Review of revised manuscript:
Linking satellites to genes with machine learning to estimate phytoplankton community structure from space
By El Hourany et al.

Thank you to the authors for thorough revisions and thoughtful replies to reviewer suggestions. The following only minor/technical changes; following these changes I believe the manuscript is ready for publication.

Line 43: correct to "in terms of"

L45: I think the parentheses need to be corrected, as-is it is a mix of only around the year and around the full citation.

L88: suggest revision to "a micro-size diatom compared to a pico-sized *Synechococcus*" to remove subjectiveness of "huge" and "tiny"

L90: suggest changing "way greater" to " significantly greater". Also *Syn* needs to be italicized in this line

Figure 1 caption: the second-to-last instance of psbO needs to be italicized

Fig 2 caption: the last instance of psbO needs to be italicized – double check throughout for consistency

L138: suggest revision to "We averaged the output of the four…"

L163: add a space before "Soppa"

L180: is there a specific number you deem a "low number" of pixels?

L 183: no need to re-define Chla here

L 236: I think "real" should be "non-transformed" Chla values?

L348: suggest revision to "observed for diatom Chla fraction,.."

L 359 'Threshold' should not be capitalized. Or, perhaps revise to make the sentence currently within parentheses its own sentence.

L481: "groups; The" – 'The' should not be capitalized