

南極条約第7条5に基づく事前通告のための電子情報交換システム(EIES)について
(第134回南極地域観測統合推進本部総会 配布資料)

外務省地球環境課

1. 背景

- (1) 南極条約第7条5は、各締約国に以下の活動についての通報を求めている。
「各締約国は、この条約がその国について効力を生じた時に、他の締約国に対し、次のことについて
通報し、その後は、事前に通告を行う。
(a) 自国の船舶又は国民が参加する南極地域向けの又は同地域にあるすべての探検隊及び自国の
領域内で組織され、又は同領域から出発するすべての探検隊
(b) 自国の国民が占拠する南極地域におけるすべての基地
(c) 第1条2に定める条件に従って南極地域に送り込むための軍の要員又は備品」
(参考: 第1条2=この条約は、科学的研究のため又はその他の平和的目的のために、軍の要員又
は備品の使用を妨げるものではない。)
- (2) これに基づき、南極条約協議国会議(ATCM)は2001年に「決議6」を採択し、事前に
通報・通告すべき事項をとりまとめた。
- (3) その後、通報のための共通フォーマットが「電子情報交換システム(Electronic
Information Exchange System: EIES) としてATCMで2008年に合意された。各締約
国がフォーマットに必要事項を入力、承認することで通報内容が公開されるというも
の。

2. 今回提出する資料

- (1) 事前報告(Pre-season Information)=2009年~2010年に行う活動の事前の通告
 - 1.1.1 2009/10年の使用予定基地(昭和基地、ドームふじ基地)、観測船(しらせ)、観測用
航空機、観測用ロケットの使用機器と発着場所を明記
 - 1.1.2 非政府活動はなし
- (2) 年次報告(Annual Report)=2008年3月~2009年4月に行った活動の事後報告
 - 2.1 実施及び実施予定研究・観測を表1, 2にて提出
 - 2.2, 2.3 使用基地、観測船(豪)、採取した植物等につき報告
 - 2.4 議定書の実施促進のためにとった措置(環境保護法施行規則の改正)、環境影響評価の
実施、廃棄物処理の実施につき報告
- (3) 常設報告(Permanent Information)=恒久的に設置されている設備などの報告
 - 3-1.3-2, 常設基地、観測ポイントにつき報告
 - 3-3.3-4, 廃棄物管理計画、燃料漏れ防止計画につき報告
 - 3-6 関連国内法(南極環境保護法)につき報告

(了)

RESOLUTION 6 (2001)**The Representatives,**

Recalling Article III (1)a and Article VII(5) of the Antarctic Treaty;

Conscious of the obligations within the Protocol on Environmental Protection to the Antarctic Treaty and its Annexes to exchange information;

Conscious also of Recommendation VIII-6 and other commitments that the Parties have made with respect to keeping each other informed by regular or occasional exchanges;

Welcoming the decision taken at this meeting relating to the establishment of the Antarctic Treaty Secretariat in Buenos Aires; and

Desiring to ensure that the exchange of information between the Parties is conducted in the most efficient and timely way;

Recommend that Parties:

1. exchange information in accordance with Attachment 4 of the ATCM XXIV Final Report;
2. provide this information to a central information exchange web site to be hosted by Argentina or provide that site with relevant links to where this information can be found; and
3. as a general principle, make that information publicly available.

Appendix 4 of the XXIV ATCM Final Report

INFORMATION EXCHANGE REQUIREMENTS

1. Pre-season Information

The following information should be submitted as early as possible, preferably by 1 October, and in any event no later than the start of the activities being reported.

1.1 Operational information

1.1.1 National Expeditions

A. Stations

Names of wintering stations (giving region, latitude and longitude), maximum population and medical support available.

Names of summer stations/bases and field camps (giving region, latitude, longitude), operating period, maximum population and medical support available.

Names of refuges (region, latitude and longitude) medical facilities and accommodation capacity.

Other major field activities, e.g. scientific traverse (giving locations)

B. Vessels

Name of vessels, country of registry of vessels, number of voyages, planned departure dates, areas of operation, ports of departure and arrival to and from Antarctica, and purpose of voyage (e.g. science deployment, resupply, change-over, oceanography, etc)

C. Aircraft

Type of aircraft, planned number of flights, period of flights or planned departure dates, routes and purpose.

D. Research Rockets

Coordinates of the place of launching, time and date/period, direction of launching, planned maximum altitude, impact area, type and specifications of rockets, purpose and title of research project.

E. Military

- Number of military personnel in expeditions, and rank of any officers
- Number and types of armaments possessed by personnel.
- Number and types of armaments of ships and aircraft and information on military equipment, if any, and its location in the Antarctic Treaty Area.

1.1.2 Non-governmental Expeditions

A. Ship-based Operations

Name of operator, name of vessel, country of registry of vessel, number of voyages, planned departure dates, ports of departure and arrival to and from Antarctica, areas of operation including the names of proposed landing sites and the planned dates at which these landings will take place.

B. Land-based Operations

Name of expedition, method of transportation to, from and within Antarctica, type of adventure/activity, location, dates of expedition, number of personnel involved, contact address, web-site address.

1.2 Visits to Protected Areas

Name and number of protected area, number of people permitted to visit, date/period and purpose.

2. Annual Report

The following information should be submitted as early as possible after the end of the austral summer season, but in all cases before 1 October, with a reporting period of 30 March to 1 April.

2.1 Scientific Information

2.1.1 Forward Plans

Details of strategic or multi-year science plans or contact point for printed version.

List of planned participations in major, international, collaborative science programs/projects.

2.1.2 Science Activities in Previous Year

List of research projects undertaken in previous year under science discipline (giving location and principal investigator).

2.2 Operational information

2.2.1 National expeditions

Update of information given under 1.1.1.

2.2.2 Non-governmental expeditions

Update of information given under 1.1.2.

2.3 Permit Information

2.3.1 Visits to Protected Areas

Update of information provided under 1.2.

2.3.2 Taking and harmful interference with flora and fauna

Species, location, amount, sex, age and purpose.

2.3.3 Introduction of non-native species

Species, location, amount and purpose.

2.4 Environmental Information

2.4.1 Compliance with the Protocol

New measures adopted during past year in accordance with Article 13 of the Protocol on Environmental Protection to the Antarctic Treaty giving description of measure, date of effect.

2.4.2 List of IEEs and CEEs

List of IEEs/CEEs undertaken during year giving proposed activity, location, level of assessment and decision taken.

