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Physical mechanisms involved in Deep Western Boundary Current variability at 26.5°N

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Variations in the deep limb of the Atlantic Meridional Overturning Circulation (MOC) carried in the Deep Western Boundary Current (DWBC) at 26.5°N have been shown to exceed in magnitude the variations of the overall basin-wide MOC, with strong variability at a range of time scales from weeks to multiple-months. Attribution of these strong variations will be crucial for understanding variations in the MOC itself, however despite many years of moored observations of the DWBC at this location, understanding of these variations is still elusive. Two years of observations from a higher horizontal resolution array of pressure-equipped inverted echo sounders are used together with satellite altimetry and output from a modern high-resolution numerical model to investigate the mechanisms behind these $\pm$20 Sv (1 Sv = 10^6 m^3 s^{-1}) variations.