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Seasonal Variations in Biological Characteristics of the South Australian Shelf Waters – Results from the Southern Australian Integrated Marine Observing System (SAIMOS)

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The Southern Australia Integrated Marine Observing System, or SAIMOS, is one of five nodes operating as part of the Australia-wide Integrated Marine Observing System (IMOS). This is a collaborative program designed to observe Australia's oceans, both coastal and blue-water. Since February 2008, and the occurrence of a record upwelling event on the South Australian continental shelf, the abundance and composition of viral, bacterial and pico- and nanoplankton communities have been investigating during 8 cross-shelf surveys and related to the physical and chemical properties of the water column. In summer, the space-time dynamic of viral, bacterial and pico- and nanoplankton communities is generally driven by the plume of upwelled, cool and nutrient rich water that flows across the continental shelf, and is locally heavily influenced by the level of vertical stability of the water column. In winter, the qualitative and quantitative nature of the plankton community is related to the local physical properties of the water column, which include the presence of a dense plume of bottom waters outflowing from the Spencer Gulf, the vertical stability of the water column and the presence of a deep chlorophyll maximum (DCM).