

**Program of the International Symposium on Environmental Research
in the Antarctic held at the National Institute of Polar Research,
Tokyo December 3-4, 1996**

— Contributed Papers —

Session I: Overview of the Antarctic Environmental Research.

- I-1. JARE environmental research and an establishment of CAEM (Center for the Antarctic Environment Monitoring). FUKUCHI, M.
- I-2. Recent advances and future directions in the investigation of the air-ice-ocean environment in the Antarctic. ALLISON, I.

Session II: Upper atmospheric environment in the Antarctic.

- II-1. Studies of the upper atmosphere over Antarctica carried out by the British Antarctic Survey. DUDENEY, J.R.
- II-2. Geospace environmental monitoring at Zhongshan Station, Antarctica. LIU Ruiyuan
- II-3. Studies of ionospheric irregularities over Syowa Station - A brief overview. OGAWA, T.
- II-4. The need for coordinated ground measurements in order to understand dayside boundary processes. EGELAND, A.
- II-5. Thermospheric dynamics at South Pole. SMITH, R. and HERNANDEZ, G.
- II-6. Global forcing and long-term trends of ozone in the southern polar stratosphere. GERNANDT, H., HERBER, A., GATHEN, P. and KANETO, S.
- II-7. Neutral atmosphere dynamics in the E- and F-region observed by a Fabry-Perot doppler imager. OKANO, S., KUBOTA, M. and FUKUNISHI, H.

Session III: Environment change in atmosphere and ocean.

- III-1. Surface radiation environment over the Antarctic: Role of surface and cloud processes. GAUTIER, C.
- III-2. Variability of the solar radiation characteristics and aerosol optical depth in Antarctica. RADIONOV, V., MARSHUNOVA, M., HERBER, A. and LEITERER, U.
- III-3. Characteristics of polar stratospheric clouds particles - Lidar measurements at the Arctic and the Antarctic -. IWASAKA, Y.
- III-4. The global carbon cycle and the distribution of O₂ in air. BENDER, M. and BATTLE, M.
- III-5. Atmospheric carbon dioxide and methane concentrations in the past and synchronisation of ice core records from both hemispheres based on methane results. STAUFFER, B.
- III-6. Spatial variations of the oceanic CO₂ in the Antarctic divergence. Hashida, G., NAKAZAWA, T., AOKI, S., MURAYAMA, S., YAMANOUCHI, T., TANAKA, M., SHIMIZU, A., HAYASHI, M. and IWAI, K.
- III-7. Carbon dioxide sources and sinks in the Southern Ocean. TILBROOK, B.

Session IV: Antarctic marine and terrestrial ecosystems and environments.

- IV-1. Phytoplankton processes and the unique photo-climate of the Southern Ocean. MITCHELL, B.G.
- IV-2. Distribution of total dissolved inorganic carbon and net community production in the Indian sector of the Southern Ocean. ISHII, M., INOUE, H.Y., MATSUEDA, H. and TANOUÉ, E.
- IV-3. Antarctic marine ecosystems research: where are we heading ? EL-SAYED, S.Z
- IV-4. Global change and marine microorganisms: Impacts and feedbacks. MARCHANT, H. J.
- IV-5. Adélie penguin as a key species for monitoring the Antarctic ecosystem. NAITO, Y. and WATANUKI, Y.

- IV-6. Temporal changes in marine environments in the Antarctic Peninsula area during the 1994/95 austral summer. KIM, S., SIEGEL, V., NAGANOBU, M., HEWITT, R., DERMER, D., ICHII, T., KANG, S.-H., KAWAGUCHI, S., LEE, W.C., and LOED, V.
- IV-7. Long-term ecological research in the McMurdo Dry Valleys. WHARTON, R.
- IV-8. Environmental geochemical and biological features of Antarctic oases. MATSUMOTO, G.I. and KANDA, H.

