

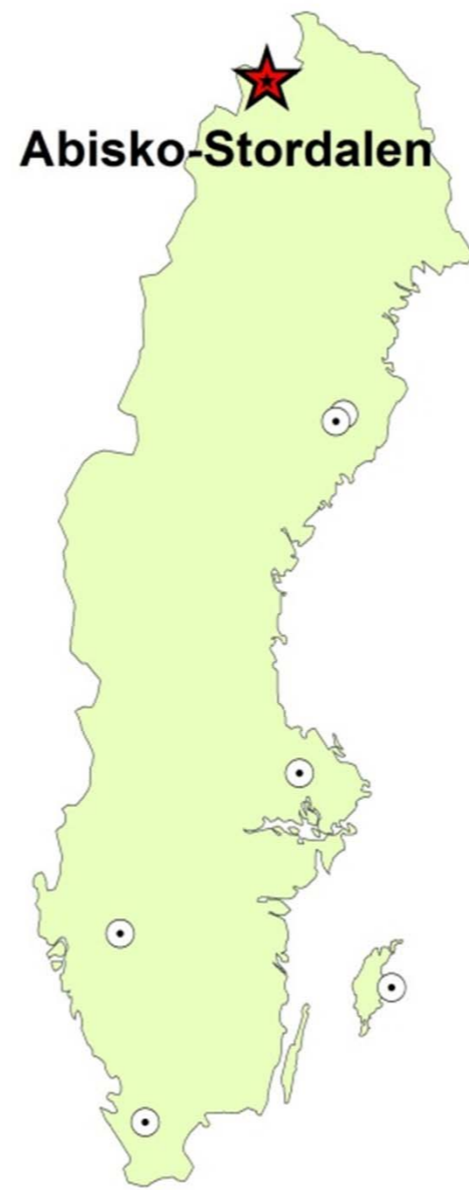
# Stordalen – Abisko subarctic wetland

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**Stordalen– Abisko (68° 21' N, 19° 03' E) is an ecosystem ICOS level 1 station, operated by Swedish Polar research secretariat. The ICOS activities are centered around a 3 m flux tower, located in a mixed mire at 360 m above sea level.**

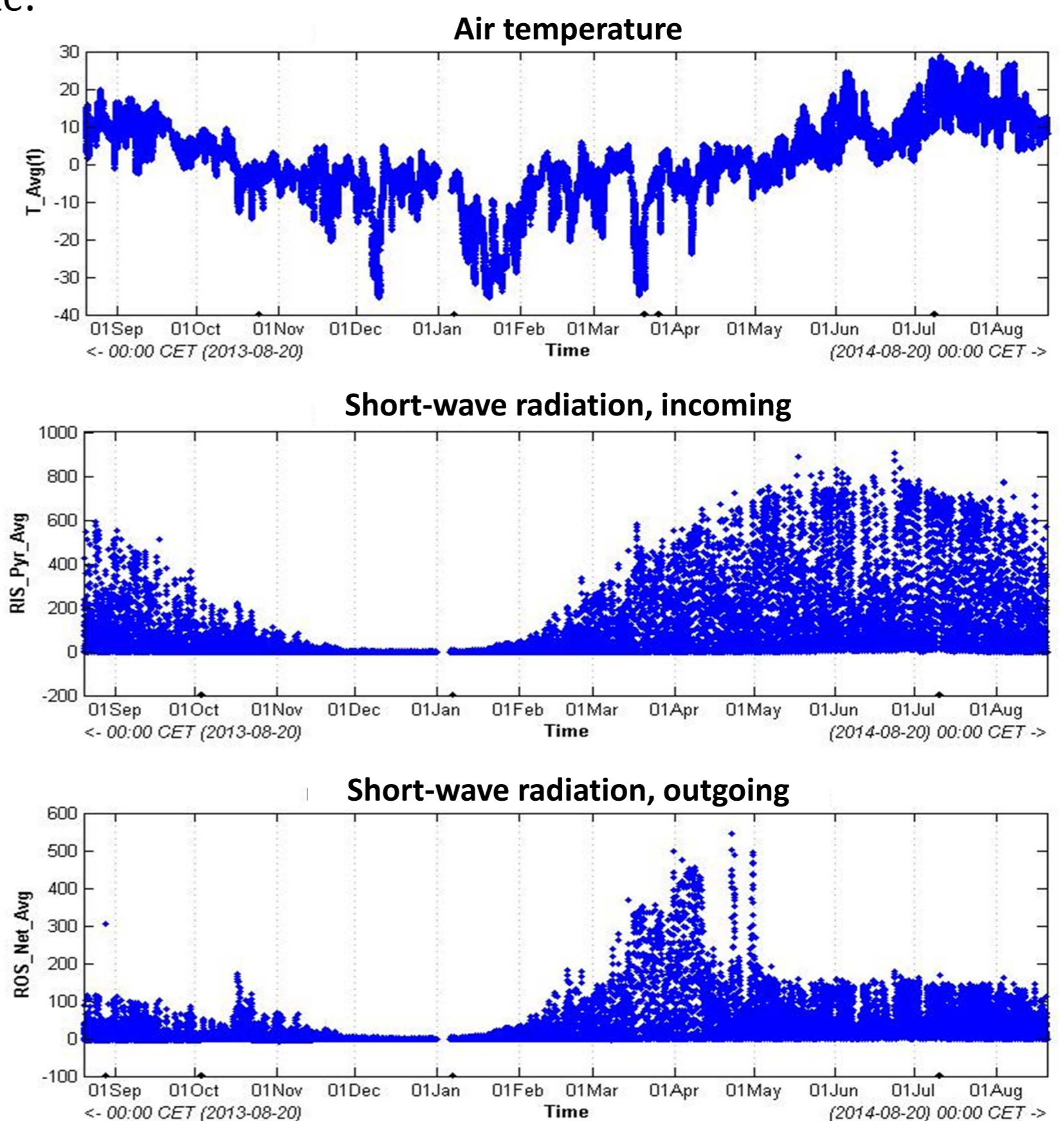
Stordalen mire is mixed mire located in northernmost Sweden. The location is characterized by belonging to the drier regions of the country with annual precipitation of around 325 mm.

