

## **Network for the Detection of Atmospheric Composition Change: Measurements and Analyses Directory**

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This Directory summarizes the operational status of the Network for the Detection of Atmospheric Composition Change (NDACC). Long-term NDACC measurement activities (both active and inactive) are listed in Sections Ia and Ib. Sections IIa and IIb include NDACC measurement activities conducted intermittently or during limited duration campaigns. Some of the locations listed in Section II appear in Section I as well since they are also associated with long-term data sets.

A fundamental aim of the NDACC is to provide high-quality data suitable for scientific studies of the stratosphere and upper troposphere. The NDACC Theory and Analysis Working Group promotes the use of the NDACC data by all interested researchers. All NDACC data over one year old is publicly available. However, many NDACC investigators have agreed to make their data publicly available immediately upon archiving. The public record is available through anonymous ftp at <ftp.cpc.ncep.noaa.gov/ndacc/station>.

The use of NDACC data prior to its being made publicly available (i.e., for field campaigns, satellite validation, etc.) is possible via collaborative arrangement with the appropriate Principal Investigator(s). Rapid delivery data, which will likely be revised before entry in the full database, is also available for some instruments at <ftp://ftp.cpc.ncep.noaa.gov/ndacc/RD>.

In all cases when NDACC data is used in a publication the authors agree to acknowledge both the NDACC data center and the data provider. Whenever substantial use is made of NDACC data in a publication an offer of co-authorship will be made through personal contact with the data providers or owners.

Users of NDACC data are expected to consult the on-line documentation and reference articles to fully understand the scope and limitations of the instruments and resulting data and are encouraged to contact the appropriate NDACC PI (listed in the data documentation on the web page) to ensure the proper use of specific data sets. Those using NDACC data in a talk or paper are asked to acknowledge its use, and to inform the Theory and Analysis Working Group PIs of any relevant publications.

## NDACC Long-Term Measurement Stations

This listing includes all stations for which long-term data sets exist in the NDACC archive. Shading throughout this report indicates those stations or activities that are currently inactive. Numbers in brackets, [], appearing after a station indicate the NDACC Cooperating Network that also makes measurements at the station (see Section III): 1 = AERONET, 2 = AGAGE, 3 = BSRN, 4 = GRUAN, 5 = MPLNET, 6 = NOAA/HATS, 7 = SHADOZ, 8 = TCCON.

<b>NH High Latitude</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Elevation (masl)</b>
Alert, Canada [3, 6]	82.50°N	62.33°W	66
Heiss Island, Russia	80.6°N	58.1°E	10
Eureka, Canada [1, 3, 8]	80.05°N	86.42°W	610/10
Ny Ålesund, Spitsbergen [2, 3, 4, 5, 8]	78.92°N	11.93°E	15
Thule, Greenland	76.53°N	68.74°W	30-220
Dikson Island, Russia	73.50°N	80.23°E	18
Summit, Greenland [3, 6]	72.34°N	38.29°W	3210
Barrow, AK, USA [1, 3, 4, 6]	71.32°N	156.68°W	8
Scoresbysund, Greenland	70.48°N	21.97°W	68
Andøya, Norway [1]	69.28°N	16.01°E	380
Kiruna, Sweden	67.84°N	20.41°E	419
Sodankylä, Finland [1, 4, 8]	67.37°N	26.65°E	179
Søndre Strømfjord, Greenland	66.99°N	50.95°W	180-300
Zhigansk, Russia	66.8°N	123.4°E	50
Salekhard, Russia	66.5°N	66.7°E	137
Yakutsk, Russia [1]	62.0°N	129.7°E	106
Harestua, Norway	60.2°N	10.8°E	596
<b>NH Mid-Latitude</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Elevation (masl)</b>
St. Petersburg, Russia [1]	59.9°N	29.8°E	20
Onsala, Sweden	57.4°N	11.93°E	
Zvenigorod, Russia [1, 3]	55.7°N	36.8°E	200
Bremen, Germany	53.1°N	8.8°E	27
Legionowo, Poland	52.40°N	20.97°E	96
Aberystwyth, United Kingdom	52.4°N	4.1°W	50
Lindenberg, Germany [4]	52.21°N	14.12°E	98
DeBilt, The Netherlands	52.10°N	5.18°E	2
Valentia, Ireland	51.94°N	10.25°W	14
Uccle, Belgium	50.8°N	4.35°E	100
Villeneuve d'Ascq, France	50.61°N	3.14°E	70
Praha, Czech Republic	50.01°N	14.45°E	302
Groß-Enzersdorf, Austria	48.20°N	16.56°E	156
Hohenpeissenberg, Germany	47.80°N	11.02°E	980
Garmisch, Germany [8]	47.48°N	11.06°E	743
Zugspitze, Germany [8]	47.42°N	10.98°E	2964
Hoher Sonnblick, Austria [3]	47.05°N	12.95°E	3106
Bern, Switzerland	46.95°N	7.45°E	550

