

**Program of the 15th Symposium on Polar Meteorology and Glaciology,
held at National Institute of Polar Research, Tokyo,
July 8-9, 1992**

- I. Sea Ice (Takatoshi TAKIZAWA)
1. Outline of sea air—sea ice— sea interaction study as a part of the Antarctic Climate Research Project. Toshiyuki KAWAMURA and Kay I. OHSHIMA.
 2. Observations of sea and ice by video cameras on ship. Haruhito SHIMODA, Tatsuo ENDOH, Takatoshi TAKIZAWA, Shuki USHIO, Toshiyuki KAWAMURA and Kay I. OHSHIMA.
 3. The latest sea ice conditions in the Sea of Okhotsk. Eturo KAMIHIRA and Saya KONDO.
 4. Variation of the sea-ice extent in the Okhotsk Sea and southward extension of the coastal Oyashio. Kunio RIKIISHI and Jun TAKAHASHI.
 5. Variation of sea ice in the Antarctic region by MSR data of MOS-1 satellite. Tomoyuki OSHIYAMA, Takashi YAMANOUCHI, Nobuo ONO and Tetsuzo YASUNARI.
 6. Analysis of sea ice concentration by processing. Ken-ichiro MURAMOTO, Kohki MATSUURA, Kosugi MASATAKA, Tatsuo ENDOH, Haruhito SHIMODA and Nobuo ONO.
- II. Physical Oceanography (Masaaki WAKATSUCHI)
7. Thermal structure in the Cosmonant Sea Polynya area. Takatoshi TAKIZAWA, Shuki USHIO, Kay I. OHSHIMA and Toshiyuki KAWAMURA.
 8. Results of oceanographic observations in the Antarctic divergence. Masaaki WAKATSUCHI, Kay I. OHSHIMA, Kazuto TANAKA and Kenichi NOGUCHI.
 9. On the flow and the oceanic structure under fast ice in Lützow-Holm Bay. Kay I. OHSHIMA, Toshiyuki KAWAMURA, Takatoshi TAKIZAWA and Shuki USHIO.
 10. Seasonal sea-level variation at Syowa Station. Michio KAWAMIYA, Yutaka NAGATA, Yutaka MICHIDA and Minoru ODAMAKI.
 11. Geosat altimeter observation of sea level variability in the Southern Ocean (off the Wilkes Land). Takashi KIKUCHI, Akira SHIBATA and Masaaki WAKATSUCHI.
- III. Poster Session: A
(Sea Ice)
12. A laboratory experiment on melting of pressure ridge keels in the summer Arctic. Wladyslaw RUDZINSKI and Masaaki WAKATSUCHI.
 13. Growth processes of sea ice in Lützow-Holm Bay. Toshiyuki KAWAMURA, Kay I. OHSHIMA, Shuki USHIO and Takatoshi TAKIZAWA.
 14. Variability of Arctic sea-ice distribution. Nobuo ONO.
 15. Long-term fluctuations of sea ice in the Northern Hemisphere. Kiyotomi SATO.
 16. Chemical reactions taking place in the freezing of aqueous solutions. Norimichi TAKENAKA, Akihiro UEDA and Yasuaki MAEDA.
- (Radio Property of Ice)
17. Dielectric anisotropy in Ice 1h at 9.7 GHz. Shuji FUJITA, SHINJI MAE and Takeshi MATSUOKA.
 18. Relation between ice sheet radio-echo reflections and ice fabric at Mizuho Station, Antarctica. Shuji FUJITA and Shinji MAE.
 19. Measurements of the thickness of model sea ice by UHF waves. Hayao TAKASHIMA, Hisao YAMAKOSHI, Toshio MAEDA and Akio SAKURAI.
- (Arctic Glaciers)
20. Radiative temperature of glacier surfaces in the Svalbard, Arctic. Shuhei TAKAHASHI, Hiroyuki ENOMOTO, Shun'ichi KOBAYASHI, Kumiko GOTO-AZUMA and Okitsugu WATANABE.
 21. Behavior of water in the Brøgger Glacier, Spitsbergen. Shun'ichi KOBAYASHI, Shuhei TAKAHASHI, Hiroyuki ENOMOTO, Kumiko GOTO-AZUMA and Okitsugu WATANABE.
 22. Chemical constituents in surface snow of glaciers near Ny-Ålesund, Spitsbergen. Kumiko GOTO-AZUMA, Hiroyuki ENOMOTO, Takao KAMEDA, Shuhei TAKAHASHI, Shun'ichi KOBAYASHI and Okitsugu WATANABE.

(Aerosols)

23. Aerosols containing nitric acid in lower troposphere of Antarctica—Preliminary results of JARE-32. Masahiko HAYASHI.
24. The origin of atmospheric aerosols in Antarctic inland. Satoru KANAMORI, Masataka NISHIKAWA, Okitsugu WATANABE, Yasu-nobu IWASAKA, Fumihiko NISHIO and Kikuo OKADA.
25. Effect of Arctic air pollutants on climate. Sachio OHTA, Kentaro HAYASHI and Naoto MURAO.

