

Interactive comment on “Technical Note: Weight approximation of single coccoliths inferred from retardation estimates using a light microscope equipped with a circular polariser – (the CPR Method)” by J. Bollmann

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I appreciate the comments by Jeremy Young, especially for catching the missing reference and the error in the caption of figure 1.

Comment Young: *“This is a valuable contribution to methodology for studying coccoliths and contains much interesting data. It is also very timely given the widespread use of his type of technique in ocean acidification studies. I would, however, like to make a couple of comments. Under-documentation of circular polarisation technique. The*

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CPL technique is not widely used in microscopy, and certainly not in micropalaeontology so a clear explanation of the method is needed. In particular it is not clear if circular polarisers replace both the polariser and the analyser or only one of them. Also the reference cited Craig1961 is both rather old and missing from the reference list.”

Author response: I added several references with a detailed description of the circular polarizer: A detailed explanation about the application and the required optics for a circular polarizer are given in (Craig, 1961;Higgins, 2010;Frohlich, 1986).

Comment Young: *I was interested in the citation here of the new recalculation of birefringence colours of Sorensen (2013). This is indeed a very useful reference, however, examination of it shows that the caption of fig. 1 of the BGD ms of Bollmann is incorrect. The base scale (A) is not a Raith-Sorensen chart but a Michel-Levy chart recalculated according to the method of Sorensen (2013).*

Author response: I corrected the caption of figure one.

References

Craig, D. B.: The Benford plate, *The American mineralogist* 46, 757-758, 1961.

Frohlich, W.: Bifringent objects visualized by circular polarization microcopy, *Stain technology*, 61, 139-143, 1986.

Higgins, M.: IMAGING BIREFRINGENT MINERALS WITHOUT EXTINCTION USING CIRCULARLY POLARIZED LIGHT, *The Canadian Mineralogist*, 48, 231-235, 2010.