Zimmerwald, Switzerland	46.88°N	7.47°E	906
Payerne, Switzerland [3, 4]	46.82°N	6.95°E	491
Arosa, Switzerland	46.78°N	9.68°E	1840
Jungfrauoch, Switzerland [2, 3]	46.55°N	7.98°E	3580
Minneapolis, MN, USA	45.14°N	93.21°W	280
Briançon, France	44.90°N	6.65°E	1310
Observatoire de Bordeaux, France [1]	44.83°N	0.52°W	73
Moshiri, Japan	44.4°N	142.3°E	200
Observatoire de Haute Provence, France [1]	43.94°N	5.71°E	650
Toronto, Canada [1]	43.66°N	79.40°W	174
Rikubetsu, Japan [8]	43.46°N	143.77°E	380
Obs. Midi-Pyrénées/Lannemezan, France [1]	43.12°N	0.38°E	610
London, Ontario, Canada	43.1°N	81.34°W	275
Issyk-Kul, Kyrgyz Republic [1]	42.6°N	77.0°E	1650
Rome – Tor Vergata, Italy	41.84°N	12.65°E	107
Laramie, WY, USA	41.32°N	105.67°W	2218
Potenza, Italy [1,4]	40.63°N	15.80°E	730
Boulder, CO, USA [1, 3, 4]	39.99°N	105.26°W	1634
Wallops Island, VA (NASA WFF), USA [1]	37.94°N	75.46°W	13
Seoul, South Korea [1]	37.58°N	127.00°E	116
Tsukuba, Japan [8]	36.05°N	140.13°E	31
Kiso, Japan	35.8°N	137.6°E	1130
Huntsville, AL, USA [1]	34.73°N	86.64°W	223
Table Mountain Facility, CA, USA [1]	34.4°N	117.7°W	2300
Kitt Peak, AZ, USA	31.9°N	111.6°W	2120

<b>NH Subtropics and Tropics</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Elevation (masl)</b>
Izaña, Tenerife, Spain [1, 3, 5, 8]	28.30°N	16.48°W	2367
Mauna Kea, HI, USA	19.83°N	155.48°W	4204
Hilo, HI, USA [7]	19.72°N	155.07°W	11
Mauna Loa, HI, USA [1, 6]	19.54°N	155.58°W	3397
Altzomoni, Mexico	19.12°N	98.66°W	3985
San Jose, Costa Rica	9.59°N	84.12°W	921
Paramaribo, Suriname [1, 7]	5.75°N	55.2°W	23
Tarawa, Kiribati Republic	1.4°N	172.9°E	0

<b>SH Subtropics and Tropics</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Elevation (masl)</b>
Natal, Brazil [7]	5.83°S	35.20°W	32
Ciater/Bandung, Indonesia [1]	6.4°S	107.4°E	826
Cape Matatula, American Samoa [2, 6, 7]	14.25°S	170.56°W	82
Reunion Island, St. Denis, France [1, 7, 8]	20.9°S	55.5°E	85
Reunion Island, Maito Observatory, France	21.1°S	55.4°E	2155
Bauru, Brazil	22.3°S	49.0°W	640
Alice Springs, Australia [3]	23.80°S	133.87°E	550

<b>SH Mid-Latitude</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Elevation (masl)</b>
Mildura, Australia	34.19°S	142.16°E	127
Wollongong, Australia [8]	34.41°S	150.88°E	30
Lauder, New Zealand [3, 4, 8]	45.04°S	169.68°E	370
Kerguelen Island, France	49.3°S	70.3°E	10
Rio Gallegos, Argentina	51.60°S	69.32°W	650
Macquarie Island, Australia	54.50°S	158.95°E	6
Ushuaia, Argentina [6]	54.82°S	68.32°W	25

