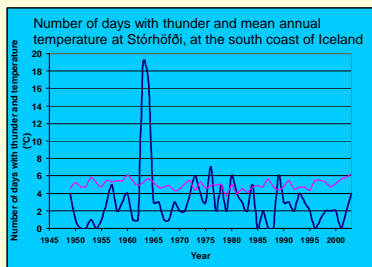
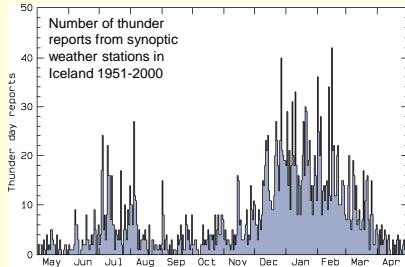


# Climatology of thunder in Iceland

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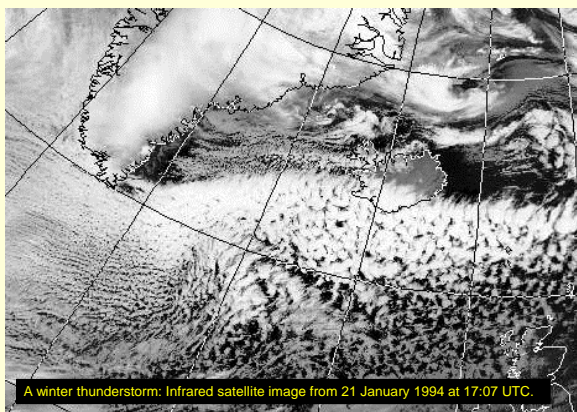
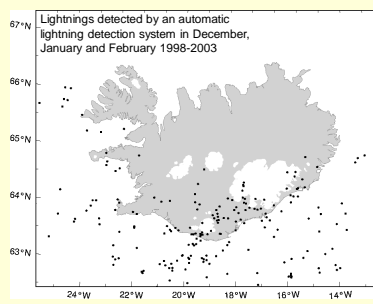
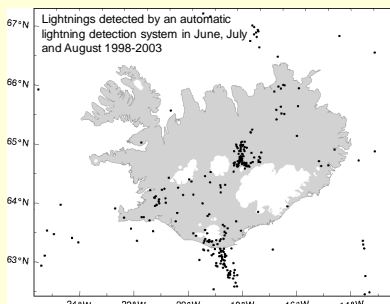
There is large seasonal variability in the frequency of thunder in Iceland. Most thunderstorms occur in mid-winter, but a secondary maximum is in July and August. There are indications that lightnings are more clustered in summer, than in winter and a higher proportion of lightnings are detected in the central and northern part of Iceland in summer than in winter.

The winter thunderstorms are formed in an arctic airmass that has been advected rapidly from N-America over the warm N-Atlantic Ocean, while the summer thunderstorms tend to be associated with a front or a convergence zone extending from Iceland to the southeast or east. The low level airmasses in the summertime thunderstorms have been advected from the southeast, mainly from Britain and continental Europe.

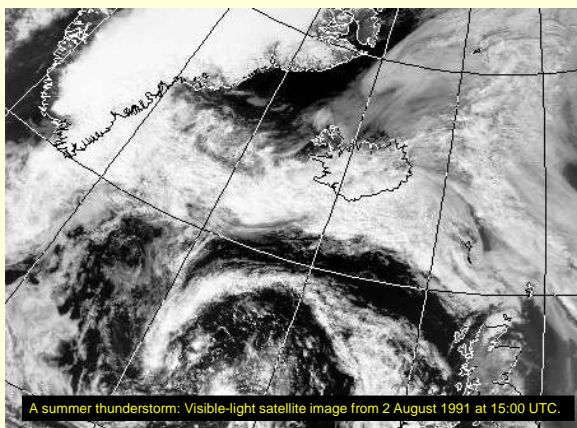
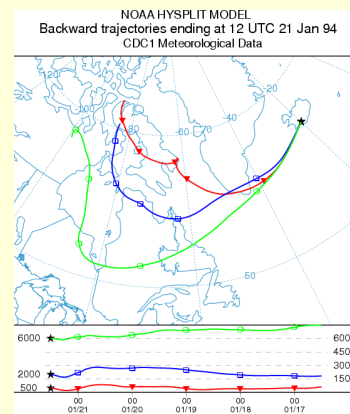
Most of the thunderstorms, including the summer storms in the summer season form in the absence of strong baroclinicity in the lower troposphere.

There is significant interannual variability in the frequency of thunderstorms at the south coast of Iceland, but no sign of a long-term trend.

The trajectories are based on NCEP/NCAR reanalysis data using the HYSPLIT numerical model provided by NOAA/ARL. The satellite images are from NOAA, provided by the Dundee Satellite Station.



A winter thunderstorm: Infrared satellite image from 21 January 1994 at 17:07 UTC.



A summer thunderstorm: Visible-light satellite image from 2 August 1991 at 15:00 UTC.

