

Spitsbergen, Zeppelin



Site information

Measurement site:	Spitsbergen, Zeppelin
Country:	Norway
Code:	NO42
Database code:	NO0042R
Geographical coordinates:	78° 54'N, 11° 53'E
EMEP coordinates (50 km):	69.02, 104.35
Altitude above sea level:	474
In operation since:	September 1989
Closest climatological station:	99910 Ny-Ålesund
Main wind direction:	E-S-E
Contact person:	Wenche Aas and Roland Kallenborn
Organisation:	NILU

Surroundings

The site is located in an undisturbed Arctic environment. Zeppelin Mountain is an excellent site for atmospheric monitoring, with minimal contamination from the local settlement due to its location above the inversion layer.

Land use

Gravel and stone 100%

The Zeppelin activities contribute to regional, national and global monitoring networks like:

- EMEP
- Network for detection of stratospheric change ([NDSC](#) under UNEP and WMO)
- Global Atmospheric Watch ([GAW](#) under WMO)
- Arctic Monitoring and Assessment Programme ([AMAP](#))

In addition to atmospheric studies, research on marine and terrestrial ecosystems, glaciers, physical properties of snow and ice, surface energy balance and solar radiation is also carried out in Ny-Ålesund, [Zeppelin homepage](#).

Measurement programme

<i>Components</i>	<i>Time res.</i>	<i>Period</i>
Air		
Ozone	1 h	1990->
SO ₂ , SO ₄ , NH ₃ +NH ₄ , HNO ₃ +NO ₃	24 h	1990->
NO ₂	24 h	1991->
Na, Mg, Ca, K, Cl	24 h	1999->
Hg (g)	2 samples pr week	1995->
Pb, Cd, Cu Zn, Cr Ni, Co, Mn, V and As in air	2 samples pr week	1995->
POP (g)	2 samples pr week	1997->
VOC	2 samples pr week	1990->
Meteorology		
wind speed (FF), gust, wind direction (DD), temperature (TT10), rel. humidity (RH), pressure (ATMP)	1 h	1990->

[Methods for sampling and analysis for Norway in 2001](#)

Measurement data

	<u>Observations</u>	<u>Model results</u>	<u>Monthly means</u>	<u>Annual means</u>	<u>Annual data capture</u>
Acidification/eutrophication	<u>NO42</u>	<u>NO42</u>	<u>NO42</u>	<u>NO42</u>	<u>NO42</u>
Heavy metals air	<u>NO42</u>	-	<u>NO42</u>	<u>NO42</u>	-
POPs air	<u>NO42</u>	-	<u>NO42</u>	<u>NO42</u>	-
Ozone data (obs.)	<u>1990</u> , <u>1991</u> , <u>1992</u> , <u>1993</u> , <u>1994</u> , <u>1995</u> , <u>1996</u> , <u>1997</u> , <u>1998</u> , <u>1999</u> , <u>2000</u> , <u>2001</u>				

More pictures





Last updated: March 2004 by [Anne-Gunn Hjellbrekke](#)