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Factors affecting the  $^7\text{Be}$  surface concentration and its extremely high occurrences over the  
Scandinavian Peninsula during autumn and winter

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## Abstract

Relationships between the beryllium-7 activity concentrations in surface air and meteorological  
parameters (temperature, atmospheric pressure, and precipitation), teleconnection indices (Arctic  
Oscillation, North Atlantic Oscillation, and Scandinavian pattern) and number of sunspots are  
investigated using two multivariate statistical techniques: hierarchical cluster and factor analysis.  
The beryllium-7 surface measurements over 1995–2011, at four sampling sites located in the  
Scandinavian Peninsula, are obtained from the Radioactivity Environmental Monitoring Database.

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