(Ozone)

26. On the relation of the ozone vertical distribution with stratospheric temperature (II). Shigeru CHUBACHI.
27. On interannual ozone layer variability in the Northern Hemisphere wintertime. Hiromichi MORI.

(Climate)

28. Temperature variations in the Svalbard, Arctic. Hiroyuki ENOMOTO, Shuhei TAKAHASHI, Shun'ichi KOBAYASHI, Kumiko GOTO-AZUMA and Okitsugu WATANABE.
29. Seasonal variation of surface pressure around the Antarctic region. Masaru CHIBA, Koji YAMAZAKI KIYOTAKA SHIBATA.
30. Seasonal variation of precipitating clouds around the coast of Antarctica as observed at Syowa Station. Hiroyuki KONISHI, Makoto WADA and Tatsuo ENDOH.

IV. Poster Session: B

(Ocean)

31. Thermal structure of coastal polynyas in Lützow-Holm Bay, Antarctica. Shuki USHIO, Takatoshi TAKIZAWA, Kay I. OHSHIMA and Toshiyuki KAWAMURA.
32. Stepped structure on the profiles of temperature and salinity observed in the vicinity of icebergs. Kay I. OHSHIMA, Toshiyuki KAWAMURA, Takatoshi TAKIZAWA and Shuki USHIO.

(Antarctic Ice Sheet)

33. Distribution of temperature and $\delta^{18}\text{O}$ of surface snow layers in the East Queen Maud Land, Antarctica. Kazuhide SATOW and Okitsugu WATANABE.
34. Depositional resime around Asuka Station. Hideaki MOTOYAMA, Nobuhiko AZUMA, Shuji FUJITA and Kazuyuki SHIRAISHI.
35. Volcanic ash layers on satellite images in Yamato Meteorite Ice Fields. Fumihiko NISHIO, Kohei CHO and Katsuki SEKO.
36. Changes of ice sheet margine along Soya-Prince Olav Coast during last 30 years. Yoshiyuki FUJII.

(Ice Cores)

37. Chemical composition, pH and particle concentration in Greenland Site-J ice core. Yoshiyuki FUJII, Kokichi KAMIYAMA, Okitsugu WATANABE, Takao KAMEDA, Hitoshi SHOJI, Hideki NARITA and Fumihiko NISHIO.
38. Core analysis obtained at S25, coastal region of Antarctica. Kazuhide SATOW, Okitsugu WATANABE, Hideaki MOTOYAMA, Kokichi KAMIYAMA and Okitsugu WATANABE.
39. Influence of space change and aging effect on the ECM anarysis of ice core. Hidekatu HARA, Nobuhiko AZUMA and Masayoshi NAKAWO.
40. An automated fabric analysis by image-processing method. Yuichi MARUBASHI and Nobuhiko AZUMA.

(Atmospheric Constituents)

41. An observation of atmospheric CH_4 aboard the icebreaker SHIRASE. Kenji ATARASHI, Isao MURATA, Kazuyuki KITA and Toshihiro OGAWA.
42. Measurement of light hydrocarbons at Syowa Station and the Antarctic Sea. Fumio SAKAMAKI, Akira SHIMIZU and MASAHIKO HAYASHI.
43. Relation between anomaly of atmospheric CO_2 concentration and production of tropical rain forest. Kikuo KATO.

(Meteorological Observation)

44. Data processing of the automatic weather stations in ACR. Tokio KIKUCHI and Tatsuo ENDOH.
45. The system of surface based radiation measurement at Syowa Station. Hiroshi INAYOSHI, Masa-

