

The Dynamics of Buoyant Microplastic in the Ocean Forced by
Unsteady Insolation - Supplementary Materials

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Supplementary materials

Figure S1 plots the daily insolation for the summer solstice (21st.June corresponding to day 172) and the winter solstice (21st.December corresponding to day 355) at latitude 55N, calculated using (9) to (13). The maximum insolation occurs at noon in each case, although the summer value is double that of the winter.

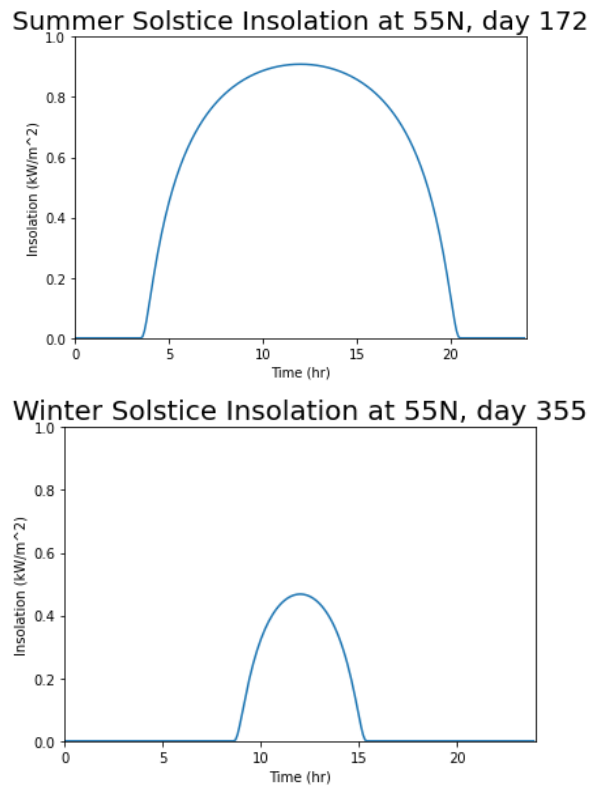


Figure S1: Comparison of the summer (top) and winter (bottom) solstice insolation for a latitude of 55N

Figure S2 shows the maximum insolation every day over one year at a latitude of 55N. The variation of the insolation between seasons is clearly displayed, with values ranging from 0.45kW/m² in winter to 0.9kW/m² in summer. These large diurnal and seasonal variations in insolation drive time dependent biofouling production rates with the same time scales.

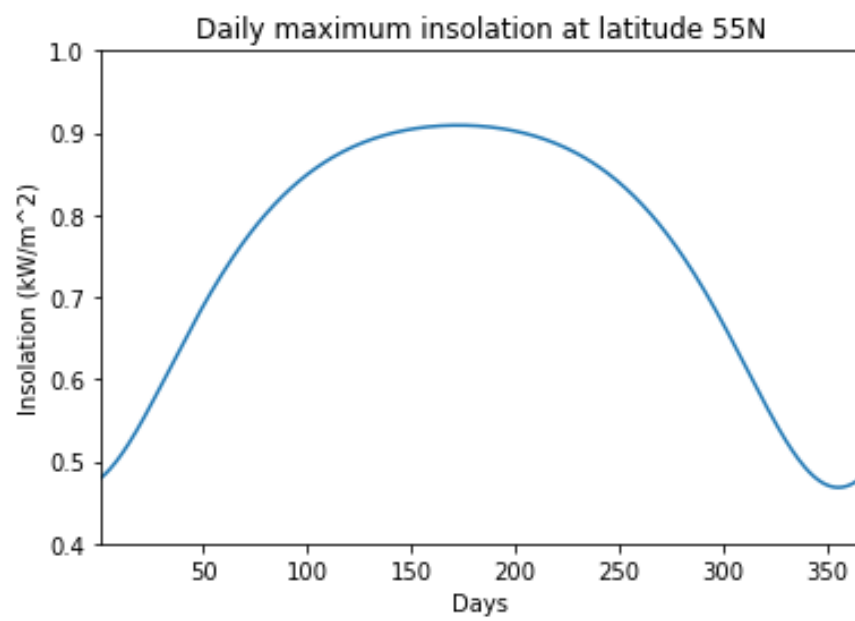


Figure S2: Plot of the daily maximum value of insolation over the course of a year, for a latitude of 55N.