

# Parallel session for Oceanic CO<sub>2</sub> Observations

## In the Indian-Southern Oceans

### Monday, March 17 (Meeting room-1, 1F, Climate Change Research Hall)

9:30-10:00 Registration

### Opening session (at Conference Room, 1F, Climate Change Research Hall)

10:00-10:05 **T. Fujitani (OCCCO, Japan)**, Welcome address

10:05-10:10 Logistic information by secretariat of the workshop

10:10-10:30 **S. Miyazaki (OCCCO, Japan)**, Outline of JACCO activities

Break 10:30-11:00 **Move to Meeting room-1, 1F, Climate Change Research Hall**

**Oceanic CO<sub>2</sub> Observations in the Indian-Southern Oceans** (Chair: M. Ishii)

#### Introduction

11:00-11:10 Self-introduction by participants

11:10-11:30 **M. Ishii (MRI, Japan)**, An Introduction

11:30-11:50 **B. Tilbrook (CSIRO, Australia)**, CO<sub>2</sub> observations south of Australia

11:50-13:00 Lunch break

#### Activities of each group - 1

13:00-13:20 **G. Hashida (NIPR, Japan)**, CO<sub>2</sub> measurements aboard icebreaker Shirase in the Indian Ocean sector

13:20-13:40 **S. Nakaoka (NIPR, Japan)**, 2002 austral summer time-series observations to the south of western Australia

13:40-14:00 **H. Y. Inoue, S. Kobayashi, D. Nomura (Hokkaido Univ., Japan), G. Hashida, S. Nakaoka, M. Fukuchi (NIPR, Japan), M. Ishii (MRI, Japan), S. Aoki, T. Nakazawa (Tohoku Univ., Japan)**,

Observation of carbonate system in the Southern Ocean and its related activity.

14:00-14:20 Break

#### Activities of each group - 2

14:20-14:40 **H.C. Shin (KORDI, Korea)**, Korea Polar Research Program's ocean biogeochemistry and ecosystem program; past and future

14:40-15:00 **J.H. Shim (Seoul National Univ., Korea)**, pCO<sub>2</sub> variability observed in the Southwest Atlantic sector of the Southern Ocean

15:20-15:40 **T.S. Rhee (KPRI, Korea)**, A projection of monitoring climate gases on the platform of Araon, the first Korean ice breaking research vessel

Break 15:40-16:00

16:00-16:20 **VVSS Sarma (NIO, India)**, The proposed carbon time-series stations in the northern Indian Ocean.

16:20-16:40 **C. Lo Monaco (IPSL, France)**, Carbon observations in the Southern Indian Ocean: from the French Observatory CARAUS to the European Integrated Project CARBOOCEAN

16:40- Discussion

18:15-20:15 Air-Sea Interaction Party at "Tsukuba Sansui-Tei"

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**Activities of each group - 3**

09:00-09:20     **A. Murata (IORGC/JAMSTEC, Japan)**, Increase of anthropogenic CO<sub>2</sub> in the Indian Ocean : Results from BEAGLE 2003.

**New Instruments**

09:20-09:40     **M. Ishii, S. Saito, T. Midorikawa (MRI, Japan), A. Murata (IORGC/JAMSTEC, Japan), T. Uji (AESTO, Japan)**, Development of dual-beam coulometer for precise DIC analysis.

09:40-10:00     **D. Sasano, T. Tokieda, M.Ishii, T. Nakano, T. Midoriakwa (MRI, Japan), A. Nakadate, H. Kamiya (JMA, Japan)**, A result of an efficiency test on new high-response DO sensor in the western North Pacific.

10:00-10:20     Break

10:20-10:40     **Y. Nakano (MIO/JAMSTEC, Japan)**, Development of pCO<sub>2</sub> sensor with small drifting buoy

10:40-13:00     Lunch break

**Wednesday, March 19**

Laboratory Tour to NIPR, Tokyo  
(Depart Tsukuba Frontier Hotel at 09:20- )