**Figure S1.** Auto-correlograms presenting the Pearson correlation coefficients (y axis) of simulated ground speeds at the French stopover site (location 2, figure 1a) and ground speeds simulated at consecutive 6-hour time steps per pressure level. The x-axis represents the number of forward 6-hour time steps. Dotted lines represent the upper and lower 95th percentile. When the lower 95th percentile crosses 0 on the y-axis, the correlations are no longer significant ($p > 0.05$).