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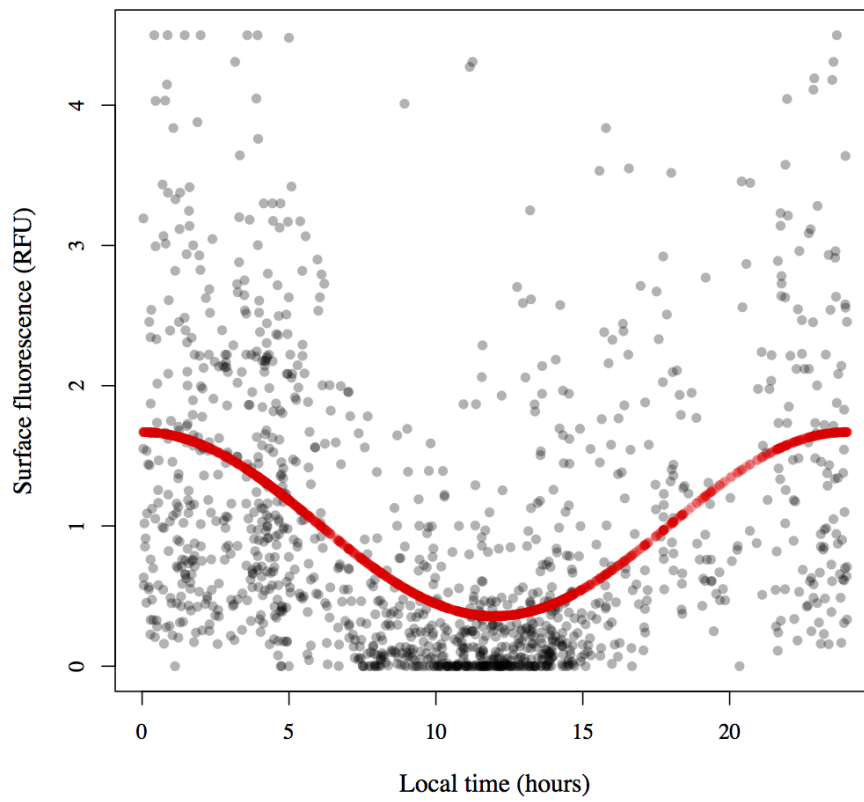
Supplement of

