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## Temperature and salinity changes in the global ocean since 1920's

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A composite quality checked historical data set is used to infer global temperature and salinity changes since 1920's. Quality controlled historical temperature and salinity profiles are compared with geographically neighbouring high-quality profiles obtained during the World Ocean Circulation Experiment (WOCE) (1990-97) used as a reference for our calculations. Temperature and salinity anomalies against the reference data are calculated for 10 layers, to estimate differences in secular changes versus depth. Possible errors due to inadequate time/spatial sampling and systematic errors in the data are discussed. The calculations reveal concerted changes in temperature and salinity in a general agreement with other studies (Levitus et al., 2000; Curry et al., 2003). Emphasis is made on the secular changes of temperature and salinity in the North Atlantic Ocean.