



## **Seasonal Variations in Physical 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 Physical Data has been collected for SAIMOS in both summer and winter months during 8 surveys. The data collected during summer are used to characterise the nature and dynamics of the Kangaroo Island-Eyre Peninsula upwelling system during a record upwelling event in February 2008. During this event a plume of very cool water was observed along the bottom from South of KI to the Eyre Peninsula. This plume dissipated rapidly after the end of upwelling favourable winds and by March 2008 had disappeared entirely from the observations. The data are also used to study the dense high salinity outflow from Spencer Gulf observed during the winter months. The dense plume result from surface cooling of high salinity waters at the head of Spencer Gulf. One striking result of these observations is that the outflow occurs during a series of strong pulses with a period of approximately 2 weeks and duration of 1-3 days. During these pulses bottom velocities at 100 m can exceed 1 m/s.