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Revisited heat budget and probability distributions of turbulent heat fluxes in the Mediterranean Sea

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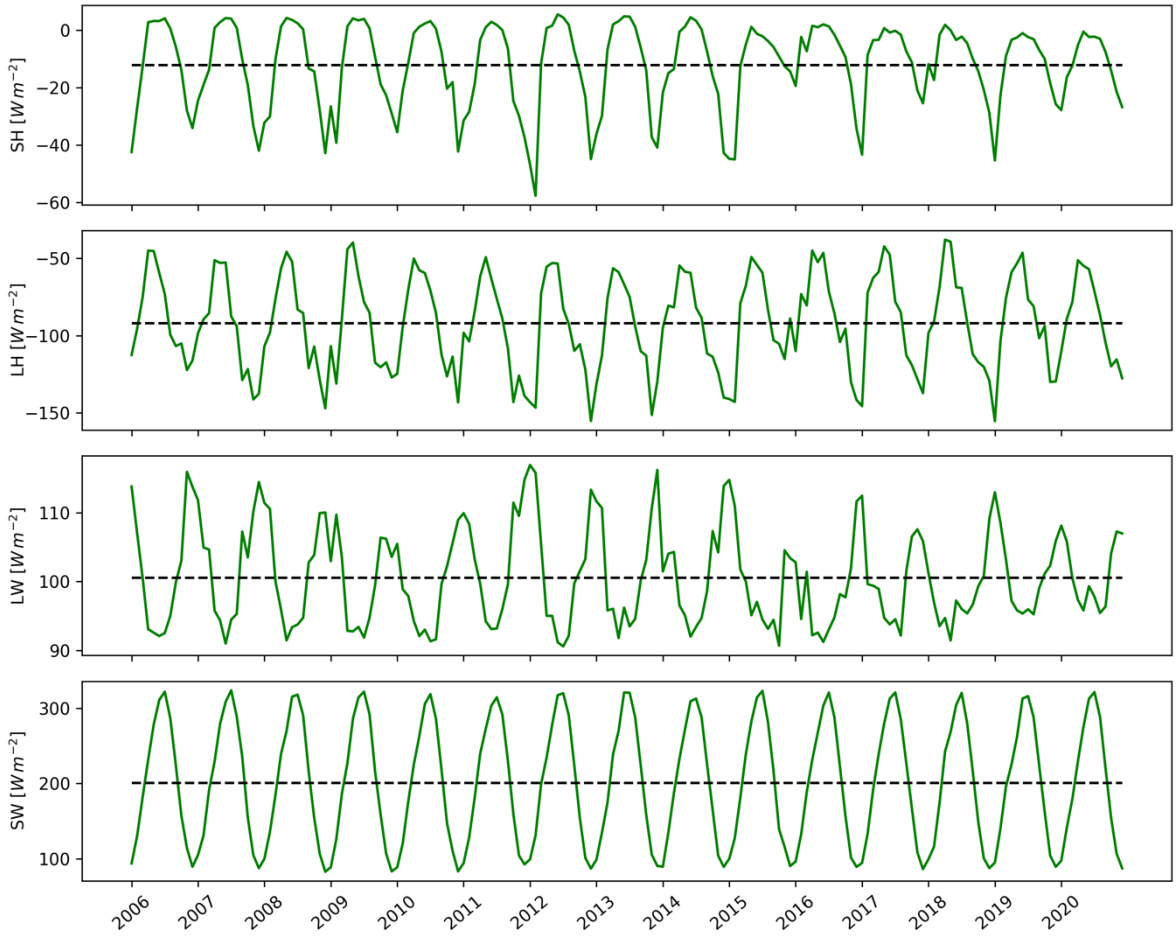


Figure S1: Monthly time series of surface averaged heat fluxes for ECMWF and the observed period 2006-2020. The mean value with the solid dashed line is also indicated for each flux component.

