

## Southern Ocean region

Figure 1 present 2 maps of the mean (left) and STD (right) SSS maps from SMAP SSS L3 v6 - 8-Day running (RSS) Satellite product over the period of the TSG transect.

Figure 1: Mean (left) and STD (right) SSS map from SMAP SSS L3 v6 - 8-Day running (RSS) Satellite product over the period of the TSG transect. The black line corresponds to the TSG transect.

Figure 2 show on the top panel SSS as measured by the TSG along its track line (black line) and collocated SMAP SSS L3 v6 - 8-Day running (RSS) Satellite product (red line). The corresponding density spectra are shown on the bottom panel.

Figure 2: SSS as a function of the cumulative distance over the TSG transect (black line) and collocated SMAP SSS L3 v6 - 8-Day running (RSS) Satellite product (red line)