The ‘analysis_error’ variable within the GHRSST compliant netCDF4 file is calculated based on error statistics when compared to buoy data from the National Buoy Database Center (NBDC). More specifically, this is a standard deviation error and is subject to the availability of data. For example, the below demonstrates the most recent bulk statistics summary when comparing the NASA SPoRT SST Composite with buoy data from NBDC. To calculate the ‘analysis_error’ variable, we first bin the observed SPoRT SST values to the nearest tenth of a degree Kelvin. Next, we determine all the buoy SSTs that are associated with those binned observed SPoRT SST values and calculate the standard deviation. In other words, this represents the spread of the buoy SST data along a binned SPoRT SST value. The bulk statistics are updated monthly (i.e., as new data becomes available); therefore, the standard deviation statistics will be constantly updated as more validation points are collected. As a result, there will be larger standard deviations where fewer validation points are available.

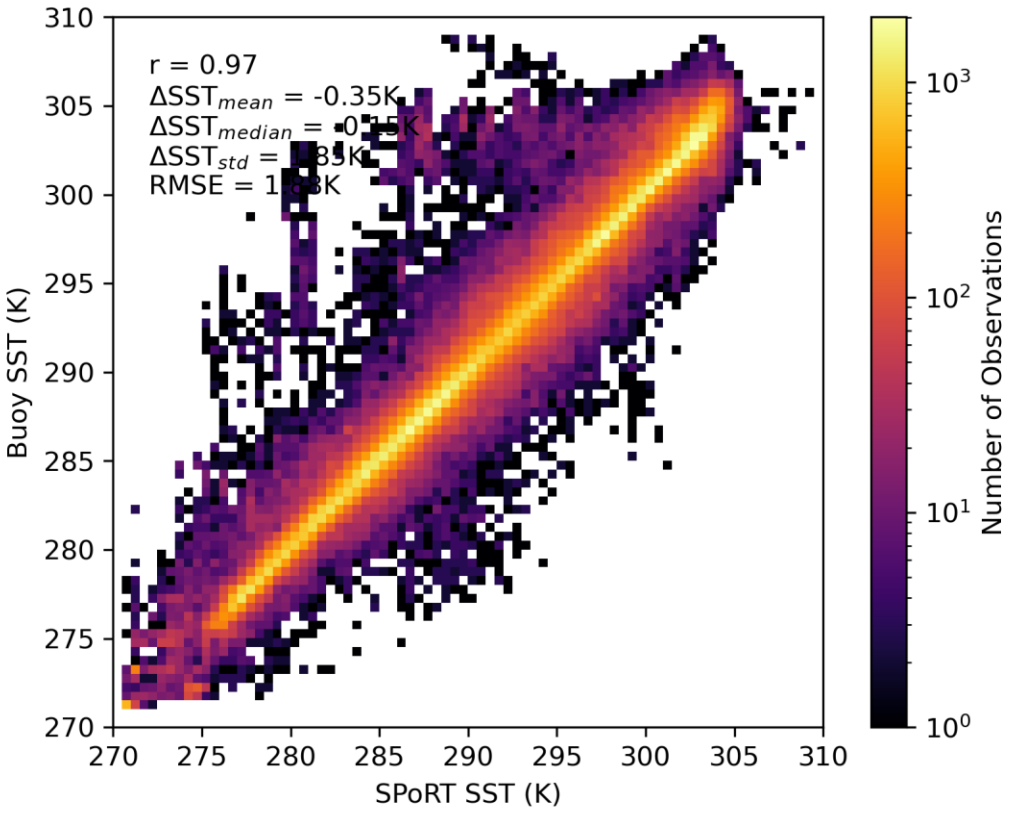

Figure: Bulk statistics comparing SPoRT SSTs and NDBC Buoy SSTs.