- michi AONO, Toyoo ABE and Miyoki IWAMOTO.
46. On the estimation of the precipitation rate at each altitude by a new analytical method for the meteorological radar echo (2). Masahiko HATANAKA, Mitsuo HOSHIYAMA and Akira NISHITSUJI.
 47. Estimation for snow fall precipitations by meteorological radar echo (2). Mitsuo HOSHIYAMA, Akira NISHITSUJI and Makoto WADA.
- V. Radio Property of Ice (Ken'ichi OKAMOTO)
48. Propagation of electromagnetic waves in ice derived from its dielectric properties. Shuji FUJITA and Shinji MAE.
 49. Dielectric properties of salt-doped ice at 9.7 GHz. Takeshi MATSUOKA, Shuji FUJITA and Shinji MAE.
 50. The causes and natures of ice sheet radio-echo internal reflections. Shuji FUJITA and Shinji MAE.
 51. Preliminary results of experiments in Antarctica for developing crevasse detention radar. Akira TAKAHASHI, Takeshi SUITZ, Ken'ichi OKAMOTO, Seiho URATSUKA, Okitsugu WATANABE and Yoshiyuki FUJII.
- VI. Ice Cores (Hideki NARITA)
52. Arctic climatic change during last 10^2 – 10^3 years revealed by ice core studies. Okitsugu WATANABE Yoshiyuki FUJII, Kokichi KAMIYAMA, Hideaki MOTOYAMA, Fumihiko NISHIO, Hitoshi SHOJI, Takao KAMEDA and Hideki NARITA.
 53. Melt feature and $\delta^{18}\text{O}$ profiles of Site-J ice core, Greenland. Takao KAMEDA and Okitsugu WATANABE.
 54. Vertical distributions of fatty acids in the ice core from Greenland. Kimitaka KAWAMURA, Ikuko SUZUKI and Yoshiyuki FUJII.
 55. Air-hydrate crystals in the Vostok ice cores (2). Tsutomu UCHIDA, Shinji MAE, Takeo HONDOH, V. YA. Lipenkov and P. DUVAL.
 56. The effect of hydrostatic pressure on formation of air hydrate crystals. Tetsuya IKEDA, Tsutomu UCHIDA and Shinji MAE.
 57. Transformation process observations of polar firn to ice. Atsu MITANI, Hitoshi SHOJI, Chester C. LANGWAY, Jr. and H. B. CLAUSEN.
- VII. Ozone (Shigeru CHUBACHI)
58. Variations of lower tropospheric ozone concentration at Syowa Station. Shuji AOKI, Shohei MURAYAMA, Akira SHIMIZU and Masahiko HAYASHI.
 59. Comparison of total ozone between TOMS Ver. 6 data and Dobson at Syowa Station. Kazuo SHIBASAKI.
 60. Comparison of total ozone amounts obtained visible spectrometers and Dobson spectrometers at Syowa Station and Sapporo. Kei NAKAMURA, Yutaka KONDO, Makoto KOIKE, Afif BUDIYONO, Takashi YAMANOUCHI and Shuji AOKI.
 61. Observational experiment of the Antarctic ozone hole of 1991 under the Polar Patrol Balloon (PPB) project (1): A preliminary result of trajectory analysis. Hiroshi KANZAWA, Ryoichi FUJII, Koji YAMAZAKI and Manabu D. YAMANAKA.
 62. Observational experiment of the Antarctic ozone hole of 1991 under the Polar Patrol Balloon (PPB) project (2): A preliminary result of ozone and aerosol observation. Masahiko HAYASHI, Isao MURATA, Ryoichi FUJII, Yasu-nobu IWASAKA, Yutaka KONDO and Hiroshi KANZAWA.
- VIII. Aerosols (Tomoyuki ITO)
63. Measurements of Pinatubo volcanic stratospheric clouds at Alaska. Yasu-nobu IWASAKA, Katsuji MATSUNAGA, Motoo FUJIWARA and Ikuko MORI.
 64. The variations of number concentration of aerosol particles in west Greenland. Katsuhiro KIKUCHI, Takashi TANIGUCHI and Hiroshi UYEDA.
 65. Balloon borne observation of stratosphere aerosols at Syowa Station in 1991. Masahiko HAYASHI and Yasu-nobu IWASAKA.
 66. Year to year variation of atmospheric turbidity at Syowa Station with direct solar radiation observation. Tetsuro UEKUBO and Kouji MATSUBARA.

67. Gaseous acidic substances in the air of Syowa Station, Antarctica. Nobuko KANAMORI, Satoru KANAMORI, Masataka NISHIKAWA and Okitsugu WATANABE.
- IX. Atmospheric Constituents (Masayuki TANAKA)
68. Infrared and ultraviolet absorption measurement at Syowa Station. Isao MURATA, Kazuyuki KITA, Naomoto IWAGAMI and Toshihiro OGAWA.
 69. Observation of atmospheric trace gases at Syowa Station throughout the year. Seizi KOGA.
 70. Measurements of atmospheric minor constituents at Ny-Ålesund, Svalbard. Shuhji AOKI, Makoto WADA, Hajime ITO and Nobuo ONO.
- X. Atmospheric Circulation and Climate Model (Tetsuzo YASUNARI)
71. Comparison of wind conditions over research area with type of upper air circulation pattern over southern ocean from last 12 seasons report. Kunihiko BABA and Yoshihisa OKUDA.
 72. Cloud-radiative forcing with a multiple scattering model for the atmosphere-snow system. Teruo AOKI, Tadao AOKI and Masashi FUKABORI.
 73. A quasi-biennial oscillation in the southern middle and high latitude circulation and the atmosphere-sea ice interaction. Tetsuzo YASUNARI, Wataru TAKAHASHI and Shao Fun TION.
 74. Interannual variation of the stratospheric circulation in the Southern Hemisphere during winter to spring. Koji YAMAZAKI, Masaru CHIBA, Kunihiko KODERA and Yuhji KURODA.