2.4.3 Monitoring activities report

Name of activity, location, procedures put in place, significant information obtained, action taken in consequence thereof.

2.4.4 Waste Management Plans

Waste management plans issued during the year giving title including name of station/vessel/location.

Report on implementation of waste management plans during the year.

2.5 Relevant National Legislation

Legislation adopted during the year to give effect to the Antarctic Treaty and to obligations arising from measures, decisions and resolutions of the Antarctic Treaty Consultative Meeting, giving description of measure and date of effect.

2.6 Other information

2.6.1 Inspection Reports

Report of any inspections conducted under Antarctic Treaty Article VII and Article 14 and Article 10 (Annex V) of the Environmental Protocol during the year giving date of inspection, person(s) conducting inspection, nationality of inspector(s), locations inspected, where inspection report located.

2.6.2 Notice of Activities Undertaken in Case of Emergencies

Description of emergency, location (latitude and longitude) and action undertaken.

3. Permanent Information

The following information should be submitted in accordance with the requirements of the Antarctic Treaty and Protocol on Environmental Protection to the Antarctic Treaty. The information can be updated at any time.

3.1. Science Facilities

3.1.1 Automatic Recording Stations/Observatories

Site name, co-ordinates (latitude and longitude), elevation (m), parameters recorded, observation frequency, reference number (e.g. WMO no.).

3.2 Operational Information

A. Stations

Name of wintering stations (giving region, latitude and longitude, and maximum population), date established and accommodation and medical facilities.

Name of summer stations/bases and field camps (giving region, latitude, longitude, operating period and maximum population)

Names of refuges (region, latitude and longitude) medical facilities and accommodation capacity.

B. Vessels

Name of vessels, Flag State, ice strength, length, beam and gross tonnage (a link may be provided to COMNAP data).

C. Aircraft

Number and type of aircraft operated.

D. Aircraft landing facilities

E. Communications facilities and frequencies

3.3 Waste Management Plans

Title of Plan, copy (PDF) or contact point for printed version and brief report on implementation.

3.4 Contingency Plans

Title of Contingency Plan(s) for Oil Spills and other emergencies, copies (PDFs) or contact point for printed versions. Brief report on implementation.

3.5 Inventory of Past Activities

Name of station/base/field camp/traverse/crashed aircraft/etc, co-ordinates (latitude and longitude) period during which activity undertaken; description/purpose of activities undertaken; description of equipment or facilities remaining.

3.6 Relevant National Legislation

Description of law, regulation, administrative action or other measure, date of effect/enacted, giving copy (PDF) or contact point for printed version.

Annual Report (2008 / 2009)

2.1 Scientific Information

2.1.1 Forward Plans

See Table 1

2.1.2 Science Activities in Previous Year

See Table 2

2.2 Operational Information

2.2.1 National Expeditions

A. Stations

Name: Syowa

Type: winter

Location:

Site Name: Syowa

Latitude: 69°00'22"S

Longitude: 39°35'24"E

Maximum Population: 130

Medical Facilities: Minimum required surgical operation facilities and dental emergency facilities are equipped. Two medical doctors stay at the station.

Description / Remarks:

Location: Higashi -Ongul To, Lützow –Holmbukta

Elevation: 29.18m

Established: January 29, 1957

Major / Field Activities: Geological survey in the Sør Rondane Mountains

B. Vessels

Name: RSV Aurora Australis

Country of Registry: Australia

Number of Voyages: 1

Departure date: December 30, 2008

Arrival Date: February 20, 2009

Port of Departure: Fremantle, Australia

Port of Arrival: Hobart, Australia

Areas of operation: Lützow-Holmbukta and Kronprins Olav Kyst areas

Purpose: The transportation of cargos and personnel / The support of oceanographic researches

C. Aircraft

Type: Ilyushin-76TD (DROMLAN)

Flight:

Departure Date: November 21, 2008

Route: Cape Town – Novolazarevskaya Station

Flight:

Departure Date: February 11, 2009

Route: Novolazarevskaya Station –Cape Town

Type: BT-67 (DROMLAN)

Flight:

Departure Date: November 22, 2008

Route: Novolazarevskaya Station - Utstainen - Novolazarevskaya Station

Flight:

Departure Date: November 23, 2008

Route: Novolazarevskaya Station - Utstainen - Novolazarevskaya Station

Flight:

Departure Date: February 10, 2009

Route: Novolazarevskaya Station - Utstainen - Novolazarevskaya Station

Type: S76 x 2 / AS350B2 x 1 (Australia)

Period of Flights:

Date From: January 13, 2009

Date To: February 2, 2009

General Task / Remarks: Route: Syowa Station - Lützow -Holmbukta and its vicinity

Number of Flights: Frequent

D. Research Rockets

Location Launch:

Site Name: Syowa

Latitude: 69°00'22"S

Longitude: 39°35'24"E

Date: daily, throughout the year

Direction: All directions

Max. Altitude: 30,000 m

Impact Area: about a radius of 200-300km from the Site

Type: Balloon

Specification: Rawinsonde

Purpose: for Upper-air synoptic measurement

Project Title / Number: Weather observations

Location Launch:

Site Name: Syowa

Latitude: 69°00'22"S

Longitude: 39°35'24"E

Date: 1 to 2 times a week, throughout the year

Direction: All directions

Max. Altitude: 30,000 m

Impact Area: about a radius of 200-300km from the Site

Type: Balloon

Specification: RS-KC02G Type Ozone sonde

Purpose: Ozone measurement

Project Title / Number: Weather observations

E. Military

None

2.2.2 Non-governmental Expeditions

None

2.3 Permit Information

2.3.1 Area Protection and Management

Report of Permits, visits, and activities

No Permit was issued in the past year

Change or Damages to ASMA, ASPA or HSM

None

Measures taken to implement the provisions of Annex V

None

2.3.2/2.3.3 Conservation of Antarctic Flora and Fauna

Species: algae

Location: Syowa Station (69°00'S, 39°35'E)

Amount: 4kg (including weight of wet soil attached to algae)

Purpose: Medical and health researches

Action: taken

Project: 50th Japanese Antarctic Research Expeditions

2.4 Environmental Information

2.4.1 Compliance with the Protocol (*Notification of measures adopted during the past year*)

Measure Title:

Revision of the Ministerial Ordinance of “*the Law relating to Protection of the Environment in Antarctica.*”

Measure Description:

The Government of Japan worked to implement the Measures, new and revised management plans for ASPAs adopted at the 31st Antarctic Treaty Consultative Meeting (ATCM) held in Ukraine, through revision of the Ministerial Ordinance of “*the Law relating to Protection of the Environment in Antarctica.*”

Date of Effect:

September 11, 2008

Contingency Plans

No new plans were made or implementation action taken during this reporting period.

