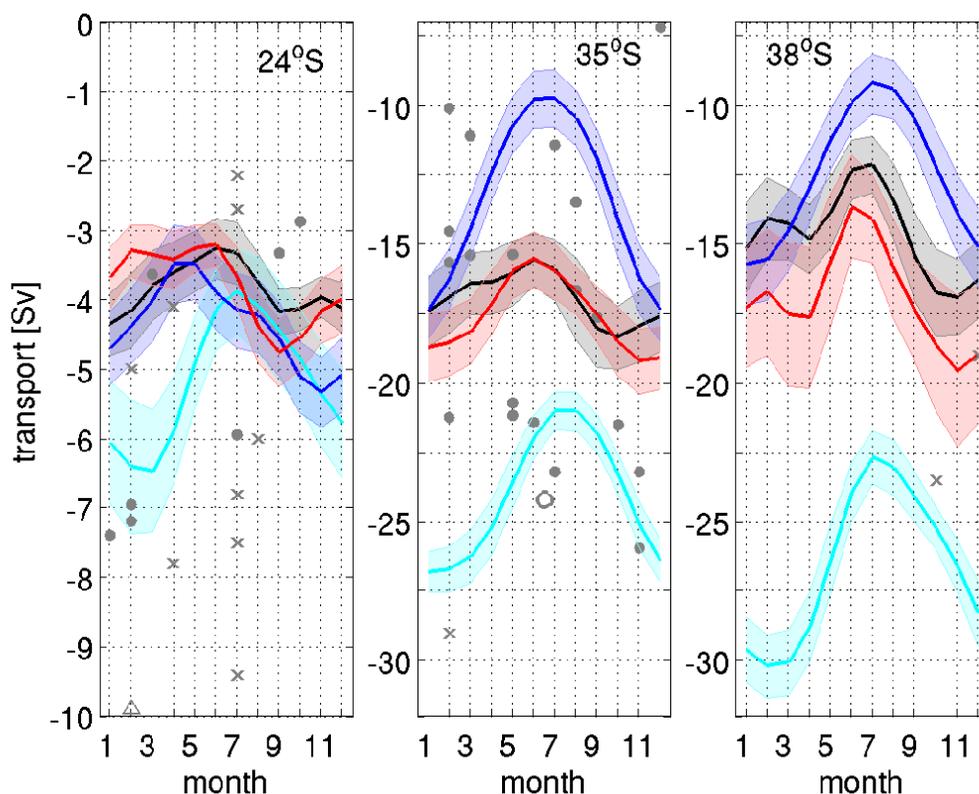


# Transports in the eastern and western boundary regimes of the subtropical South Atlantic

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The goal of this project is to improve the knowledge and understanding of the meridional circulation along the boundaries of the subtropical South Atlantic, which is an important component of the Meridional Overturning Circulation. Monthly three-dimensional fields of the horizontal velocity for the years 2000 to 2014 were derived from Argo profiles, AVISO satellite sea surface height, and subsurface trajectories from Argo and other floats (Argo & SSH; Schmid, 2014) for the purpose of studying the circulation in the South Atlantic. Due to space limitations, this summary focuses on the Brazil Current.

The mean annual cycle of the Brazil Current is characterized by high (low) southward transports in austral summer (winter), both in Argo & SSH and in data assimilation models. The best agreement is visible at 24°S. At 35°S NCEP has smaller transports and both at 35°S and 38°S SODA has larger transports. The full time series also reveals interesting signs of interannual variability, both in terms of magnitude and in terms of variations of the annual cycle. Periods exceeding a year with relatively low/high transports are observed at 24°S and 35°S (e.g. 24°S: 5/2008-8/2009 with  $2.7 \pm 0.3$  Sv and 12/2013-5/2014 with  $5.0 \pm 0.8$  Sv).



Mean annual cycle of the meridional transports in the Brazil Current at three latitudes. Red, blue and cyan lines are from HYCOM reanalysis, NCEP/GODAS and SODA, respectively. Shading indicates standard errors. Gray dots are based on transport estimates by Garzoli et. al. (2013). Gray crosses indicate estimates from other studies.