

## ***Interactive comment on “Optical tools for ocean monitoring and research” by C. Moore et al.***

**C. Moore et al.**

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We thank the reviewer for his positive comments.

The reviewer suggested broader inclusion of optical techniques within the introduction - in particular imaging and lidar: We fully agree that underwater imaging is an exciting, important and rapidly developing field that needs to be addressed properly. Instead of doing this within this publication we included a reference to a dedicated paper within this issue by Jonsson et al. (as suggested by the editors).

Responding to our exclusion of spaceborne and airborne measurement optical techniques that used lidar as an example the reviewer reminded us that lidar is seeing growing use as an underwater tool: We agree that LIDAR techniques are an important and developing field and they are by no way restricted to airborne applications. The point we wanted to address at that time in the text was to exclude airborne and spaceborne sensors entirely &#8211; LIDAR was just one example &#8211; and we

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changed the text to avoid misinterpretation.

We appreciate the reviewer&#8217;s point about the fundamental importance of platforms. We feel that the location of the section with the background material on optical properties (subsection &#8216;d&#8217; of section 2) does convey that the issue of an effective platform transcends all the more detailed applications discussed in subsequent sections (3-6).

The review suggested the the definition of an optode must be clarified :We have reorganized the text so that the optode description is at the top. This section does focus on oxygen optodes, as there are currently the most prevalent of this technique. However, we have added text on other properties that can be measured using optodes (not based on fluorescence quenching) as pointed out by the reviewer.

The review suggested that we more broadly and directly address the use of optical fibers in underwater instrumentation: The authors feel that addressing the general use of fibers in marine instrumentation is out of scope for this topic. Many of the sensors discussed use fibers optics as a component technology, as do they use LEDs, photovoltaic cells, gratings and other fundamentally enabling technologies. Our goal was to review the state of the art in optical sensors, not optical technologies per se.

We once again thank the reviewer for his thorough review and constructive recommendations.

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