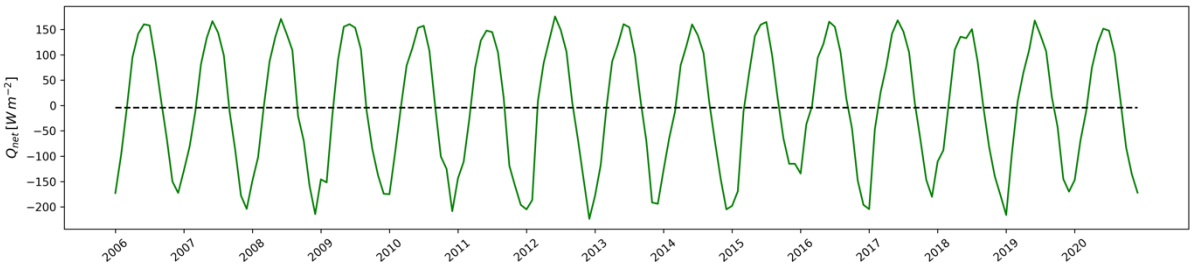


Figure S2: Monthly time series of surface averaged net heat flux Q_{net} for the observed period 2006-2020. The mean value is marked with dashed line

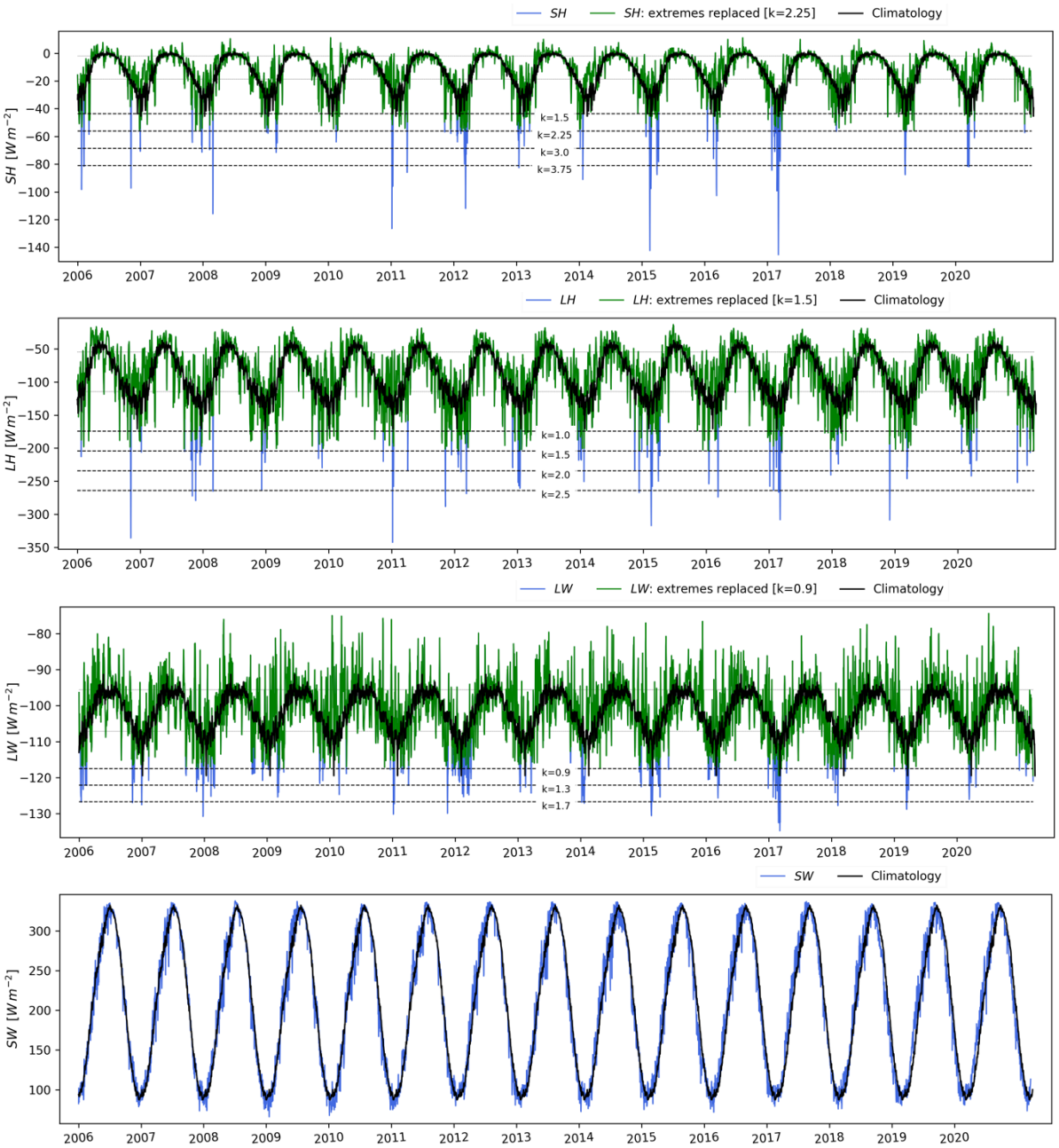
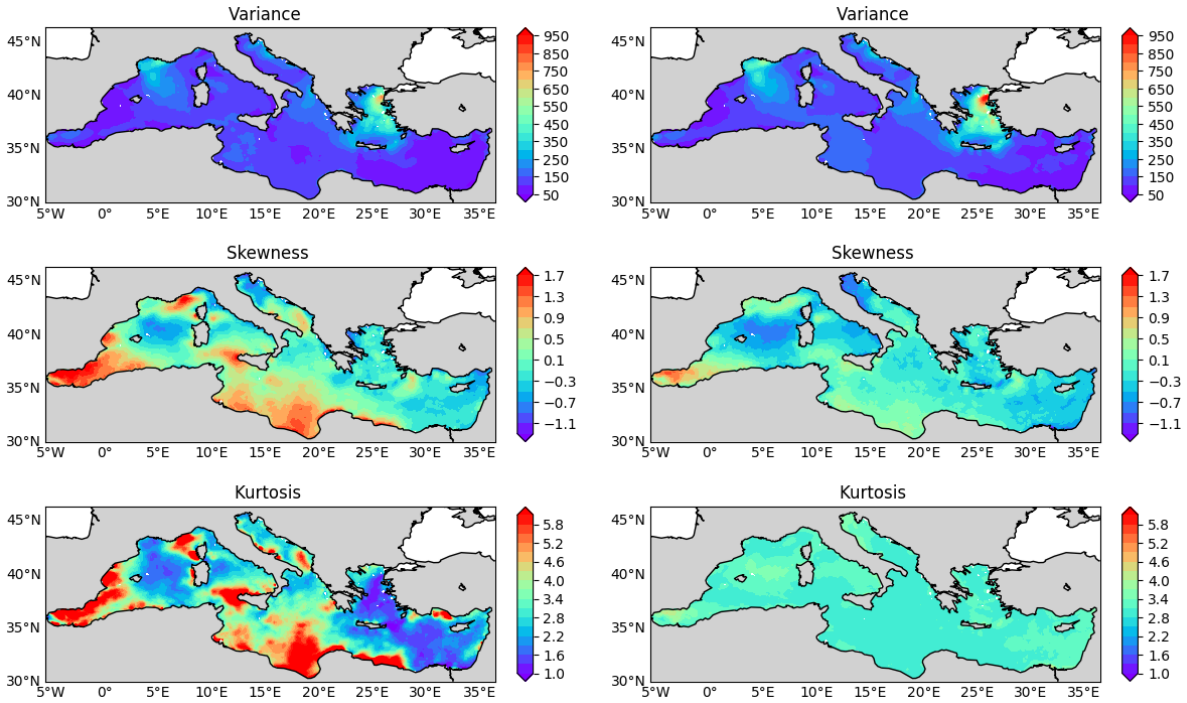


Figure S3: Time series of the basin averaged SH, LH, LW an SW overlapped with long-term yearly climatology. Lower quantile boundary lines are marked with dashed lines with different k values used to remove the extremes from the time series.



