

Global Mean Temperature Changes in Model and Observed SSU and MSU Data

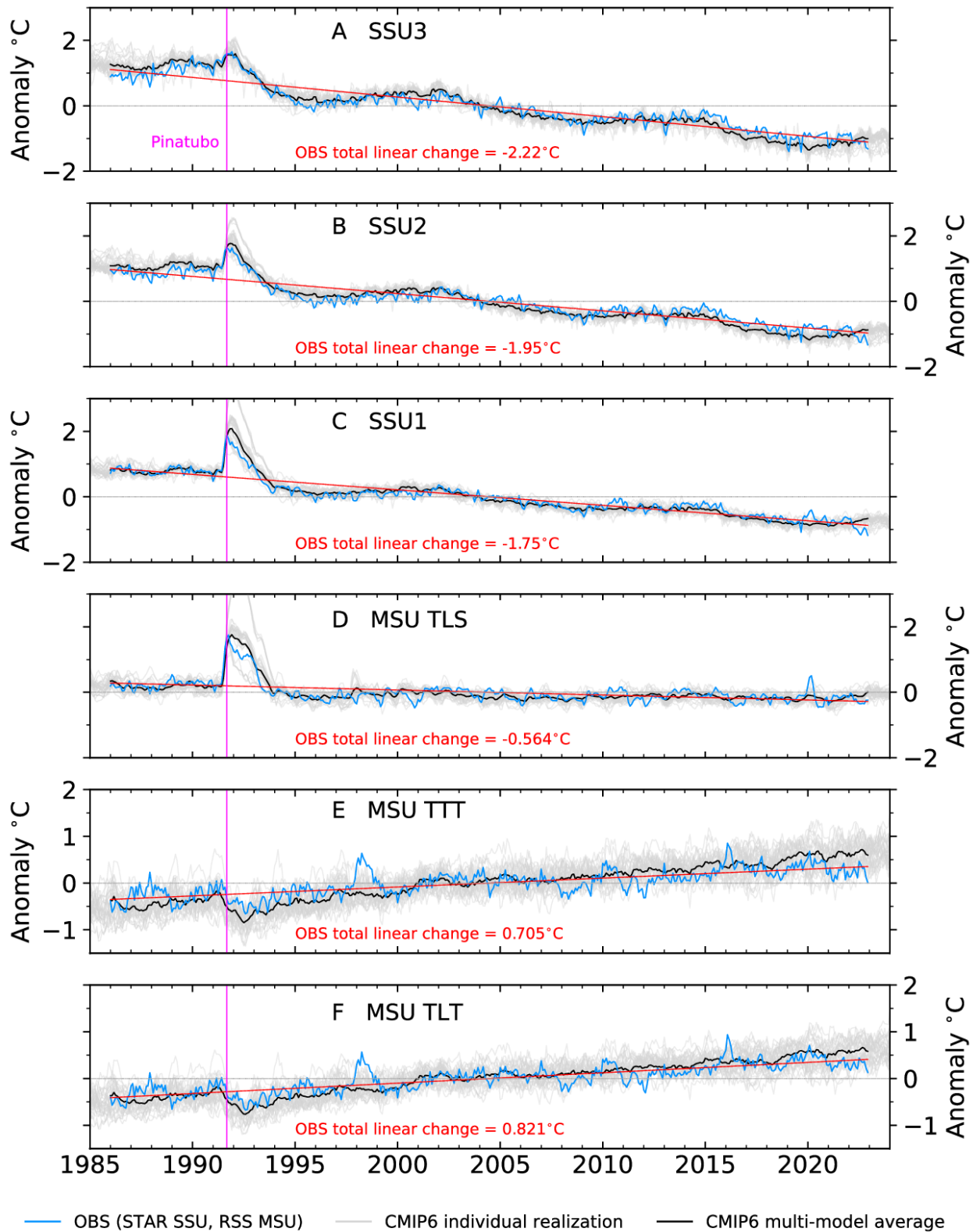


Fig. 1. Observed and simulated changes in global-mean monthly mean temperature in six atmospheric layers. Results are temperatures from channels 3, 2, and 1 of the Stratospheric Sounding Unit (SSU; panels A–C) (27), lower stratospheric temperature from the Microwave Sounding Unit (MSU TLS; panel D), MSU total tropospheric temperature (TTT; panel E), and MSU lower tropospheric temperature (TLT; panel F) (25). The peaks of the weighting functions for these six layers are at ca. 45, 38, 30, 19, 5.6, and 3.1 km above the Earth’s surface (respectively). Results are anomalies relative to climatological monthly means over 1986 to 2022. Model simulations are from nine different CMIP6 models and a total of 32 realizations of historical climate change (*Methods* and *SI Appendix*).