

ANTARCTIC RECORD Vol. 40, No. 1

CONTENTS

Scientific Paper

- Anomaly in the orientation angle of morning side Pc5 geomagnetic pulsations
observed at Syowa Station (in Japanese) *Ken-ichi Kato* ... 1

Scientific Notes

- Change of earth environment due to the decreasing geomagnetic field
—The necessity of observation in Brazilian geomagnetic anomaly region— *Kazuo Makita* ... 15
- Development of the JARE deep ice coring system (III) (in Japanese)
.... *Akiyoshi Takahashi, Yoshiyuki Fujii, Hideki Narita, Yoichi Tanaka,
Hideaki Motoyama, Kunio Shinburi, Morihiro Miyahara,
Nobuhiko Azuma, Yoshiki Nakayama and Okitsugu Watanabe* ... 25
- Summer changes in the vertical distribution of chlorophyll-a in Boeckella Lake
(Hope Bay, Antarctic Peninsula) *Irina Izaguirre, Alicia Vinocur and Gabriela Mataloni* ... 43
- Quantitative chemical analyses of rocks with X-ray fluorescence analyzer:
(2) Trace elements (in Japanese) *Yoichi Motoyoshi, Hideo Ishizuka and Kazuyuki Shiraishi* ... 53

Reports

- Activities of the summer party of the 31st Japanese Antarctic Research Expedition
in 1989–1990 (in Japanese) *Masashi Sano* ... 64
- Report of the 33rd Japanese Antarctic Research Expedition
—Activities of the summer party (1991–1992) and wintering party (1992)—
(in Japanese) *Mitsuo Fukuchi and Masashi Sano* ... 83