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Variability in the Atmosphere-Ocean System and Global Change: Insights via Sea Surface Temperature Analysis

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We have extended an earlier study [*Dickey et al., GRL, 2003*] of the sea surface temperature (SST) field to longer time span (1870 to 2002), using the newly available Global Sea Surface Temperature (HadISST 1.1), a set of SST data in monthly 1° area grids. In the previous study, poleward propagating atmospheric zonal wind anomalies were observed, originating at the equator and penetrating to high latitudes in both hemispheres on interannual, decadal and longer timescales. These patterns were shown to be linked to complementary oscillations in the sea surface temperature (SST) field. Results from these extended analyses will be presented and the increasing intensity of these interannual, decadal and multi-decadal variations will be examined for possible indications of Global Warming.