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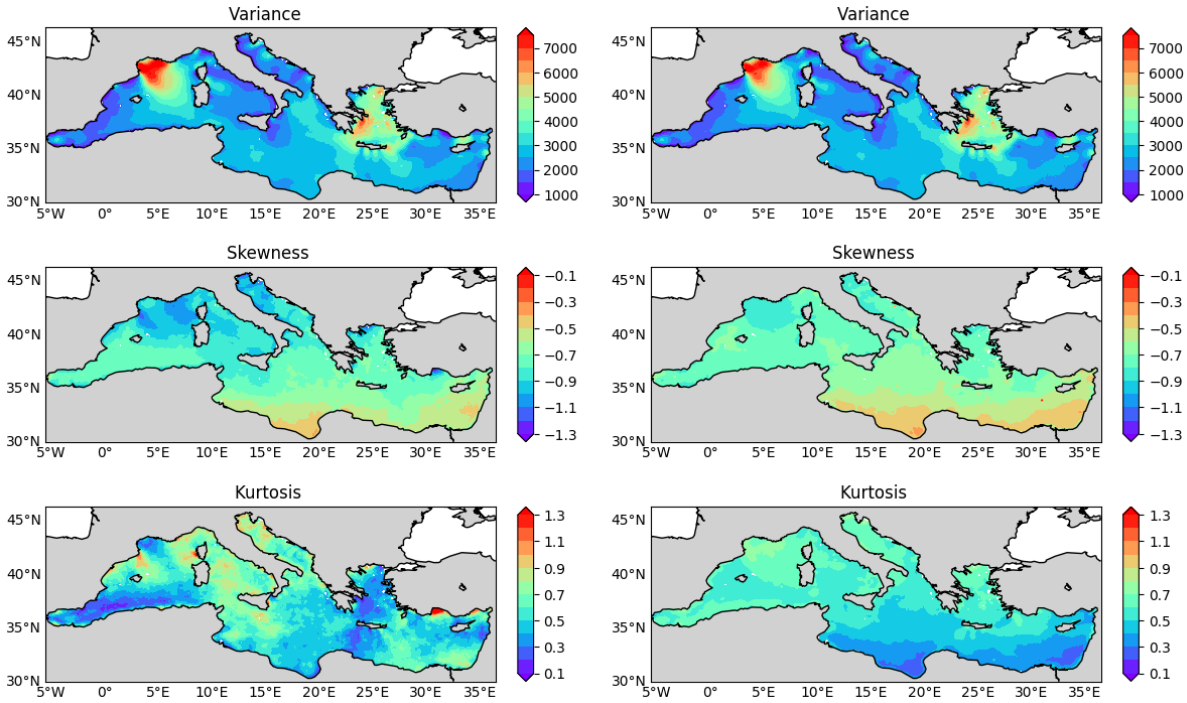


Figure S5: Comparison of the statistical moments (variance, skewness, kurtosis) for observed LH flux anomaly series and estimated statistical moments computed using Skew-normal PDF parameter values

