

Supplement Figure S1

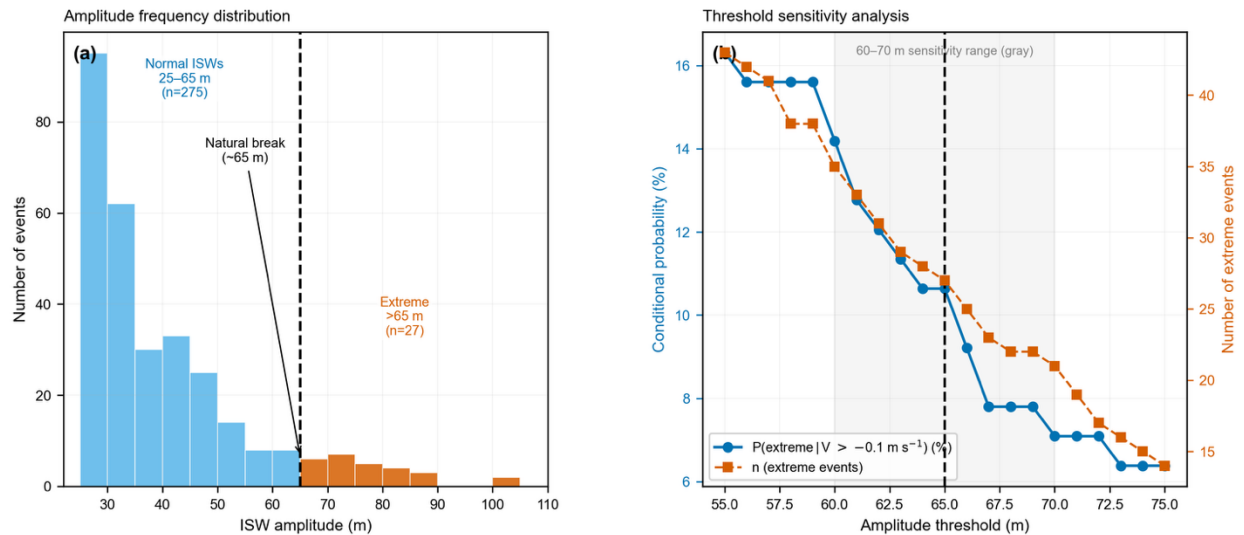


Figure S1. Amplitude distribution and threshold sensitivity analysis. (a) Frequency histogram of ISW peak amplitude for all 302 identified wave packets. Blue bars indicate normal ISWs (25–65 m); orange-red bars indicate extreme ISWs (>65 m). The dashed vertical line marks the 65 m natural break point used to classify amplitude categories throughout this study. (b) Sensitivity of the main results to the choice of amplitude threshold, evaluated over the range 55–75 m. Blue circles show the conditional probability of an extreme ISW occurring given near-neutral background flow ($V > -0.1 \text{ m s}^{-1}$); orange squares show the corresponding number of extreme events. Gray shading marks the 60–70 m range used for the sensitivity assessment. Results are qualitatively unchanged across this range, confirming that the 65 m threshold is not critical to the conclusions.