Dear Editor:

Thank you for your consideration of our manuscript entitled: "Eulerian and Lagrangian measurements of water flow and residence time in a fringing reef flat-lined embayment: Faga’alu Bay, American Samoa" which I am submitting for publication as a Report in Coral Reefs.

The paper demonstrates the use of a hybrid Eulerian and Lagrangian approach, using acoustic current profilers and GPS-logging drifters, to characterize spatially distributed water flow patterns and quantify water residence time under variable wave and wind conditions at the study site. While many studies are limited by a small number of Lagrangian drifters or a limited range of forcing conditions, we conducted thirty deployments of a fleet of five drifters to sample a wide range of wind and wave forcing conditions experienced annually at the study site. This unique dataset for a fringing reef environment demonstrates the advantage of a hybrid Lagrangian-Eulerian measurement scheme to understand long-term, spatially-distributed flow patterns and residence times for biophysical studies in geomorphically-complex embayments that are common to reef-lined coasts. As such, this paper should be of interest to a broad readership including those interested in studying larval dispersal, nutrient cycling, temperature dynamics, or sediment impacts on fringing reefs.

The submitted manuscript is a component of a larger body of research on terrigenous sediment dynamics in Faga’alu Bay, American Samoa, a Priority Restoration site for the U.S. Coral Reef Task Force. In a forthcoming paper to be submitted to Coral Reefs, we use the flow pattern results from this manuscript to interpret sediment accumulation patterns observed in tubes and SedPods over 1 year (2014-2015) at the study site. This forthcoming paper will also incorporate measurements of sediment loading to the reef, detailed in a paper currently in review for publication in the Journal of Hydrology.

Thank you for your consideration of our work! Please address all correspondence concerning this manuscript to me by e-mail (amesssina@rohan.sdsu.edu).

Sincerely,

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