2.4.2 Environment Impact Assessment –List of IEEs and CEEs

Type: IEE

Activity: Construction works

Year: 2008

Title: 50th Japanese Antarctic Research Expeditions

Location: Syowa Station (69°00'S, 39°35'E)

Organization responsible: The Ministry of Education, Culture, Sports, Science and Technology Japanese Antarctic Research Expeditions, Japan

Decision: Proceed (No more than a minor or transitory impact)

2.4.3 Environment Impact Assessment –Monitoring Activities

None

2.4.4 Waste Disposal and Waste Management-Waste Management Plans

Title: Waste Management Guide

Fixed Site / Field Camp / Ship: Station and Field

Implementation Report: Disposal of wastes in the stations and fields is implemented in accordance with Annex III of the Protocol on Environmental Protection to the Antarctic Treaty and the relevant national legislation. Sewage and gray water from summer

accommodation are treated by non-biological method (Coagulation-Sedimentation Method), and Sewage and gray water from winter accommodation are treated by contact aeration process and the treated water is discharged into the sea. All the wastes are sorted and treated properly. Combustible wastes are disposed of by a two-stage incinerator. The ash is taken back to Japan. Wet food waste is treated by a dehydrating instrument. The residue is directly taken back to Japan or incinerated and its ash is also taken back to Japan. The other waste is taken back to Japan.

Contact Point:

Name: Kenji

Surname: Ishizawa

Job Title or Position: Head of logistics section, National Institute of Polar Research

Phone: +81-42-512-0779

Email: ishizawa@nipr.ac.jp

Inventory of Past Activities

Activity Type: Scientific observation, Logistics

Location:

Site name: Mizuho

Latitude: 70°41'53"S

Longitude: 44°19'54"E

Description of Activity: It was established on July 21, 1970 and had been occupied until 1986. It is now temporarily closed.

Remaining Equipment or Facilities: Five huts including diesel generators, communication antennas and an observation tower.

Activity Type: Scientific observation

Location:

Site name: Asuka

Latitude: 71°31'34"S

Longitude: 24°08'17"E

Description of Activity: It was established on March 26, 1985 and had been occupied to 1991. It is now temporarily closed.

Remaining Equipment or Facilities: Five huts including diesel generators, communication antennas and a small wind turbine.

Prevention of marine pollution

In Japan, *the Law relating to Protection of the Environment in Antarctica (Antarctic Environment Law)* entered into force on 14th January 1998, on the same day when the Protocol itself entered into force.

Since then, Japan has worked for the full implementation of the Protocol through the *Antarctic Environment Law*. According to *the Antarctic Environment Law*, in principle, no person shall engage in any activity in Antarctica other than Antarctic Activity Plan that has been certified by the Minister of the Environment, Japan.

No person shall burn, bury, discharge abandon, or otherwise dispose of waste in Antarctica, including marine areas, except by the methods stipulated in *the Antarctic Environment Law*.

2.5 Relevant National Legislation

None

2.6 Other Information

2.6.1 Inspection Reports

None

2.6.2 Activities Undertaken in Case of Emergencies

None

Table 2. Scientific information – Science Activities in Previous Year

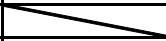
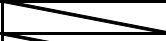
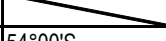
Project name	Main Activity / Remarks	Site Name	Latitude, Longitude	Discipline	PI	URL
Research Project						
Prioritized Research Project						
Study on coupling processes between polar upper atmosphere and lower atmosphere	Meso-pause temperature measurement by OH airglow	Syowa Station	69°00'22"S 39°35'24"E	Space and upper atmospheric sciences	Natsuo Sato, National Institute of Polar Research	
	MF radar observation of lower-thermosphere and mesosphere wind					
	Atmospheric electric field observation by field-mill					
	All-sky TV camera observation of rapid auroral motion					
	Super DARN HF radar observation					
	Unmanned magnetometer observation with near real-time data transfer	Skallen	69°40' 21"S 39°24'07"E			
		H57	69°09'38"S 40°58'52"E			
		Mt. Riiser-Larsen	66°47'44"S 50°34'38"E			
		Utsteinen	71°55'51"S 23°19'31"E			
	Unmanned magnetometer observation with annual data collection	Mizuho	70°42'08"S 44°17'04"E			
		MD364	74°00'37"S 42°59'30"E			
		Dome Fuji	77°19'02"S 39°42'32"E			
	ELF atmospheric observation	Syowa Station	69°00'22"S 39°35'24"E			
Telemetry data reception of "Reimei" satellite						
Stratospheric ozone observation using Fourier Transform Infrared Spectroscopy	Syowa Station	69°00'22"S 39°35'24"E	Meteorology and glaciology			
Study on coupling processes between polar lower atmosphere and ocean	Dynamics of Dimethylsulfide(DMS) in the polar ocean	Umitaka-Maru		Meteorology and glaciology Bioscience	Makoto Wada, National Institute of Polar Research	
	Continuous measurement of atmospheric oxygen/nitrogen ratio	Syowa Station	69°00'22"S 39°35'24"E			
Ordinary Research Project						
Studies on climate processes and ecosystem dynamics in polar regions	Relationship between sea ice variation and biological processes	Umitaka-Maru		Bioscience	Tsuneo Odate, National Institute of Polar Research	
		RSV Aurora Australis				
	Studies on climate processes and foraging dynamics of penguins	Bird Island	54°00'S 38°03'W			

