

***Interactive comment on “Spring molybdenum enrichment in scallop shells: a potential tracer of diatom productivity in coastal temperate environments (Brittany, NW France)?” by A. Barats et al.***

**Anonymous Referee #1**

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Barats et al present a large geochemical dataset on bivalve shells. Their compilation of Mo/Ca in the shells of *Pecten maximus* is very impressive. This paper presents some very interesting data, however, it is very poorly written and some of the correlations they discuss are not clear from their figure 4. There is discussion mixed in the overly long Results section (the results are actually longer than the discussion). The English usage and grammar make the paper very difficult to read and understand. I do not think the authors put much time into the final stages of the paper. For example, on page 8052 the authors discuss profiles of “PSNZ” without ever defining what PSNZ is.

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They eventually do define it 7 lines later. On this same page they also write “-1W + 1W period”, but the definition of this can only be found in Table 3. Sloppiness such as this makes this a difficult paper to read. The manuscript really does have very interesting data and I urge the authors to completely re-write the paper properly and to be more conservative with their conclusions; then have it professionally edited by a native English speaker. It does seem that Mo/Ca profiles are indeed an environmental proxy, and that it indeed records something different than the similar signal of Ba/Ca-shell, but I do not think the authors have convincing evidence of what the proxy is recording. They push their interpretations too far.

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