

## **HYCOM on the Agulhas Shelf**

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A regional simulation of HYCOM is compared against both a mooring array and different model output in order to assess its effectiveness in resolving shelf edge processes in the Agulhas Current. These processes have a large effect on upwelling dynamics inshore of the current and include large meanders, Ekman veering in the bottom layer and interactions with a strongly sloping bathymetry. The dynamics in the shelf region are strongly effected by the configuration of the western boundary current jet and thus the greater Agulhas Current needs to be well-represented as well as the finer scale shelf processes. Choice of vertical coordinates appear to have an effect on the realism of bottom temperatures over the shelf. Tracer experiments illustrate the contribution of large solitary meanders in the current to the supply of cold water to inshore upwelling cells. HYCOM simulations show good agreement with observations of the mean state but under represent the stronger upwelling events perhaps due to the difficulties in simulating the bottom boundary layer. Development of higher resolution simulations is ongoing.