Table 1. Scientific information – Forward Plans

Project name	Details / Description	Contact	URL
Research Project			
Prioritized Research Project			
Study on coupling processes between polar upper atmosphere and lower atmosphere	Meso-pause temperature measurement by OH airglow	Name: Natsuo	
	MF radar observation of lower-thermosphere and mesosphere wind	Surname: Sato	
	Atmospheric electric field observation by field-mill instrument	Job Title or Position: Deputy Director, NIPR	
	All-sky TV camera observation of rapid auroral motion	Phone: +81-42-512-0602	
	All-sky imaging of proton auroras	Email: nsato@nipr.ac.jp	
	Meteor radar observation of lower-thermosphere wind and temperature		
	Super DARN HF radar observation		
	Unmanned magnetometer observation with near real-time data transfer		
	Unmanned magnetometer observation with annual data collection		
	ELF atmospheric observation		
	Telemetry data reception of "Reimei" satellite		
Aerosol observation			
Study on coupling processes between polar lower atmosphere and ocean	Dynamics of Dimethylsulfide(DMS) in the polar ocean	Name: Makoto	
	Continuous measurement of atmospheric oxygen/nitrogen ratio	Surname: Wada Job Title or Position: Professor, NIPR Phone: +81-42-512-0682 Email: wada@nipr.ac.jp	
Ordinary Research Project			
Studies on systems for climate change and ice sheet change, by introducing new observational methods and technologies	Oversnow traverse to Dome Fuji Station	Name: Shuji Surname: Fujita Job Title or Position: Associate Professor, NIPR Phone: +81-42-512-0679 Email: sfujita@nipr.ac.jp	
Reconstruction of Cenozoic Antarctic ice sheet and southern ocean history and investigation into the cause of the global environmental change	Reconstruction of Cenozoic Antarctic ice sheet history and weathering environments around the inland Sør-Rondane mountains	Name: Hideki Surname: Miura Job Title or Position: Research Associate, NIPR Phone: +81-42-512-0703 Email: miura@nipr.ac.jp	

Table 1. Scientific information – Forward Plans

Project name	Details / Description	Contact	URL
Studies on climate processes and ecosystem dynamics in polar regions	Ecological studies on Antarctic terrestrial & lake environments	Name: Tsuneo Surname: Odate Job Title or Position: Professor, NIPR Phone: +81-42-512-0738 Email: odate@nipr.ac.jp	
Study of formation and evolution of terrestrial planet	Meteorite search around the Sør Rondane Mountains	Name: Hideyasu Surname: Kojima Job Title or Position: Professor, NIPR Phone: +81-42-512-0708 Email: kojima@nipr.ac.jp	
Evolution and dispersion of supercontinents and mantle processes	Broadband seismic deployment on Antarctic continent at IPY - Antarctic Arrays	Name: Yoichi Surname: Motoyoshi Job Title or Position: Deputy Director, NIPR Phone: +81-42-512-0604 Email: motoyosi@nipr.ac.jp	
	Geological survey in the Sør Rondane Mountains		
Human Biology and Medicine under the Polar Environments	Psychological studies of JARE over-wintering personnel with tests	Name: Kentaro Surname: Watanabe Job Title or Position: Professor, NIPR Phone: +81-42-512-0646 Email: kentaro@nipr.ac.jp	
	Survey for Legionella in Syowa Station area		
	Study on health and diet for expedition personnel		
	Physiological study on responses of expedition personnel in high altitude		
	Collaborative study with space medicine in Antarctica		
Exploratory Research Project			
Program of the Antarctic Syowa MST/IS Radar	Feasibility study of the MST/IS radar such as field survey and prototype antenna test	Name: Masaki Surname: Tsutsumi Job Title or Position: Associate Professor, NIPR Phone: +81-42-512-0658 Email: tutumi@nipr.ac.jp	http://pansy.nipr.ac.jp/index-e.html
Biodiversity under extreme environment and genetic characteristics	Diversity and genetic analysis for microorganisms in snow and ice of inland area	Name: Hiroshi Surname: Kanda Job Title or Position: Professor, NIPR Phone: +81-42-512-0644 Email: kanda@nipr.ac.jp	
	Diversity and genetic analysis for plants and animals in the ice-free area		
	Sampling of ice-cores near the ice-free area		
	Sampling of lake water, benthic plants and sediment on the lake bottom		

Table 1. Scientific information – Forward Plans

Project name	Details / Description	Contact	URL
Monitoring Observation			
Long-term monitoring of the upper atmosphere phenomena	All-sky monochromatic imaging of auroras	Name: Hisao	
	Meridian-scan photometer observation of auroral luminosity	Surname: Yamagishi	
	Absolute value measurement of geomagnetic field	Job Title or Position: Professor, NIPR	
	Three-component magnetic field variation measurement	Phone: +81-42-512-0657	
	Magnetic pulsation measurement	Email: yamagisi@nipr.ac.jp	
	ELF-VLF emission measurement		
	Broad-beam riometer observation		
	Imaging riometer observation		
Monitoring of climate change in the Antarctic -Observation of the atmosphere, ice sheet and ocean-	Monitoring of sea ice and ocean variations in the Indian Sector of the Southern Ocean	Name: Makoto	
	Monitoring of aerosol and clouds	Surname: Wada	
	Monitoring of atmospheric minor constituents (Greenhouse gases)	Job Title or Position: Professor, NIPR	
	Monitoring of ice sheet change	Phone: +81-42-512-0682 Email: wada@nipr.ac.jp	
Monitoring of change in geosphere	on-ice GPS measurement to validate height change	Name: Kazuo	
	Broadband and short-period seismic observations in the FDSN	Surname: Shibuya	
	Installation of corner reflector for ALOS/PALSAR	Job Title or Position: Professor, NIPR	
	Monitoring of ground temperature	Phone: +81-42-512-0705	
	Maintenance of IGS-GPS and IDS-DORIS at Syowa Station	Email: shibuya@nipr.ac.jp	
	Crustal deformation monitoring by GPS observations		
	VLBI observations in the IVS network		
	Observation of sea level change and ocean bottom pressure gauge Superconducting gravimeter observations in the GGP network		
Long-term ecosystem monitoring program	Observation of plankton and sea environmental parameters	Name: Hiroshi	
	Monitoring of the marine top predators	Surname: Kanda	
	Observation of terrestrial and lake ecosystem	Job Title or Position: Professor, NIPR Phone: +81-42-512-0644 Email: kanda@nipr.ac.jp	
Monitoring of environmental changes in polar region by remote sensing satellites	Data acquisition of polar-orbiting NOAA, DMSP, AQUA and TERRA satellites with newly installed L/S/X-band receiving facilities	Name: Hiroshi Surname: Miyaoka Job Title or Position: Associate Professor, NIPR Phone: +81-42-512-0662 Email: miyaoka@nipr.ac.jp	http://polaris.nipr.ac.jp/~dmisp/ http://www.nipr.ac.jp/center/SA_TELLITE/noaa_data_j.html

