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**Meteorological and Biometeorological Conditions in the Norwegian Arctic during
the First (1882/1883) and the Fourth (2007/2008) International Polar Years**

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For the two International Polar Years investigated in this paper (IPY-1, 1881/1882 and IPY-4, 2007/2008) the same sets of meteorological data with hourly resolution have been gathered for stations operating in the Norwegian Arctic. The main aim here has been to compare meteorological and biometeorological conditions occurring in the study periods. Main meteorological variables have been characterised using standard statistical methods. On the other hand, biometeorological conditions have been described using the following indices: wind chill index (WCI), predicted insulation of clothing (Iclp), the cooling power of the air (H) and the Universal Thermal Climate Index (UTCI).

Unfavourable thermal conditions in the Norwegian Arctic are mainly caused by low temperature and its high degree of variability, especially in winter. However, bad biometeorological conditions are also exacerbated by humid and dynamic conditions, which are here, contrary to other Arctic regions, characterised by high values of relative humidity, atmospheric precipitation and wind speed. A comparison of meteorological and biometeorological conditions occurring during the IPY-1 and the IPY-4 shows that human thermal sensations in the former period were significantly worse than in the latter one.

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