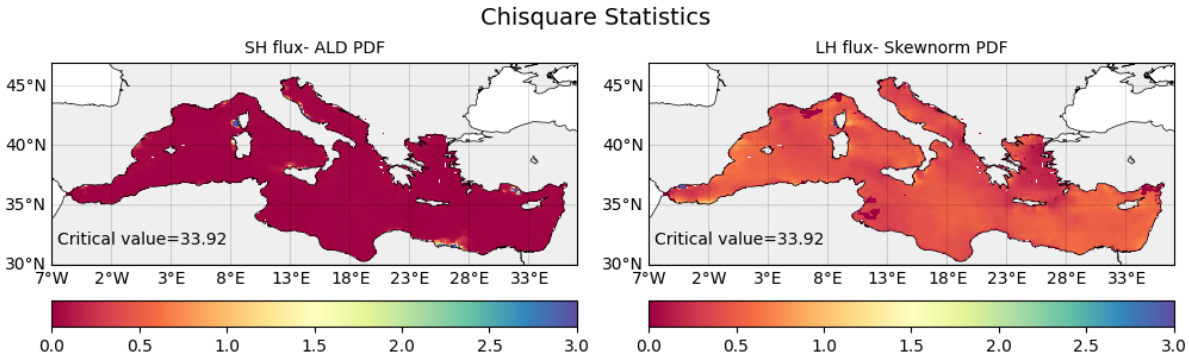
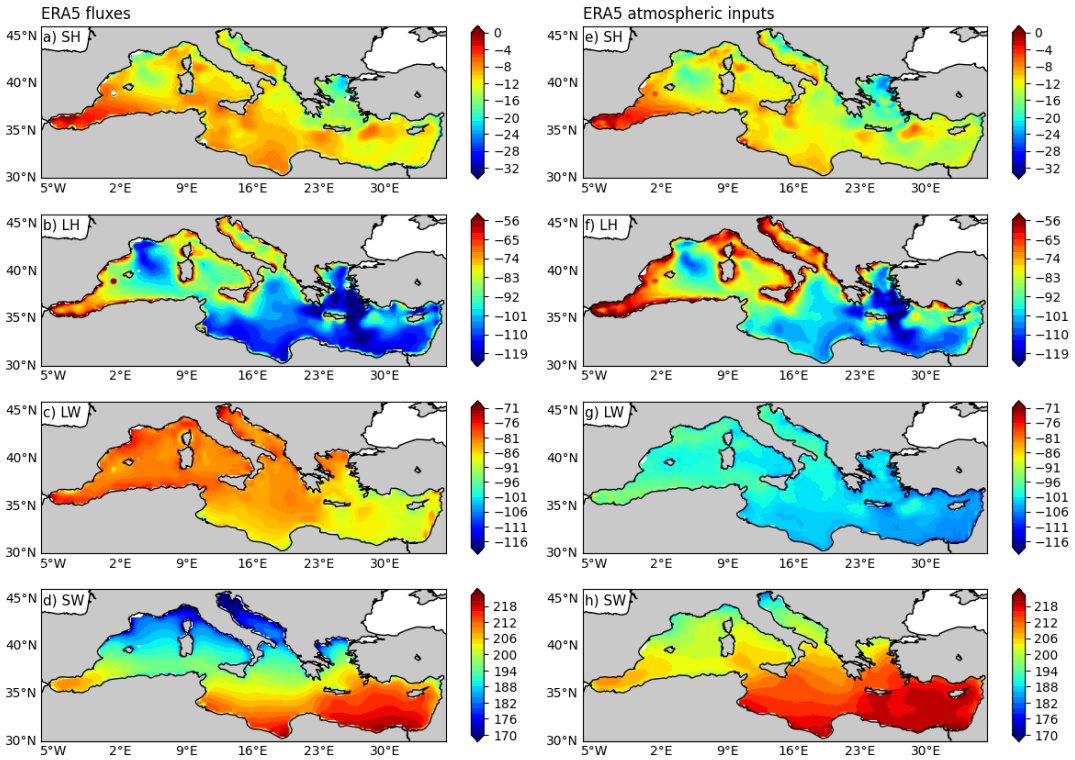


Figure S6: Chi-square test statistics computed for the applied PDFs and observed anomalies; ALD PDF for SH flux (left) and Skew-normal PDF for LH flux (right). All sea grid points values below the critical value (33.92) are theoretically accepted and aligned with applied PDFs.



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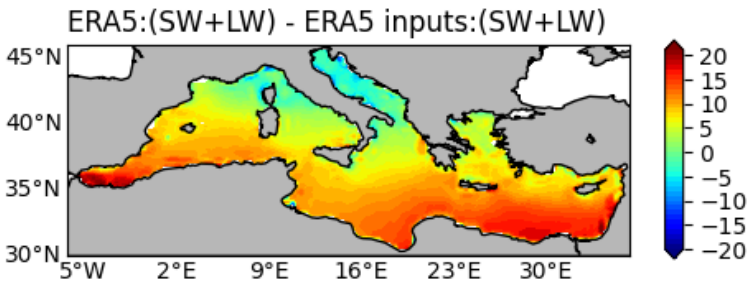

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