Table 1. Scientific information – Forward Plans

Project name	Details / Description	Contact	URL
Routine Observation			
Ionospheric observations	Ionospheric vertical sounding	Name: Mamoru Surname: Ishii Job Title or Position: Research Manager, Applied Electromagnetic Research Center, National Institute of Information and Communications Technology Phone: +81-42-327-7540 Email: mishii@nict.go.jp	http://wdc.nict.go.jp/ionog/10c_viewer/o_index.html
	Aurora radar observation		
	Riometer absorption measurement		
Weather observations	Ozone Layer observation	Name: Terumasa Surname: Tashiro Job Title or Position: Head, Office of Antarctic Observations, Observations Department, Japan Meteorological Agency (JMA) Phone: +81-3-3211-8409 Email: antarctic@met.kishou.go.jp	
	Upper-air observation		
	Surface synoptic observation		
	Weather analysis		
	Ozonesonde observation		
	Surface ozone concentration observation		
Solar Radiation observation			
Geodetic observations	Precise Geodetic Survey	Name: Hidekazu Surname: Hoshino Job Title or Position: Deputy Head of International Affairs Office Planning Dept. Geographical Survey Institute Phone: + 81-29-864-6264 Email: antarctic@gsi.go.jp	
	Topographic mapping for using satellite image		
Physical and Chemical oceanographic observations	Bathymetric survey	Name: Arata Surname: Sengoku Job Title or Position: Director, Hydrographic Surveys Division, Hydrographic and Oceanographic Department, Japan Coast Guard Phone: + 81--3-3541-3815 Email: -	

Table 1. Scientific information – Forward Plans

Project name	Details / Description	Contact	URL
Tidal observation	Tidal observation	Name: Satoshi Surname: Sato Job Title or Position: Director, Environmental and Oceanographic Research Division Hydrographic and Oceanographic Department, Japan Coast Guard Phone: + 81--3-3541-3814 Email: -	

Table 2. Scientific information – Science Activities in Previous Year

Project name	Main Activity / Remarks	Site Name	Latitude, Longitude	Discipline	PI	URL
Evolution and dispersion of supercontinents and mantle processes	Broadband seismic deployment on Antarctic continent at IPY - Antarctic Arrays	Rundvågshetta	69°32'35"S 39°01'19"E	Geoscience	Yoichi Motoyoshi, National Institute of Polar Research	
		Botnnuten	70°23'31"S 37°55'23"E			
		S16	69°00'50"S 40°01'19"E			
	Geological survey in the Sør Rondane Mountains	Sør Rondane Mts.				
Human Biology and Medicine under the Polar Environments	Psychological studies of JARE over-wintering personnel with tests	Syowa Station	69°00'22"S 39°35'24"E	Bioscience	Kentaro Watanabe, National Institute of Polar Research	
	Survey for Legionella in Syowa Station area					
	Study on health and diet for expedition personnel					
	Physiological study on responses of expedition personnel in high altitude					
	Study on physiological stresses of expedition personnel by UV radiation					
	Collaborative study with space medicine in Antarctica					
Exploratory Research Project						
Program of the Antarctic Syowa MST/IS Radar		Syowa Station	69°00'22"S 39°35'24"E	Space and upper atmospheric sciences Meteorology and	Masaki Tsutsumi, National Institute of Polar Research	http://pansy.nipr.ac.jp/index-e.html
Monitoring Observation						
Long-term monitoring of the upper atmosphere phenomena	All-sky monochromatic imaging of auroras	Syowa Station	69°00'22"S 39°35'24"E	Space and upper atmospheric sciences	Hisao Yamagishi, National Institute of Polar Research	
	Meridian-scan photometer observation of auroral					
	Absolute value measurement of geomagnetic field					
	Three-component magnetic field variation measurement					
	Magnetic pulsation measurement					
	ELF-VLF emission measurement					
	Broad-beam riometer observation					
Imaging riometer observation						

Table 2. Scientific information – Science Activities in Previous Year

Project name	Main Activity / Remarks	Site Name	Latitude, Longitude	Discipline	PI	URL
Monitoring of climate change in the Antarctic -Observation of the atmosphere, ice sheet and ocean-	Monitoring of aerosol and clouds	Syowa Station	69°00'22"S 39°35'24"E	Meteorology and glaciology	Makoto Wada, National Institute of Polar Research	
	Monitoring of atmospheric minor constituents (Greenhouse gases)	RSV Aurora Australis				
		Syowa Station	69°00'22"S 39°35'24"E			
	Monitoring of ice sheet change	en Route to Mizuho				
Monitoring of change in geosphere	on-ice GPS measurement to validate height change	Syowa Station	69°00'22"S 39°35'24"E	Geoscience	Kazuo Shibuya, National Institute of Polar Research	
		S16	69°01'46"S 40°03'04"E			
		S17	69°01'27"S 40°05'57"E			
		en Route to Mizuho				
		Benten Jima	69°02'27"S 39°15'14"E			
	Broadband and short-period seismic observations in the FDSN network	Syowa Station	69°00'22"S 39°35'24"E			
		Skarvsnes	69°28'01"S 39°36'E			
		Skallen	69°40'01"S 39°25'01"E			
		Tottsuki Misaki	68°55'01"S 39°49'59"E			
		Langhovde	69°15'S 39°43'01"E			
	Installation of corner reflector for ALOS/PALSAR	Syowa Station	69°00'22"S 39°35'24"E			
		Skallen	69°40'12"S 39°24'E			
	Monitoring of ground temperature	Zakuro Ike	69°10'41"S 39°38'49"E			
		O-ike	69°01'19"S 39°38'49"E			

