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Underwater gliders as virtual moorings; lessons from the RAPID program

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The RAPID program measures the Atlantic Meridional Overturning Circulation in the sub tropical Atlantic using an array of moored instruments. We have made trials using autonomous underwater gliders as a replacement for one of the RAPID moorings. The mooring is located on the continental slope at a water depth of 1000m. Six glider deployments have been made concurrent with mooring deployments. In this presentation data from the moorings and from the gliders are compared; different glider sampling strategies are considered; and the advantages and disadvantages of gliders are described. The capability of gliders to resolve tidal motion and to quantify geostrophic currents is examined.