An alternative method for correcting fluorescence quenching

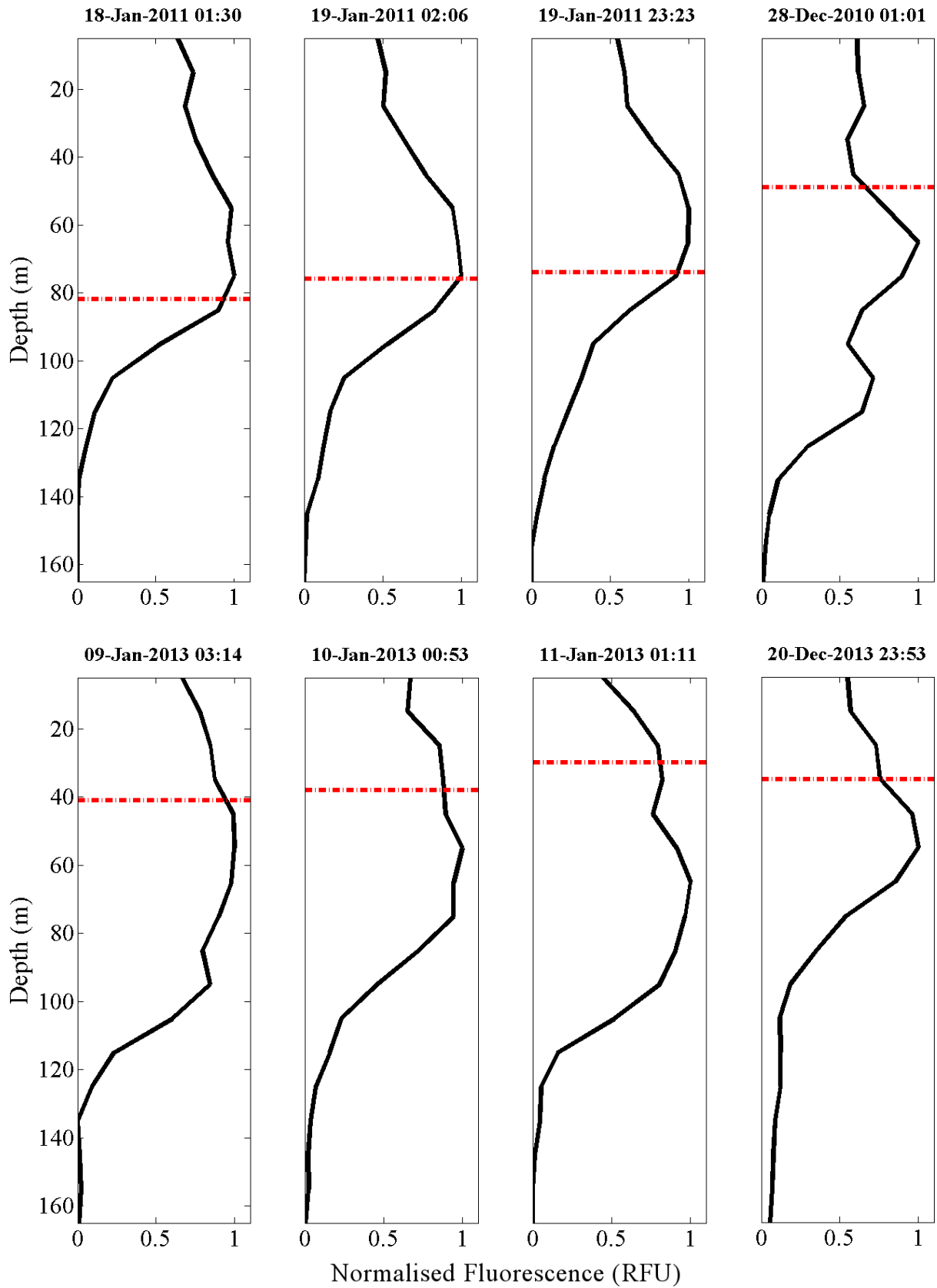
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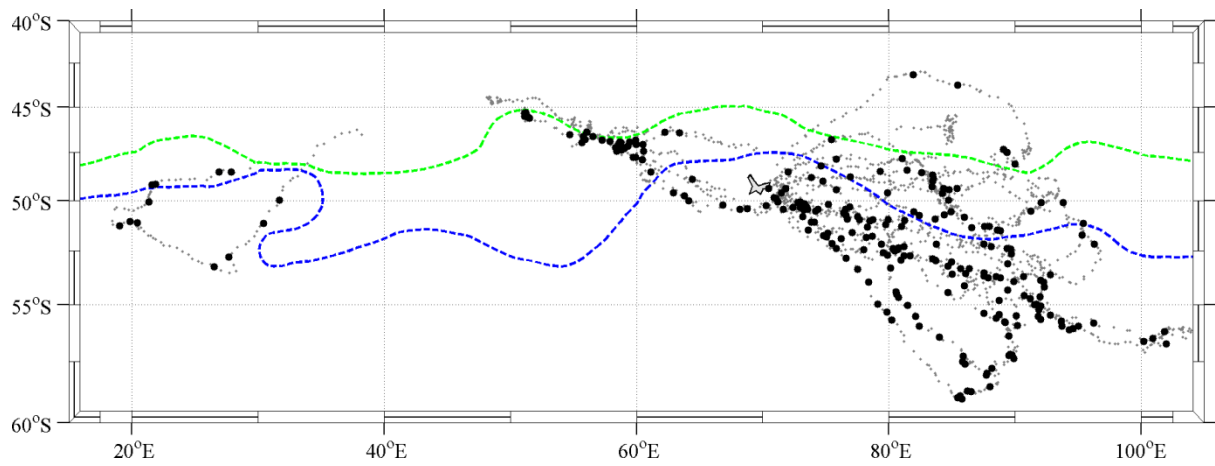
Supplementary Figures



Supplementary Figure 1: Uncorrected surface fluorescence data (top 10m) collected by 19 animal-borne fluorimeters over successive austral summers. Fitted sin wave in red illustrates how yield is significantly suppressed around midday. ($n = 1267$, $R^2 = 0.26$, $P < 0.001$).



Supplementary Figure 2: Examples of discrete vertical profiles of night (unquenched) fluorescence (solid black line) collected by instrumented elephant seals in the Southern Ocean. The depth of the density-derived mixed layer is shown by the dashed red line.



Supplementary Figure 3: Positions of the night (unquenched) deep fluorescence maxima along the tracks of southern elephant seals tagged with FCTD-SRDLs over the austral summers spanning 2009 to 2013. These 'true' deep maxima compose approximately 30% of all night data collected by these animal-borne fluorometers. The general positions of the Sub Antarctic Front and the Polar front are shown in green and blue, respectively (Orsi and Harris, 2014).