Table 2. Scientific information – Science Activities in Previous Year

Project name	Main Activity / Remarks	Site Name	Latitude, Longitude	Discipline	PI	URL
	Maintenance of IGS-GPS and IDS-DORIS at Syowa Station	Syowa Station	69°00'22"S 39°35'24"E			
	Crustal deformation monitoring by GPS observations	Ongulgalten	69°04'08"S 39°36'40"E			
		Skarvsnes	69°28'12"S 39°36'36"E			
		Skallen	69°40'12"S 39°24'E			
		Langhovde	69°14'24"S 39°42'36"E			
		Tottsuki Misaki	68°54'36"S 39°49'12"E			
		Mukai Iwa	69°01'48"S 39°41'42"E			
		Rundvågshetta	69°54'28"S 39°02'24"E			
		Botnnuten	70°23'33"S 37°55'22"E			
		Padda	69°37'06"S 38°16'34"E			
		Enderby Land 4800	66°47'39"S 50°35'08"E			
		Enderby Land 3604	66°47'40"S 50°35'56"E			
		Enderby Land 3603	66°46'16"S 50°35'21"E			
		GPS reflection survey	Mizuho Station	70°41'53"S 44°19'54"E		
	Skjegget		69°26'S 39°37'E			
	VLBI observations in the IVS network	Syowa Station	69°00'22"S 39°35'24"E			
	Observation of sea level change and ocean bottom pressure gauge	RSV Aurora Australis				
		Syowa Station	69°00'22"S 39°35'24"E			
	Superconducting gravimeter observations in the GGP network	Syowa Station	69°00'22"S 39°35'24"E			

Table 2. Scientific information – Science Activities in Previous Year

Project name	Main Activity / Remarks	Site Name	Latitude, Longitude	Discipline	PI	URL
Long-term ecosystem monitoring program	Observation of plankton and sea environmental parameters	RSV Aurora Australis		Bioscience	Hiroshi Kanda, National Institute of Polar Research	
	Monitoring of the marine top predators	Ongulkalven	69°01'20"S 39°26'00"E			
		Mame Jima	69°01'35"S 39°29'20"E			
		Benten Jima	69°02'28"S 39°15'11"E			
		Rumpa	69°08'45"S 39°25'30"E			
		Sigaren	69°10'30"S 39°27'00"E			
		Ytre hovdeholmen	69°13'00"S 39°26'00"E			
		Fukuro Ura	69°12'50"S 39°38'00"E			
		Mizukuguri Ura	69°11'30"S 39°38'00"E			
		Nekkelholmane	69°23'30"S 39°28'00"E			
		Torinosu Wan	69°29'00"S 39°33'40"E			
Monitoring of environmental changes in polar region by remote sensing satellites	Receiving of L/S band satellite data (Receiving of DMSP and NOAA satellites)	Syowa Station	69°00'22"S 39°35'24"E	Inter-Disciplinary	Hiroshi Miyaoka, National Institute of Polar Research	http://polaris.nipr.ac.jp/~dmsp/ http://www.nipr.ac.jp/center/SATELLITE/noaa_data_j.html
Routine Observation						
Ionospheric observations	Ionospheric vertical sounding	Syowa Station	69°00'22"S 39°35'24"E	Ionospheric Research	Mamoru Ishii, Applied Electromagnetic Research Center, National Institute of Information and Communications Technology	http://wdc.nict.go.jp/iono/g10c_viewer/o_index.html
	Aurora radar observation					
	Riometer absorption measurement					

Table 2. Scientific information – Science Activities in Previous Year

Project name	Main Activity / Remarks	Site Name	Latitude, Longitude	Discipline	PI	URL
Weather observations	Ozone Layer observation	Syowa Station	69°00'22"S 39°35'24"E	Meteorology	Terumasa Tashiro, Office of Antarctic Observations, Observations Department, Japan Meteorological Agency (JMA)	
	Upper-air observation					
	Surface synoptic observation					
	Weather analysis					
	Ozonesonde observation					
	Surface ozone concentration observation					
	Solar Radiation observation					
Geodetic observations	Precise Geodetic Survey	SHOG (IGS)	69°00'25"S 39°35'01"E	Geodesy	Kosei Tanaka, Deputy Head of International Affairs Office Planning Dept. Geographical Survey Institute	
Physical and Chemical oceanographic observations	Oceanographic survey	RSV Aurora Australis		Oceanography	Satoshi Sato, Hydrographic and Oceanographic Department, Japan Coast Guard	
	Marine pollution survey	RSV Aurora Australis				
	Observation of Antarctic circumpolar current and the abyssal circulation in the Antarctic Ocean	RSV Aurora Australis				
Tidal observation	Tidal observation	Syowa Station	69°00'22"S 39°35'24"E	Oceanography	Satoshi Sato, Hydrographic and Oceanographic Department, Japan Coast Guard	

Permanent Information (version 2009)

3.1 Science Facilities

3.1.1 Automatic Recording Stations/Observatories

-Location:

Site Name: Dome Fuji Station

Latitude: 77°19'00"S

Longitude: 39°42'11"E

Type: Automatic Weather Station (C-MOS Data Logger Type)

Elevation: 3,810m

Parameters Recorded: temperature, wind speed, wind direction

Observation Frequency: 1hour

Reference Number: None

-Location:

Site Name: Dome Fuji Summit (DK0)

Latitude: 77°14'56"S

Longitude: 39°14'10"E

Type: Automatic Weather Station (C-MOS Data Logger Type)

Elevation: 3,811m

Parameters Recorded: temperature

Observation Frequency: 1hour

Reference Number: None

-Location:

Site Name: Middle Point (DK190)

Latitude: 76°47'37"S

Longitude: 31°54'00"E

Type: Automatic Weather Station (C-MOS Data Logger Type)

Elevation: 3,750m

Parameters Recorded: temperature, wind speed, wind direction

Observation Frequency: 1hour

Reference Number: None

-Location:

Site Name: Mizuho Station

Latitude: 70°42'00"S

Longitude: 44°17'21"E

Type: Automatic Weather Station (ARGOS Type)

Elevation: 2,250m

Parameters Recorded: temperature, wind speed, wind direction, atmospheric pressure

Observation Frequency: 10 minutes

Reference Number: AWS No. 21359

-Location:

Site Name: Relay Point (MD364)

Latitude: 74°00'29"S

Longitude: 42°59'48"E

Type: Automatic Weather Station (ARGOS Type)

Elevation: 3,353m

Parameters Recorded: temperature, wind speed, wind direction, atmospheric pressure

Observation Frequency: 10 minutes

Reference Number: AWS No. 8918 / WMO No. 89744

-Location:

Site Name: Dome Fuji Station

Latitude: 77°19'00"S

Longitude: 39°42'11"E

Type: Automatic Weather Station (ARGOS Type)

Elevation: 3,810m

Parameters Recorded: temperature, wind speed, wind direction, atmospheric pressure

Observation Frequency: 10 minutes

Reference Number: AWS No. 8904 / WMO No. 89734

-Location:

Site Name: JASE2007 (DK379)

