

S7

MONITOR Topic Session

State of the art of real-time monitoring and its implication for the FUTURE oceanographic study

Co-sponsored by Argo and GOOS

Co-Convenors: Jack Barth (U.S.A.), Dake Chen (China), David L. Mackas (Canada), Vyacheslav Lobanov (Russia), Young Jae Ro (Korea) and Hiroya Sugisaki (Japan)

As the technology for the Ocean Sciences and Engineering is advanced rapidly, the real-time data production will revolutionize the field investigation and laboratory analysis in many ways which will have the impact over the entire oceanographic paradigm in the end. This session will review the state of art technology for the ocean investigation on real-time and/or near real-time basis and will discuss the impact on the research and educational horizons made possible by it. Each nation will demonstrate their ocean monitoring network and their application. The exhibits from ocean monitoring companies are to occur in conjunction with this session.

Thursday, October 29 (9:00-17:20)

- 9:00 **Introduction by Convenors**
- 9:05 **Howard J. Freeland (Invited)**
The state of the art of real-time monitoring – The Argo experience (S7-5645)
- 9:35 **Tsuyoshi Kitamoto, Hirotaka Hamanaka, Asako Toyozumi, Satoshi Tanaka, Hiroko Arataki, Yoichiro Ishibashi, Yukio Kishimoto, Hideaki Nakata, Satoru Futatsumachi, Joji Ishizaka, Hideaki Maki, Shuhei Nishida, Yukihiko Nojiri, Haruo Ogi, Yoshihisa Shirayama and Shinsuke Tanabe**
Has pollution of the sea around Japan become better? A discussion based on more than 10 years of monitoring at depths up to 4000m (S7-5765)
- 9:55 **Elena A. Shtraikhert, Sergey P. Zakharkov and Tatyana N. Gordeychuk**
Some features of the distribution chlorophyll *a* in the north-western part of the Sea of Japan based on near real-time data (S7-5593)
- 10:15 **Young Baek Son, Joji Ishizaka and Young-Sang Suh**
Detection of *Cochlodinium polykrikoides* blooms using spectral classification in the South Sea of Korea (SSK) (S7-5665)
- 10:35 **Coffee / tea break**
- 10:55 **Kelly J. Benoit-Bird (Invited)**
Trophic cascades in Hawaii's nearshore ecosystem: Using observing technology to understand ecological interactions (S7-5649)
- 11:25 **Hiroya Sugisaki and K. Sawada**
Real-time monitoring for mesopelagic fish abundance using J-QUEST integrated system of echosounder and stereo TV cameras (S7-5611)
- 11:45 **Yury N. Morgunov, Yury A. Polovinka and Dmitry S. Stroykin**
Acoustic monitoring of hydrophysical processes in ocean shelf zones (S7-5740)
- 12:05 **Natheer M. Alabsi, Hideaki Tanoue, Teruhisa Komatsu, Isamu Mitani, Mitsuhiro Kato, Toyomitsu Horii, Ichiro Aoki and Nobuyuki Miyazaki**
Measurement of swimming behavior of alfoncino *Beryx splendens* in experimental tank using micro-data logger (S7-5929)
- 12:25 **Lunch**

- 14:00 **Tomowo Watanabe, Manabu Shimizu, Takashi Setou, Hiroshi Kuroda, Masachika Masujima and Makoto Okazaki (Invited)**
Ocean monitoring system operated by fisheries institutes at waters around Japan (S7-5932)
- 14:30 **John A. Barth, Justin Brodersen, Francis Chan, Anatoli Y. Erofeev, Murray D. Levine, Kim Page-Albins, Stephen D. Pierce, Craig Risien, Laura Rubiano-Gomez, R. Kipp Shearman and B. Walton Waldorf**
An expanding observatory to monitor hypoxia off the Oregon (U.S.A.) coast (S7-5949)
- 14:50 **Tomoharu Senjyu, Takeshi Matsuno, Sang-Hyun Kim and Ig-Chang Pang**
Monitoring of the Changjiang Diluted Water around the Jeju and Tsushima Straits using fisheries trap-nets (S7-5894)
- 15:10 **Kwang-Soon Park, Dong-Young Lee, Jae-Il Kwon, Kwan Chang Lim, Sang-Ik Kim and Ki-Chun Jun**
Development of real-time coastal monitoring network and operational oceanographic system in Korea (S7-5992)
- 15:30 ***Coffee / tea break***
- 15:50 **Dong-Young Lee (Invited)**
Status of real-time data exchange and strategy for the development of regional GOOS (S7-5984)
- 16:20 **Gennady A. Kantakov, Viktor S. Tambovsky, Alexey O. Bobkov and Evgeny G. Lunev**
Surface currents new data collected during 2008-2009 Argo's ice/ocean drifters. Prototype trials in the Sea of Okhotsk (S7-5747)
- 16:40 **Yasumasa Miyazawa, Ruo Chao Zhang, Sergey M. Varlamov, Takashi Setou, Daisuke Ambe and Tomowo Watanabe**
Roles of *in situ* profile data obtained by Japanese fishery research agencies in quality of the eddy-resolving ocean reanalysis data: FRA-JCOPE2 (S7-5729)
- 17:00 **David G. Foley, Elizabeth A. Becker and Karin Forney**
Integrating ocean observing data to enhance protected species spatial decision support systems (S7-5953)
- 17:20 ***Session ends***

S7 Posters

- S7-5533 **Sirajuddin M. Horaginamani and M. Ravichandran**
A study on impacts of anthropogenic CO₂ on oceans
- S7-5646 **Howard J. Freeland and the Argo Steering Team**
Argo – An ocean observing system for the 21st century
- S7-5699 **Xiutang Yuan, Aihua Chen, Yibing Zhou, Haiying Liu and Dazuo Yang**
The influence of cadmium on the antioxidant enzyme activities in polychaete *Perinereis aibuhitensis* Grube (Annelida: Polychaeta)
- S7-5709 **Jingfeng Fan and Hongxia Ming**
Fecal coliform and typical enteric virus in representative bathing beaches of China
- S7-5710 **Zhen Wang, Zhengxian Yang, Dongmei Zhao and Ziwei Yao**
Sources and deposition of heavy metals, nutrients and PAHs in the atmosphere of the North Yellow Sea
- S7-5808 **Shin-ichi Ito, Yugo Shimizu, Shigeho Kakehi, Fumitake Shido, Taku Wagawa, Kazuyuki Uehara, Toshiya Nakano and Masafumi Kamachi**
A profiling mooring buoy to observe mixed layer formations in the western North Pacific and its combination with a deeper type underwater glider
- S7-5865 **Koji Kakinoki, Tatsuro Watanabe, Katsumi Takayama and Osamu Katoh**
Behavior of the cold water area off the Sado Island in the Japan Sea detected from satellite altimeter data
- S7-5927 **Hisashi Yamaguchi, Young Baek Son, Eko Siswanto, Joji Ishizaka, Sinjae Yoo, Yu-Hwan Ahn, Sang-Woo Kim, Junwu Tang, Hiroshi Kawamura and Yoko Kiyomoto**
Development and validation of a new satellite chlorophyll *a* algorithm in the Yellow and East China Seas with relation to suspended sediment concentration
- S7-5928 **Yoshiyuki Nakano, Tetsuichi Fujiki and Shuichi Watanabe**
Development of compact drifting buoy for sea surface *p*CO₂ monitoring

