

ANTARCTIC RECORD Vol. 41 CONTENTS

No. 1 (March 1997)

Project Report on Antarctic Climate Research	
Foreword	<i>Sadao Kawaguchi</i> i
Features of weather around Syowa Station in the ACR period, 1987-1991 (in Japanese)	
.....	<i>Susumu Kaneto</i> 1
Temperature, wind and atmospheric circulation in East Queen Maud Land, Antarctica (in Japanese)	
.....	<i>Tokio Kikuchi</i> 9
Cloud distribution in the Antarctic from satellite data (in Japanese)	
.....	<i>Takashi Yamanouchi</i> 23
Radiation observations at Asuka Station, Antarctica and radiative properties of the atmosphere and snow surface (in Japanese)	
.....	<i>Teruo Aoki</i> 41
Albedo distribution in Lützow-Holm Bay and its neighborhood (in Japanese)	
.....	<i>Kiyotaka Nakagawa</i> 63
Surface temperature distribution in Lützow-Holm Bay and its neighborhood (in Japanese)	
.....	<i>Kiyotaka Nakagawa</i> 73
Radiative effects of clouds and cryosphere in the Antarctic (in Japanese)	
.....	<i>Takashi Yamanouchi</i> 83
Characteristics and seasonal variations of precipitation phenomena at Syowa Station (in Japanese)	
.....	<i>Hiroyuki Konishi and Tatsuo Endoh</i> 103
Observations of precipitable water, column liquid water and column ice water at Syowa Station (in Japanese)	
.....	<i>Makoto Wada and Hiroyuki Konishi</i> 131
Seasonal variation of atmospheric water circulation in the Antarctic region derived from objective analysis data (in Japanese)	
.....	<i>Koji Yamazaki</i> 149
Continuous measurement of atmospheric CO ₂ concentration at Syowa Station (in Japanese)	
.....	<i>Shuhji Aoki and Takakiyo Nakazawa</i> 161
Variations of the carbon and oxygen isotopic ratios of atmospheric CO ₂ at Syowa Station, Antarctica (in Japanese)	
.....	<i>Shohei Murayama, Takakiyo Nakazawa, Shuhji Aoki and Shinji Morimoto</i> 177
Concentration variations of tropospheric carbon dioxide over the Antarctic region (in Japanese)	

.....	<i>Shohei Murayama, Takakiyo Nakazawa and Shuhji Aoki</i> . . .	191
Measurements of the partial pressure of CO ₂ in the air and surface sea water on board the icebreaker SHIRASE (in Japanese)	.....
.....	<i>Gen Hashida, Takakiyo Nakazawa, Shuhji Aoki, Shohei Murayama, Takashi Yamanouchi, Masayuki Tanaka, Akira Shimizu, Masahiko Hayashi and Kunimoto Iwai</i> . . .	203
Continuous measurement of atmospheric CH ₄ concentration at Syowa Station (in Japanese)	.....
.....	<i>Shuhji Aoki</i> . . .	221
Continuous measurement of surface O ₃ concentration at Syowa Station and onboard SHIRASE (in Japanese)	.....
.....	<i>Shuhji Aoki</i> . . .	231
The relationship between tropospheric ozone concentration and atmospheric transport over Syowa Station, Antarctica (in Japanese)	.....
.....	<i>Shohei Murayama, Shuhji Aoki and Takakiyo Nakazawa</i> . . .	249
Ozone observations by the Japanese Antarctic Research Expedition (JARE) (in Japanese)	.....
.....	<i>Kouji Matsubara</i> . . .	259
Chemistry of the reactive nitrogen in the Antarctic stratosphere (in Japanese)	.....
.....	<i>Yutaka Kondo and Makoto Koike</i> . . .	271
Eruption of Mt. Pinatubo and climate of Syowa Station (in Japanese)	.....
.....	<i>Susumu Kaneto</i> . . .	285
The behavior of chemical components in the snow and atmosphere on the Mizuho Plateau (in Japanese)	.....
.....	<i>Satoru Kanamori, Nobuko Kanamori, Okitsugu Watanabe, Masataka Nishikawa, Kokichi Kamiyama and Hideaki Motoyama</i> . . .	291
Seasonal cycle of the Antarctic coastal ocean (in Japanese)	.....
.....	<i>Kay I. Ohshima, Takatoshi Takizawa, Shuki Ushio and Toshiyuki Kawamura</i> . . .	311
Ice production and convective mixing in the coastal polynya off Lützow-Holm Bay, Antarctica (in Japanese)	.....
.....	<i>Shuki Ushio, Takatoshi Takizawa, Kay I. Ohshima and Toshiyuki Kawamura</i> . . .	329
Temperature structure and SSM/I images of the Cosmonaut Polynya region (in Japanese)	.....
.....	<i>Takatoshi Takizawa, Kay I. Ohshima, Shuki Ushio, Toshiyuki Kawamura and Hiroyuki Enomoto</i> . . .	335
Sea ice drift off Queen Maud Land, Antarctica (in Japanese)	.....
.....	<i>Takuya Miyakawa and Kay I. Ohshima</i> . . .	347
Observations of sea-ice conditions in the Antarctic coastal region using ship-board video cameras (in Japanese)	.....
.....	<i>Haruhito Shimoda, Tatsuo Endoh, Ken'ichiro Muramoto, Nobuo Ono, Takatoshi Takizawa, Shuki Ushio, Toshiyuki Kawamura and Kay I. Ohshima</i> . . .	355
Characteristics and growth processes of sea ice in Lützow-Holm Bay (in Japanese)		