<b>SH High Latitude</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Elevation (masl)</b>
Marambio Station, Antarctica (Argentina)	64.23°S	56.63°W	
Palmer, Antarctica (USA) [6]	64.77°S	64.05°W	21
Faraday, Antarctica (Ukraine)	65.25°S	64.27°W	10
Dumont d'Urville, Antarctica (France)	66.67°S	140.01°E	20
Rothera, Antarctica (United Kingdom)	67.57°S	68.13°W	30
Syowa Base, Antarctica (Japan) [3, 5]	69.01°S	39.59°E	21
Neumayer Station, Antarctica (Germany) [3]	70.62°S	8.37°E	42
Concordia Dôme-C, Antarctica (France) [1, 3]	75.10°S	123.35°E	3233
Arrival Heights, Antarctica (New Zealand)	77.83°S	166.67°E	184
McMurdo Station, Antarctica (USA) [1]	77.85°S	166.63°E	10
Scott Base, Antarctica (New Zealand)	77.85°S	166.78°E	22
Belgrano II Station, Antarctica (Spain)	77.87°S	34.62°W	250
South Pole Sta., Antarctica (USA) [1, 3, 5, 6]	90.00°S		2835

## NDACC Intermittent or Campaign Measurement Locations

This listing includes all locations for which intermittent or campaign data sets exist in the NDACC archive. Some of these correspond to stations associated with long-term data sets. Numbers in brackets, [], appearing after a station indicate the NDACC Cooperating Network that also makes measurements at the station (see Section III): 1 = AERONET, 2 = AGAGE, 3 = BSRN, 4 = GRUAN, 5 = MPLNET, 6 = NOAA/HATS, 7 = SHADOZ, 8 = TCCON.

<b>NH High Latitude</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Elevation (masl)</b>
Eureka, Canada [1, 3, 8]	80.05°N	86.42°W	610/10
Ny Ålesund, Spitsbergen [2, 3, 4, 5, 8]	78.92°N	11.93°E	15
Thule, Greenland	76.53°N	68.74°W	30-220
Resolute, Canada	74.7°N	95.0°W	64
Andøya, Norway [1]	69.28°N	16.01°E	380
Esrang, Sweden	67.9°N	21.1°E	341
Sodankylä, Finland [1, 4, 8]	67.37°N	26.65°E	100
Søndre Strømfjord, Greenland	66.99°N	50.95°W	180-300
Salekhard, Russia	66.5°N	66.7°E	419
Fairbanks, AK, USA [5]	64.82°N	147.87°W	135
Arkhangel'sk, Russia	64.6°N	40.5°E	4
Harestua, Norway	60.2°N	10.8°E	596
Lerwick, United Kingdom [3]	60.1°N	1.1°E	84
<b>NH Mid-Latitude</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Elevation (masl)</b>
Aberdeen, United Kingdom	57.15°N	2.15°W	10
Prestwick, Scotland	55.50°N	4.61°W	
Lindenberg, Germany [3, 4]	52.52°N	9.57°E	
Hannover, Germany	52.39°N	9.70°E	
Hohenpeissenberg, Germany	47.80°N	11.02°E	980
Jungfraujoch, Switzerland [2, 3]	46.55°N	7.98°E	3580
Observatoire de Haute Provence, France [1]	43.94°N	5.71°E	650
Greenbelt, MD, USA [1, 5]	38.9°N	76.7°W	50
Mt. Barcroft, CA, USA	37.58°N	118.24°W	3800
Table Mountain Facility, CA, USA [1]	34.4°N	117.7°W	2300
<b>NH Subtropics and Tropics</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Elevation (masl)</b>
Izaña, Tenerife, Spain [1, 3, 5, 8]	28.30°N	16.48°W	2367
Mauna Loa, HI, USA [1, 6]	19.54°N	155.58°W	3397
Paramaribo, Suriname [1, 7]	5.75°N	55.2°W	23
<b>SH Subtropics and Tropics</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Elevation (masl)</b>
Reunion Island, St. Denis, France [1, 7, 8]	20.9°S	55.5°E	10
<b>SH Mid-Latitude</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Elevation (masl)</b>
Lauder, New Zealand [3, 4, 8]	45.04°S	169.68°E	370
Punta Arenas, Chile	53.17°S	70.93°W	



<b>SH High Latitude</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Elevation (masl)</b>
McMurdo Station, Antarctica (USA) [1]	77.85°S	166.63°E	10
South Pole Sta., Antarctica (USA) [1, 3, 5, 6]	90.00°S		2835

**Ship-Based Measurements**

Polarstern, Germany  
 Sonne, Germany

NH - SH Atlantic  
 Pacific (NH – SH midlatitudes)