Latitude: 75°53'17"S

Longitude: 25°50'01"E

Type: Automatic Weather Station (ARGOS Type)

Elevation: 3,661m

Parameters Recorded: temperature, wind speed, wind direction, atmospheric pressure

Observation Frequency: 10 minutes

Reference Number: AWS No. 30305

-Location:

Site Name: Tottsuki Misaki

Latitude: 68°55'S

Longitude: 39°50'E

Type: Seismic observation by Guralp seismometer

Elevation: 15m

Parameters Recorded: 3 components (NS, EW, Z)

Observation Frequency: nearly year-round by 10 Hz sampling

Reference Number: None

-Location:

Site Name: Langhovde

Latitude: 69°15'S

Longitude: 39°43'E

Type: Seismic observation by Guralp seismometer

Elevation: 28m

Parameters Recorded: 3 components (NS, EW, Z)

Observation Frequency: nearly year-round by 10 Hz sampling

Reference Number: None

-Location:

Site Name: Skarvsnes

Latitude: 69°28'S

Longitude: 39°36'E

Type: Seismic observation by Guralp seismometer

Elevation: 10m

Parameters Recorded: 3 components (NS, EW, Z)

Observation Frequency: nearly year-round by 10 Hz sampling

Reference Number: None

-Location:

Site Name: Skallen

Latitude: 69°40'S

Longitude: 39°25'E

Type: Seismic observation by Guralp seismometer

Elevation: 28m

Parameters Recorded: 3 components (NS, EW, Z)

Observation Frequency: nearly year-round by 10 Hz sampling

Reference Number: None

-Location:

Site Name: Rundvågshetta

Latitude: 69°55'S

Longitude: 39°02'E

Type: Seismic observation by Guralp seismometer

Elevation: 37m

Parameters Recorded: 3 components (NS, EW, Z)

Observation Frequency: nearly year-round by 10 Hz sampling

Reference Number: None

-Location:

Site Name: S16

Latitude: 69°02'S

Longitude: 40°04'E

Type: Seismic observation by Guralp seismometer

Elevation: 604m

Parameters Recorded: 3 components (NS, EW, Z)

Observation Frequency: nearly year-round by 10 Hz sampling

Reference Number: None

-Location:

Site Name: Langhovde

Latitude: 69°14'35"S

Longitude: 39°42'33"E

Type: GPS remote base station

Elevation: 28m

Parameters Recorded: GPS

Observation Frequency: 30 Seconds

Reference Number: None

-Location:

Site Name: Yukidori Zawa

Latitude: 69°15'S

Longitude: 39°46'E

Type: Microclimate Stations

Elevation: 70m

Parameters Recorded: Air temperature, Air moisture, Wind direction, Wind speed, Light intensity

Observation Frequency: 1 hour

Reference Number: None

-Location:

Site Name: Suribachi Ike

Latitude: 69°28'S

Longitude: 39°36'E

Type: Microclimate Stations

Elevation: -30m

Parameters Recorded: Air temperature, Air moisture, Wind direction, Wind speed, Light intensity

Observation Frequency: 1 hour

Reference Number: None

-Location:

Site Name: Oyako Ike

Latitude: 69°29'S

Longitude: 39°36'E

Type: Limnological Station

Elevation: 5m

Parameters Recorded: Water temperature, Underwater light intensity, Chlorophyll fluorescence, Turbidity

Observation Frequency: 1 hour

Reference Number: None

-Location:

Site Name: Naga Ike

Latitude: 69°29'S

Longitude: 39°36'E

Type: Limnological Stations

Elevation: 70m

Parameters Recorded: Water temperature, Underwater light intensity, Chlorophyll fluorescence, Turbidity

Observation Frequency: 1 hour

Reference Number: None

3.2 Operational Information

A. Stations

-Name: Syowa

Type: wintering

Location:

Site Name: Syowa

Latitude: 69°00'22"S

Longitude: 39°35'24"E

Maximum Population: 130

Date Established: 1957

Accommodation Facilities: There are 2 buildings for over-wintering expeditioners and each building has 21 beds. For summer expeditioners, there are 2 buildings. One has 48 beds and cafeteria for 60 people and the other has 40 beds.

Medical Facilities: Minimum required surgical operation facilities and dental emergency facilities are equipped. Two medical doctors stay at the station.

Description / Remarks: Region: Higashi-Ongul To, Lützow-Holmbukta / Elevation: 29.18m

-Name: Dome Fuji

Type: Summer

Location:

Site Name: Dome Fuji

Latitude: 77°19'01"S

Longitude: 39°42'12"E

Maximum Population: 14

Accommodation Facilities: There are 9 buildings below snow surface. 8 people can be accommodated for wintering.

Medical Facilities: None

Operating Period: from November to February

Description / Remarks: Region: The top of Dronning Maud Land / Date Established: 1995 / Elevation: 3,810m

-Name: Mizuho

Type: Summer

Location:

Site Name: Mizuho

Latitude: 70°41'53"S

Longitude: 44°19'54"E

Maximum Population: 8

Accommodation Facilities: N/A

Medical Facilities: None

Operating Period: from November to February

Description / Remarks: Region: Dronning Maud Land / Date Established: 1970 / Elevation: 2,230m

-Name: Asuka

Type: Summer

Location:

Site Name: Asuka

Latitude: 71°31'34"S

Longitude: 24°08'17"E

Maximum Population: 8

Accommodation Facilities: N/A

Medical Facilities: None

Operating Period: from November to February

Description / Remarks: Region: Sør Rondane Mountains region / Date Established: 1985 / Elevation: 930m

B. Vessels

Name: R/V Shirase

Flag State: Japan

Ice Strength: (Icebreaking capacity: Continuous 1.5 m ice thickness)

Length: 134m

Beam: 28m

Gross Tonnage: (Standard displacement: 12,500 tons)

Type: Supply and Research

Maximum Crew: 179

Maximum Passengers: 80

C. Aircraft

Type: CH-101

Number: 2

General Task / Remarks: transport cargos and personnel / support scientific field operations

3.3 Waste Management Plans

Title: Waste Management Guide

Fixed site/Field Camp/Ship: Station and field

Objective: Management of field Wastes, Station Wastes

Implementation Report: Disposal of wastes in the stations and fields is implemented in accordance with Annex III of the Protocol on Environmental Protection to the Antarctic Treaty and the relevant national legislation. Sewage and gray water from summer accommodation are treated by non-biological method (Coagulation-Sedimentation Method), and Sewage and gray water from winter accommodation are treated by contact aeration process and the treated water is discharged into the sea. All the wastes are sorted and treated properly. Combustible wastes are disposed of by a two-stage incinerator. The ash is taken back to Japan. Wet food waste is treated by a dehydrating instrument. The residue is directly taken back to Japan or incinerated and its ash is also taken back to Japan. The other waste is taken back to Japan.

