



THE ORIGIN OF AIRMASSES IN MAJOR THUNDERSTORMS IN ICELAND AND THE PREDICTABILITY OF THE STORMS

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The evolution of the atmosphere prior to major thunderstorm events in Iceland is studied by tracing the airmasses back in time. The backtracing reveals large seasonality in the trajectory pattern: In wintertime, both low level as well as upper level tropospheric airmasses originate from N-America and they are highly influenced by the blocking effect of Greenland. Airmasses in summertime thunderstorms originate on the other hand from the south or southeast (Europe) at low levels, while cold air at at upper levels is brought in by westerly winds.

Thunderstorm events are simulated and the predictability of the storms is evaluated, using atmospheric thunder indices. The simulations reveal reasonable accuracy in the short range forecasts. The sensitivity of the forecasts is discussed in view of the THORPEX campaign on atmospheric predictability.