..... <i>Toshiyuki Kawamura, Takatoshi Takizawa, Kay I. Ohshima and Shuki Ushio</i>	367
Micrometeorology and heat balance over the fast ice (in Japanese)	
..... <i>Kiyotaka Nakagawa</i>	385
Ocean and sea-ice observations during the Antarctic Climate Research Program (in Japanese)	
..... <i>Toshiyuki Kawamura, Takatoshi Takizawa, Kay I. Ohshima and Shuki Ushio</i>	395
NOAA satellite observation in the Antarctic (in Japanese)	
..... <i>Katsumoto Seko</i>	415
Bare ice fields developed in the inland part of the Antarctic ice sheet (in Japanese)	
..... <i>Shuhei Takahashi</i>	433
Dark streams observed on NOAA satellite images over the katabatic wind zone, Antarctica (in Japanese)	
..... <i>Tatsuo Endoh, Takashi Yamanouchi, Takayuki Ishikawa, Hideo Kakegawa and Sadao Kawaguchi</i>	447
Glaciological studies near the Sør Rondane Mountains, East Antarctica (in Japanese)	
..... <i>Hideaki Motoyama, Nobuhiko Azuma and Shuji Fujita</i>	459
Note to contributors	

No. 2 (July 1997)

Scientific Papers

A study of the reconstruction algorithm for auroral tomography by numerical simulation (in Japanese)	
..... <i>Akira Urashima, Atsufumi Fujita and Takehiko Aso</i>	469
Crust-mantle decoupling revealed by seismic velocity anisotropy beneath Syowa Station, Antarctica (in Japanese)	
..... <i>Atsuki Kubo and Masaki Kanao</i>	497

Scientific Note

Snow noise disturbance in Antarctic radio communications and development of mobile antenna for snow vehicle in Antarctica (in Japanese)	
..... <i>Isao Fukushima and Etsuo Kubo</i>	513

Reports

Activities of the summer party of the 35th Japanese Antarctic Research Expedition in 1993-1994 (in Japanese)	
..... <i>Okitsugu Watanabe</i>	537
Meteorological Observations at Syowa Station in 1994 by the 35th Japanese Antarctic Research Expedition (in Japanese)	
..... <i>Yuzuru Inagawa, Yoshikatsu Yamamoto, Yûji Taguchi, Toshihiro Abo and Osamu Ijima</i>	549
German Antarctic activities (in Japanese)	
..... <i>Kazuyuki Shiraishi</i>	589

No. 3 (November 1997)

Scientific Paper

- System design and initial results of all sky imager at South Pole (in Japanese)
.....*Masaki Okada, Masaki Ejiri, Shoichi Okano,*
Makoto Taguchi and Shu Takeshita....613

Scientific Notes

- Determination of HTO content in polar ice/snow samples by low background
liquid scintillation technique (in Japanese)
.....*Kokichi Kamiyama, Wataru Shimada, Kohichi Kitaoka,*
Kaoru Izumi and Syuichi Ezumi....631
- Local earthquakes recorded at Syowa Station, Antarctica (in Japanese)
.....*Katsutada Kaminuma and Masaki Kanao*....643
- Establishment of permanent plots with lichens and mosses for monitoring local
human impact on environment in Heimefrontfjella and Vestfjella, Dronning
Maud Land, Antarctica
.....*Göran Thor*....652

Reports

- Activities of the wintering party of the 36th Japanese Antarctic Research
Expedition, 1995–1996 (in Japanese)
.....*Shigemi Meshida*....673
- Report on the geological and geomorphological field party in the Mt.
Riiser-Larsen area, Enderby Land, 1996–97 (JARE-38) (in Japanese)
.....*Hideo Ishizuka, Hideki Miura, Masashi Takada,*
Masahiro Ishikawa, Daniel Peter Zwartz,
Satoko Suzuki and Tomokazu Hokada....743
- Note on the feasibility of establishing snow and ice runways at Japanese Antarctic
stations—In the context of the East Antarctic Air Network— (in Japanese)
.....*Kazuyuki Shiraishi and Valery Klovov*....778