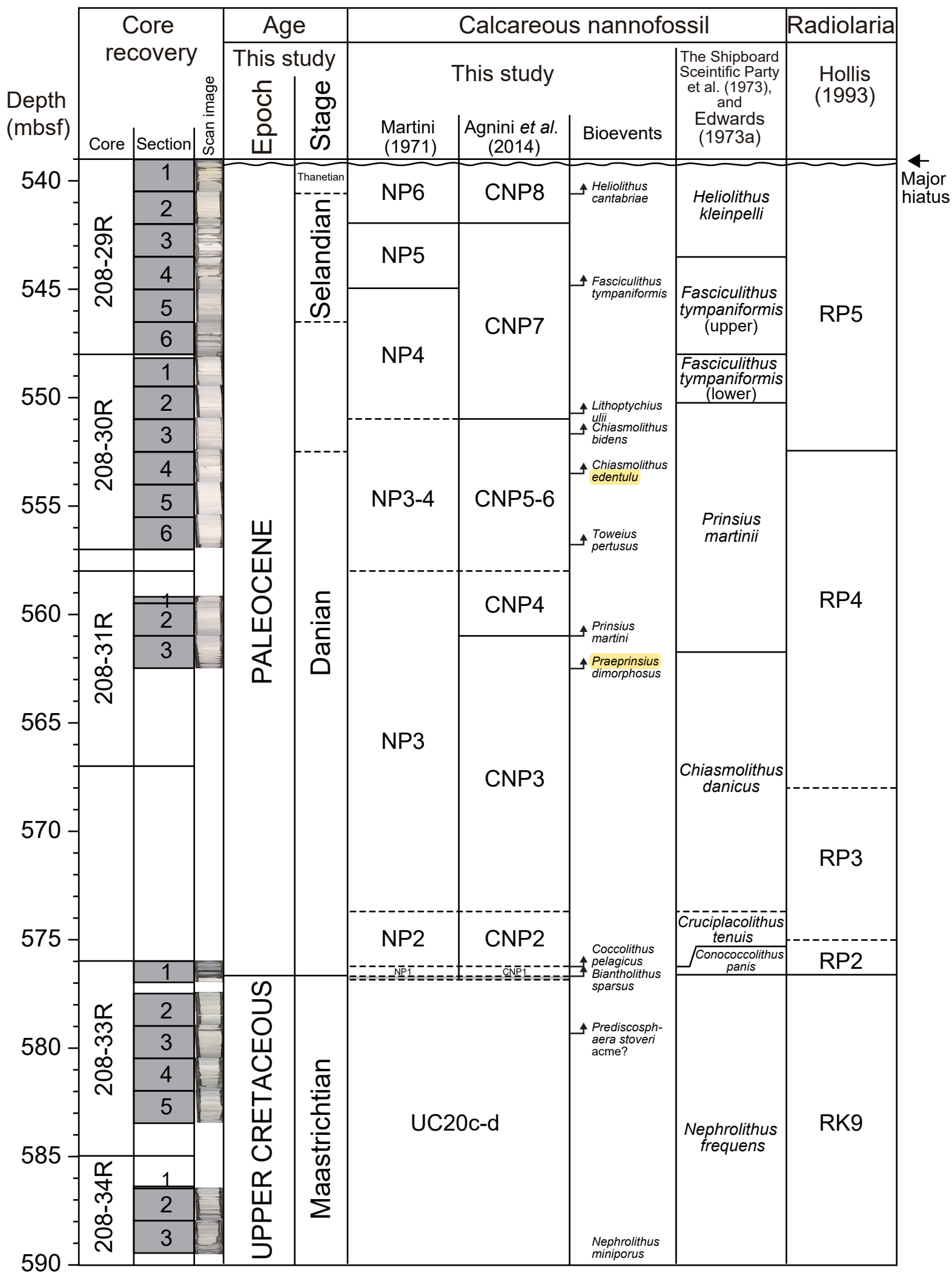


TABLE S1. (continued)