Reviewer Report of Hopwood et al.

The authors clearly demonstrate their diligence in covering the scope of ice-ocean biogeochemical research. It is apparent that more effort should be devoted to describe the variability of these ecosystems and their responses to regional forcing, with particular emphasis on continued monitoring and automation, under a wider geographical lens (both hemispheres). The developing portrait of the ice-ocean interface may be obscured by shifts in baseline processes — therefore, the case-study approach here is particularly effective at capturing spatial and quasi-time variability, by comparing distinct regions and exchanging "time" for "place." The calculations made in this review, I think, should motivate others to constrain the large uncertainties. Each layer of complexity presented has better informed the modeling community and I think this review will serve the scientific community well to think about multiple controls on primary production in dynamic coastal regions. The authors have whole-heartedly considered initial comments from the reviewers and made the appropriate changes. The review is formatted well and it is easy to extract the summarized findings. It is therefore my recommendation that the review be published in TC.