

Long term observations of marine snow, using cabled observatory system

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Marine aggregates are formed through coagulation of small biogenic and non-biogenic components. Visible ones, known as marine snow, are typically larger than 0.5mm. Aggregates are well recognised as hotspots of microbial and planktonic activities. Aggregates formation is an important pathway for transferring organic matter from surface to deep ocean, hence the impacts of aggregates in carbon flux is significant. However, field observations of aggregates have been challenging and not many long-term observational results have been reported.

In this study, we analysed in-situ observations of aggregates using a high-resolution plankton camera mounted on cabled observatory OCEANS. OCEANS has been continuously collecting hydrographic data and images of aggregates simultaneously since 2014. Here we will present a few months of in-situ observations results to show aggregates size and population change over time. Turbulence and other plankton distributions are compared to aggregates.

Keywords: Marine snow, Turbulence, Size distribution