Poster presentation

Session II

- PII-1. Earth induction effect observed by unmanned magnetometer network near Syowa Station, Antarctica. SHIMOIZUMI, M., SAKA, O., SATO, N., and WATANABE, O.
- PII-2. Observation of Schumann Resonances as monitoring the global warming. HAYAKAWA, M.
- PII-3. Comparison of solar wind parameters with geomagnetic activity. ONDOH, T.
- PII-4. Deuterium in atmospheric water vapour. SCHWARZ, G., KOWSKI, P., KANETO, S., and GERNANDT, H.
- PII-5. Irregular tropospheric ozone depletions in the Antarctic. WESSEL, S., GERNANDT, H., AOKI, S., and WINKLER, P.

Session III

- PIII-1. Diurnal variation of heat budget at King Sejong Station, Antarctica. CHOI, H.
- PIII-2. The Antarctic sea ice variation and its relationships with global climate system. BAO, C. and XIE, S.
- PIII-3. UV irradiance measurements in Antarctica - A link between ozone depletion and biological impact. BOOTH, C.R. and TUSSON, J.R.
- PIII-4. Vertical profiles of homologous series of dicarboxylic acids in an Antarctic ice core. KAWAMURA, K., KASUKABE, H., FUJII, Y. and WATANABE, O.
- PIII-5. Classification of polar satellite data using minimum distance method. MURAMOTO, K., SAITO, H., TOKUNAGA, T., KUBO, M. and YAMANOUCHI, T.
- PIII-6. Seasonal and annual variations of column water vapor and column liquid water in the atmosphere off the coast of Lüow-Holm Bay, Antarctica derived from SSM/I data. KONISHI, H. and WADA, M.

Session IV

- PIV-1. The distribution of dissolved organic carbon nitrogen and phosphorus in the Indian sector of the Southern Ocean. DAFNER, E. and GOEYENS, L.
- PIV-2. General regularities of total organic phosphorus distribution in the Atlantic sector of the Southern Ocean. DAFNER, E.V.
- PIV-3. Preliminary studies on the effects of UV-B irradiation on the lipids of Antarctic marine micro-algae. SKERRATT, J., DAVIDSON, A., NICHOLS, P. and McMEEKIN, T.
- PIV-4. The relationships of Antarctic krill (*Euphausia superba* DANA) variability with westerlies fluctuations in the Antarctic Peninsula area. NAGANOBU, M., KUTSUWADA, K. and SASAI, Y.
- PIV-5. Light environment and its determinative role on bio-optical relationships in south-west Atlantic sector of Antarctic Ocean. MAHAPATRA, K., MATSUMURA, S., KAWAGUCHI, S. and SENGA, Y.
- PIV-6. Palmer LTER: Temporal dynamics and regulation of coastal phytoplankton communities in spring and summer 1991-1994. MOLINE, M.A. and PRÉZELIN, B.B.
- PIV-7. Long-term observation of zooplankton biomass in the Indian sector of the Southern Ocean. TAKAHASHI, K. and TANIMURA, A.
- PIV-8. The Antarctic fish *Trematomus bernacchii* as biomonitor of human activity at Terra Nova Bay Station (Antarctica). BARGAGLI, R., CORSOLINI, S., FOCARDI, S., FOSSI, C. and SANCHEZ-HERNANDEZ, J.C.

- PIV-9. Respiration rate of the necrophagous amphipod *Eurythenes gryllus* in Antarctic deep-waters. TAKEUCHI, I. and WATANABE, K.
- PIV-10. Adélie penguin census in the Syowa and the Prince Olav Coast areas, East Antarctica in the 1994/95 season. WATANABE, K. and SATO, T.
- PIV-11. Springtime peaks of trace metals in east Antarctic snow. IKEGAWA, M., KIMURA, M., HONDA, K., MAKITA, K., MOTOYAMA, H., FUJII, Y. and ITOKAWA, Y.
- PIV-12. Taxonomical and ecological studies of soil algae in Yukidori Valley, Antarctica. NAKANO, T., YAMASAKI, H., KANDA, H. and DEGUCHI, H.
- PIV-13. Algal flora in Cape Adare (Antarctica). Fukushima, H., Ko-Bayashi, T. and YOSHITAKE, S.
- PIV-14. Life cycles of some chaetophoralean algae in Antarctica. IHDA, T., NAKANO, T., OHTANI, S. and DEBUCHI, H.