The Abisko area is located on the 0 °C isotherm which causes the permafrost in the mire to be of sporadic and of very dynamic nature.

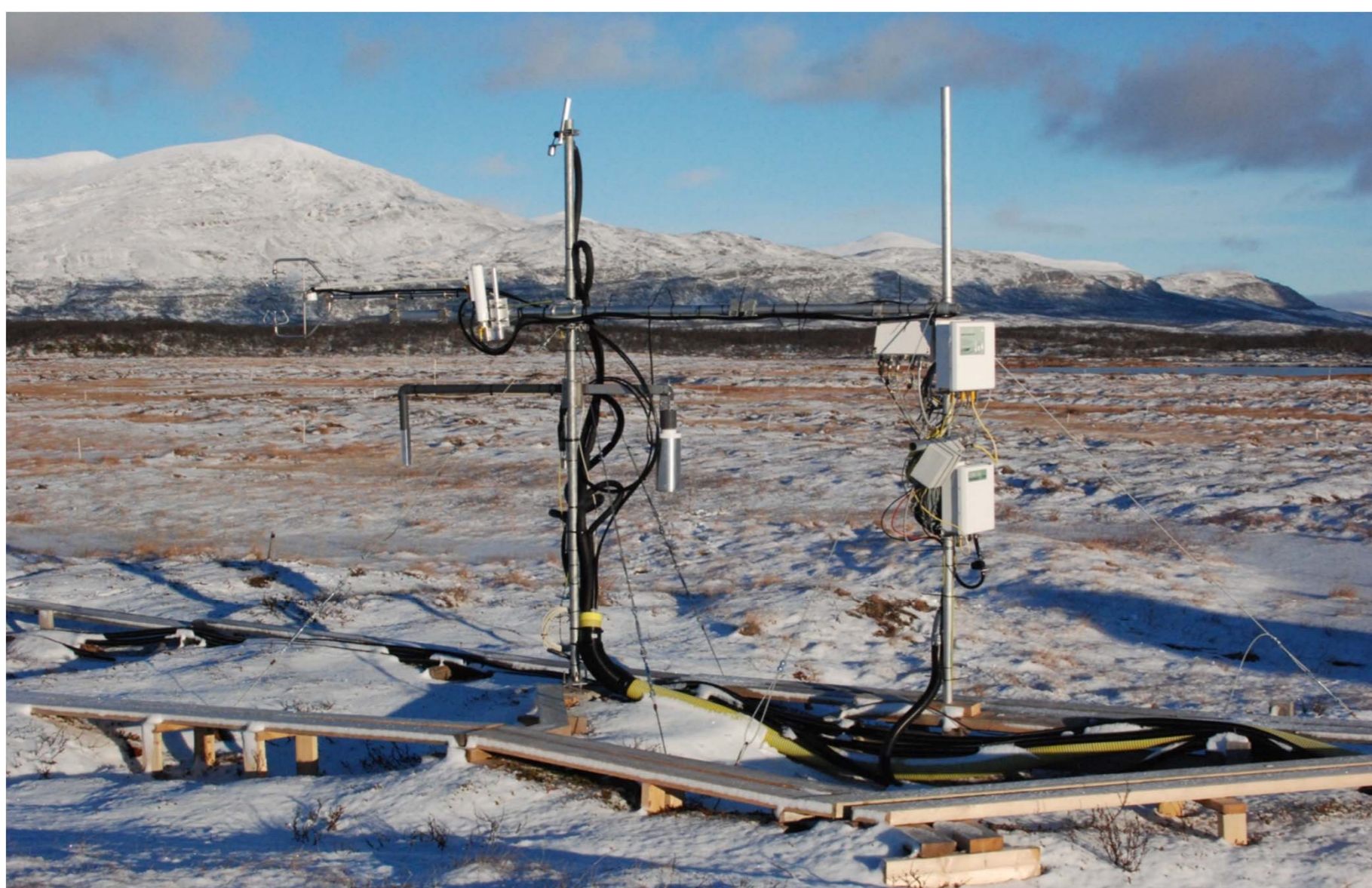


Igloo for instrument housing and board walk infrastructure

Changes in the amount and duration of the snow cover in the area will change the radiation and energy balance of the site.



Air temperature (top) incoming short wave radiation (middle) and outgoing short wave radiation (bottom) September 2013 to August 2014.



Flux tower setup during spring time in Abisko

As a result of recent years warming in the area permafrost has been observed to degrade in many parts of the mires, causing thermokarst activity and with an increase in the relative proportion of the wet habitats.

Due to the location of the site and mean annual temperature around freezing point the stability of both permafrost and carbon stored in the mire is highly dependent on the amount of snow received during winter. During the months from November through April the snow cover acts as an insulation towards the atmosphere and by reflecting a large proportion of the incoming short wave radiation.

Instrumentation in Abisko-Stordalen has been running since spring 2013 with few interruptions and provides data on standard meteorology, vegetation dynamics and relevant gas and heat fluxes. The station follows the protocols for level 1 ICOS stations and ancillary data sampling for wetlands.

The site has a long lasting history of climate and vegetation research going back to The International Biological Program (IBP) of the 1970ties.

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