



Seasonal analysis of the Equatorial Undercurrent at 10°W

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13 cross-equatorial shipboard current profiling sections along with CTD measurements taken between 1997 and 2005 are used to analyze the mean meridional structure and the seasonal variability of the Equatorial UnderCurrent (EUC) at 10°W. This analysis confirms a semi annual cycle of the EUC at 10°W, with a first maximum in January and a second maximum from June to September. The mean EUC isopycnal transport at 10°W is estimated to be 11.1 Sv within the 24.5 - 26.5 isopycnal layer. For the seasonal cycle, the wind stress and the Zonal Pressure Gradient (ZPG) are well correlated, with less than one month lag, so indicating the near seasonal equilibrium between the ZPG and the wind forcing. The seasonal EUC transport also varies nearly in phase with the ZPG and the easterly trade winds.