



Global Ocean Acidification  
Observing Network

## GOA-ON WEBINAR SERIES

*Regional changes in Southern Ocean biogeochemistry due to  
projected carbon uptake*

Wednesday, 14 July 2021

at 10:00 Australian Eastern Standard Time (UTC+10)

Register here: <https://register.gotowebinar.com/rt/3191371397724780304>

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**Description:** The Southern Ocean accounts for nearly half of the global ocean's sink of anthropogenic carbon. Despite this important contribution, many climate models do not represent the mesoscale features that characterize the region due to limited spatial resolution. Here we apply a high-resolution ocean model that incorporates biogeochemistry with high-emission (RCP8.5) forcing in order to identify regions of pronounced change due to carbon uptake into the near future. We find that the annual uptake of carbon in the Southern Ocean south of 40° S is projected to double over the first half of the 21st century. The changes due to the increase in carbon will lead to acidification and lowering of aragonite saturation. We will present regions where changes to carbon system variables are respectively more and less pronounced to inform the siting of near-future observations.



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