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## Ocean Heat Transport's Response to Future Climate Projections

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This study investigates the response of the meridional Ocean Heat Transports (OHT) to future climate projections in both CMIP5 and CMIP6 models. Globally the OHT transport is declining/becoming more southward across all latitudes in the Northern Hemisphere, while at latitudes south of 10°S the OHT is increasing/becoming more northward. These changes in OHT are much stronger in CMIP6 models relative to CMIP5, especially for the rcp2.6/ssp126 scenario relative to the rcp85/ssp585 scenario. Throughout the entire Atlantic basin the northward heat transport is reduced and can be tied to the velocity driven overturning (Atlantic Meridional Overturning Circulation (AMOC)) contribution to the OHT. While the temperature driven changes in the Atlantic basin dampen the changes in the OHT. In the Indo-Pacific basin the OHT transport north of the equator does not change much since the temperature and velocity driven changes balance each other. However, south of the equator the increase in northward heat transport is caused by the overturning velocity driven changes and again dampened by temperature driven changes. These changes in the Indo-Pacific basin can be tied to changes in wind driven subtropical overturning cells.