Photo: National Antarctic Scientific Center of Ukraine

Vernadsky

National Antarctic Scientific Center of Ukraine

65°14′74.5″S 64°15′44.9″W

Type: Station

Operational period: Year-round

Location

Vernadsky station is located at Marina Point Galindez Island, Argentine Islands Archipelago, Kiev Peninsula, Antarctic Peninsula. The Antarctic Specially Protected Area (ASPA) 108 "Green Island, Berthelot Islands, Antarctic Peninsula" is situated 9 km to the South from Vernadsky. CEP Visitor Site Guidelines for nearest islands: Winter I., Petermann I., Pleneau I., Booth I., Yalour I. The station is located in the vicinity to relict Galindez Island Ice Cap (Woosle Hill), 51 m height.

Biodiversity and natural environment

Fauna: The following species are regularly sighted on the Island: Adélie penguins (Pygoscelis adeliae), Gentoo penguins (Pygoscelis papua), Blue-eyed shags (Phalacrocorax atriceps), Wilson's storm-petrels (Oceanites oceanicus), South polar skuas (Catharacta maccormicki), Kelp gulls (Larus dominicanus) Weddell seals (Leptonychotes weddellii). Flora: Rhizocarpon sp. and Usnea Antarctica lichens are present on the island. The moss Polytrichum strictum is also found.

CLIMATE	
Climate zone	Maritime Antarctica
Permafrost	Continuous
Mean annual wind speed (km/h)	15.4
Max wind speed (km/h)	144
Dominant wind direction	N
Sea Ice Break Up	December
Snow free period	February, March
Total annual precipitation (mm)	530
Precipitation type	Snow and Rain
Mean annual temperature (°C)	3.8
Mean temperature in February (°C)	0.6
Mean temperature in July (°C)	-8.7
ENVIRONMENT	
Region	Antarctic Peninsula
Antarctic Environmental Domain: G – Antarctic Peninsula offshore island geologic	
Antarctic Conservation Biogeographic Region: 3 North-west Antarctic Peninsula	
Altitude of facility (m)	7
Type of surface facility built on	Ice-free ground
Long term monitoring	Yes
Waste management	Yes
Hazard(ous) management	Yes
Fuel spill response capability	Yes

Photo: National Antarctic Scientific Center of Ukraine

FACILITIES INFRASTRUCTURE	
Area under roof (m^2)	1150
Area scientific laboratories (m^2)	180
Type of scientific laboratories: Balloon shed, Biology, Fluxgate, Geophysics, Scientific diving, Variometer	
Conference room (capacity)	
Logistic area (m^2)	385
Number of beds	24
Showers	Yes
Laundry facilities	Yes
Power supply type	Fossil fuel
Power supply (V)	220
Power supply (hours per day)	24
Hydroponics facilities	No
Number of staff on station (peak/summer season)	10
Number of scientists on station (peak/summer season)	20
Number of staff on station (off peak/winter season)	5
Number of scientists on station (off peak/winter season)	7
Max number of personnel at a time (staff, scientists and others)	24
Specific device/Scientific equipment: Meteorological equipment and recording devices (mobile meteorological complex), marine and hydro-meteorological equipment (mechanical and automatic mareographs, oximeter, bathometer, bottom sampler, manual coring winch), biological equipment	
Scientific services possible: Meteorological parameters, sea level measuration, sea water saltiness, oxygen content in sea water, deep water sampling and temperature measuring, bottom deposits sampling, measuring of absolute values of magnetic field and baselines values.	
Long-term monitoring/observations: Meteorology, oceanography, geomagnetic monitoring, lonosphere radiosounding, total ozone measurement in the atmosphere	

MEDICAL FACILITIES	Yes
Area of medical facility (m^2)	26
Staff with basic medical training or doctor (Summer)	1
Staff with basic medical training or doctor (Winter)	1
Capability: Basic, Dental, Surgery	
Equipment: Anaesthesia, Biochemistry, Blood transfusion medicine, Diagnostic X-ray, Haematology, Laboratory diagnostics, Electrocardiograph, Electroencephalograph, Reflotron (biochemical laboratory)	
Distance to hospital (km)	
Closest emergency facility in Antarctica (km)	53.5
Closest emergency facility external (km)	
Medical research capabilities	Yes
Medical screening requirements	Yes
VEHICLES AT FACILITY	
Sea transportation: Three plastic boats and six inflatable boats	
Land transportation: Skidoos	
WORKSHOP FACILITIES	
ICTS, Metal workshop, Wood workshop	
COMMUNICATIONS	
E-mail, Satellite phone, VHF	
TRANSPORT AND FREIGHT	
Access	Sea
Transport to facility: Ship	
Number of airstrips	0
Length (m) of longest runway	
Width (m) of longest runway	
Number of flight visits per year	0
Period of flight visits per year:	
Helipad	No
Number of ship visits per year	40
Period of ship visits per year: January, February, March, December	
Ship landing facilities: Pier/Jetty	

History and facilities

In 1995 the British Faraday station was transferred to Ukraine under the Memorandum of Understanding between the British Antarctic Survey and the State Institution National Antarctic Scientific Center of Ukraine (July 20, 1995). February 6, 1996 the Ukrainian State Flag was raised and the station was renamed to Vernadsky.

General research and databases

Monitoring of environmental parameters in the Antarctic region, at all levels of geosphere – from tectonosphere to geospace – and their transfer to the national and international centers of scientific data (WMO, INTERMAGNET, MAGATE, BAS), including: research of the Earth magnetic field, radio sounding of the ionosphere in the Southern Polar region, hydro-meteorological research, geophysical research of the Earth lithosphere, research of the West Antarctic biosphere, medical and physiological research.

Features in the facility area

Bird colonies, Coast, Crevasse, Ice cap or glacier, Moraine, Other Biological, Sea, Sea ice, Seal colonies, Shoreline, Snow.

Main science disciplines

Climatology, Geology, Geophysics, GIS, Marine biology, Medicine, Microbiology, Oceanography, Terrestrial biology.

Photo: Pishniak