Contact Point:

Name: Kenji

Surname: Ishizawa

Job Title or Position: Head of logistics section, National Institute of Polar Research

Phone: +81-42-512-0779

Email: ishizawa@nipr.ac.jp

3.4 Contingency Plans

Title: Syowa Station Oil Spill Contingency Plan

Implementation Report: The expedition contingency plans are made and published for respective operations by departure from Japan and the expedition members act as keeping the plans.

An oil spill contingency plans for Syowa Station was first compiled in 1987 and the plan was revised in 2008.

Objective: Contingency plan to response safely and promptly to oil spill on a station and to minimize human, environmental and physical loss or damage.

Contact Point:

Name: Kenji

Surname: Ishizawa

Job Title or Position: Head of logistics section, National Institute of Polar Research

Phone: +81-42-512-0779

Email: ishizawa@nipr.ac.jp

3.5 Inventory of Past Activities

Activity Type: Scientific observation, Logistics

Location:

Site name: Mizuho

Latitude: 70°41'53"S

Longitude: 44°19'54"E

Description of Activity: It was established on July 21, 1970 and had been occupied until 1986. It is now temporarily closed.

Remaining Equipment or Facilities: Five huts including diesel generators, communication antennas and an observation tower.

Activity Type: Scientific observation

Location:

Site name: Asuka

Latitude: 71°31'34"S

Longitude: 24°08'17"E

Description of Activity: It was established on March 26, 1985 and had been occupied to 1991. It is now temporarily closed.

Remaining Equipment or Facilities: Five huts including diesel generators, communication antennas and a small wind turbine.

3.6 Relevant National Legislation

Title: *The Law relating to Protection of the Environment in Antarctica*
(*Antarctic Environment Law*)

Description:

In Japan, *the Law relating to Protection of the Environment in Antarctica* (*Antarctic Environment Law*) entered into force on 14th January 1998, on the same day when the Protocol itself entered into force.

Since then, Japan has worked for the full implementation of the Protocol through the *Antarctic Environment Law*. According to *the Antarctic Environment Law*, in principle, no person shall engage in any activity in Antarctica other than Antarctic Activity Plan that has been certified by the Minister of the Environment, Japan.

The Government of Japan issues and distributes pamphlets, and set up website to provide Japanese citizens of information on natural features, legal procedures required to visit Antarctica, the history of Japanese Antarctic Research and alike.

Date of Effect: January 14, 1998

Link: http://www.env.go.jp/earth/nankyoku/kankyohogo_en/index.html

Contact Point:

Name: Yusuke SAITO (Mr.)

Job Title: Technical Official for Ministry of the Environment, Japan

Phone: +81-3-5521-8245

E-mail: ANTARCTIC@env.go.jp

Pre-Season Information (2009 / 2010)

1.1 Operational Information

1.1.1 National Expeditions

A. Stations

-Name: Syowa

Type: winter

Location:

Site Name: Syowa

Latitude: 69°00'22"S

Longitude: 39°35'24"E

Maximum Population: 130

Medical Facilities: Minimum required surgical operation facilities and dental emergency facilities are equipped. Two medical doctors stay at the station.

Remarks/ Description:

Location: Higashi-Ongul To, Lützow-Holmbukta

Elevation: 29.18m

Established: January 29, 1957

Major Field Activities: Oversnow traverse to Dome Fuji Station / Biological observations in Lützow-Holmbukta area / Geological and geomorphological survey and meteorite search in the Sør Rondane Mountains

-Name: Dome Fuji

Type: Summer

Location:

Site Name: Dome Fuji

Latitude: 77°19'01"S

Longitude: 39°42'12"E

Maximum Population: 14

Medical Facilities: None

Remarks/ Description:

Location: The top of Dronning Maud Land

Elevation: 3,810m

Established: 1995

Operating Period: January

B. Vessels

Name: R/V Shirase

Country of registry: Japan

Number of Voyages: 1

Maximum Crew: 179

Maximum Passengers: 80

Departure date: November 29, 2009

Port of Departure: Fremantle, Australia

Arrival Date: March 17, 2010

Port of Arrival: Sydney, Australia

Areas of operation: Lützow-Holmbukta, Kronprins Olav Kyst area and Breivika

Purpose: The transportation of cargo and personnel / the support of oceanographic and biological observations

C. Aircraft

Type: CH-101

Period of Flights: from December 2009 to February 2010

General Task / Remarks: transport cargos and personnel / support scientific field operations

D. Research Rockets

-Location Launch:

Site Name: Syowa Station

Latitude: 69°00'22"S

Longitude: 39°35'24"E

Date: 3~5times, throughout the year

Direction: depends on wind

Max. Altitude: 30,000m

Impact Area: within a 100-kilometer radius

Type: Balloon

Specification: OPC (optical particle counter)

Purpose: Aerosol measurement

Project Title / Number: Study on coupling processes between polar upper atmosphere

and lower atmosphere

-Location Launch:

Site Name: Syowa

Latitude: 69°00'22"S

Longitude: 39°35'24"E

Date: daily, throughout the year

Direction: All directions

Max. Altitude: 30,000 m

Impact Area: about a radius of 200-300km from the Site

Type: Balloon

Specification: Rawinsonde

Purpose: Upper-air synoptic measurement

Project Title / Number: Weather observations

-Location Launch:

Site Name: Syowa

Latitude: 69°00'22"S

Longitude: 39°35'24"E

Date: 1 to 2 times a week, throughout the year

Direction: All directions

Max. Altitude: 30,000 m

Impact Area: about a radius of 200-300km from the Site

Type: Balloon

Specification: RS-KC02G Type Ozone sonde / ECC (Electrochemical Concentration Cell) Type Ozone sonde

Purpose: Ozone measurement

Project Title / Number: Weather observations

E. Military

None

1.1.2 Non-Governmental Operations

A. Ship-based Operations

None

B. Land-based Operations

None

1.2 Visits to Protected Areas

None