



## **Observations of the temporal variability of the Atlantic meridional overturning circulation from the Rapid-MOC transatlantic array at 26.5°N**

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The vigour of Atlantic Meridional Overturning Circulation (MOC) is thought to be vulnerable to global warming, but a lack of understanding of its shorter-time variability means that changes inferred from sparse observations on the decadal timescale of recent climate change are uncertain. From continuous measurements of the MOC (from 29th March 2004 to 31st March 2005) using the purposefully designed Rapid array of moored instruments deployed along 26.5° N and cable measurements of Florida Current transport the year-long average overturning is  $18.7 \pm 5.6 \times 10^6 \text{ m}^3\text{s}^{-1}$  (range  $4.0$  to  $34.9 \times 10^6 \text{ m}^3\text{s}^{-1}$ ): inter-annual changes in the overturning can be monitored with a resolution of  $1.5 \times 10^6 \text{ m}^3\text{s}^{-1}$ . In this talk we will present the first analysis of a further 18 months of observations from the Rapid array (1st April 2005 to October 2006). We will compare transports and variability from 2004 to 2006 and examine the contributions to MOC variability from Gulf Stream, Ekman and interior baroclinic and barotropic transport fluctuations.