

Herbert et al noted that the Site 846 composite section across the Pliocene M2 glaciation was anomalous compared to other sites. They attempt to remake a composite section for ODP Site 846 based on physical properties from shipboard scanning tracks but also by correlation to the wireline logs, and comparison to new discrete stable isotope and alkenone analyses. It has long been known that one hole, even if completely cored, will have gaps between cores taken. Two holes are better, but there can still be gaps. There are times when correlations are ambiguous. They develop a methodology to compare shipboard data to a conductivity record from the wireline logs and check it with other discrete measurements.

They used a process where they compared a high-resolution electrical conductivity log to the shipboard bulk density measurements, a measure of porosity. In unconsolidated marine sediments, conductivity is directly related to the seawater present in the measurement volume, or porosity. They report that the record is from the HLDT tool, but this is incorrect. Comparing the data table to the archived logs, they are using conductivity data from the Formation MicroScanner, an imaging conductivity tool, on pass 2 of Hole 846B. It is important to keep the correct description of the data and they should make note of where it is archived (<http://brg.ldeo.columbia.edu/logdb/hole/?path=odp/leg138/846B/>). The detrending and normalization of the data are warranted, since the FMS is not well calibrated to absolute values.

Elimination of flyers in both the logging and GRAPE data is justified and well explained.

Lines 258-274: I was impressed that the coring distortions were correlated across holes and apparently result from different responses by different lithologies to the coring. The most extension was in the more porous diatom-rich sediments, as might be expected.

Figure 6 and Fig 7: some scales on the graph would be useful. On reflectance, is white up or down? Is 18O reversed?

I noticed that there was no table that describes the revised composite section. An interval table that shows their new proposed composite is needed for other researchers. It isn't clear from the text exactly what holes are involved, and where different cores are joined. They would only have to do the interval they have revised, e.g, like this section of Site 849 where each line represents an interval from each hole included in the composite.

Site_Top	Hole_Top	Core_Top	Type_Top	Section_Top	Interval_Top	CSF_Top	CCSF_Top	Section_Bottom	Interval_Bottom	CSF_Bottom	CCSF_Bottom	TIE
849 D	13 H	1	63	103.33	124.03	3	103	112.33	127.33	TIE		
849 B	13 H	1	64	111.84	127.94	6	119	119.89	135.99	TIE		
849 D	13 X	3	32	118.82	135.98	5	100	122.5	139.66	TIE		
849 B	14 X	1	86	121.56	139.66	3	129	124.99	143.09	TIE		
849 D	14 X	1	1	125.11	143.26	4	136	130.96	149.11	APPEND		
849 B	15 X	1	66	130.96	149.11	7	3	139.33	157.48	TIE		
849 D	15 X	2	8	136.38	157.48	6	78	143.08	164.18	TIE		
849 B	16 X	3	49	143.49	164.18	5	109	147.09	167.78	TIE		
849 D	16 X	1	44	144.94	167.78	5	54	151.04	173.88	TIE		