Abstract

Workshop for ocean colour data collection, distribution and utilization for East Asian coastal waters (Asian Workshop on Ocean Color: AWOC)

18-19 December 2010

The 7th Korea-Japan Workshop on Ocean Color Remote Sensing (KJWOC)

18-20 December 2010

Domestic Meeting on Ocean Color Research in Japan

20 December 2010

Hakodate, Hokkaido, Japan

Schedule

18 December 2010 (Meeting room)
Opening
Oral presentation for the Asian WS and KJWOC
Poster Presentation

19 December 2010 (Audio-visual room)
Oral presentation for the Asian WS and KJWOC
Discussion for the Asian WS

20 December 2010 (Meeting room)
Discussion for the KJWOC
Domestic meeting (Japanese)

Sponsors

- Japan Society for the Promotion of Science (JSPS)
- Faculty of Environmental Earth Science, Hokkaido University
- Hydrospheric Atmospheric Research Center (HyARC), Nagoya University
- Faulty of Fisheries Sciences, Hokkaido University

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Program

Day 1 (18 December 2010) at Meeting Room

9:00-9:10 Opening & Logistics announcement (J. Ishizaka, T. Hirata)

Session 1: Towards Operational Applications of Ocean Colour Research [1]: Societal Need (Chair H-S. TongPhuoc)

9:10-9:30 (G. Terauchi/NPEC)
Integration of remote sensing and *in-situ* observation data for assessment of marine ecosystem services; a case study in Nanao Bay, Japan

9:30-09:50 (S. Saitoh/Hokkaido Univ.)
Research and development of integrated coastal fisheries information system in southern Hokkaido, Japan

09:50-10:10 (T. Oberding/Univ. Hawaii, Manoa)
A Regional Scale Site Suitability Framework for Aquaculture in Offshore Zones; A Case Study on O'ahu, Hawaii

10:10-10:30 (S. Matsumura/National Research Institute of Far Seas Fisheries)
Ocean Color images as fisheries information

10:30-10:50 (H-R. Yoo/KORDI)
Introduction to GOCI data distribution service

10:50-11:10 [Break]

Session 2: Ocean Colour Applications for Coastal Waters [1] (Chair Y-B. Son)

11:10-11:20 (J. Ishizaka/HyARC, Nagoya Univ.)
Toward reduction of red tide damage with satellite ocean color data

11:20-11:40 (J-K. Choi/KORDI)
A study on the turbidity change in the coastal area using remotely sensed data

11:40-12:00 (W. Yang/Univ. Tsukuba)
Retrieval of water constituent concentrations in case II waters by a relaxed matrix inversion method

12:00-12:20 (P. Singhruck/Chulalongkorn Univ.)
Improving coral reef habitat mapping with high-resolution multi-spectral WorldView-2 data

12:20-12:40 (Y-B. Son/KORDI)
Preliminary study for validation of the Geostationary Ocean Color Imager (GOCI) Level 2 products

12:40-13:50 [Lunch]

Session 3: Ocean Colour Applications for Coastal Waters [2] (Chair A. Buranapratheprat)

13:50-14:10 (S-I. Cho/KORDI)
In-Orbit Radiometric Calibration and Performance Assessment of Geostationary Ocean Color Imager

14:10-14:30 (M. Toratani/Tokai Univ.)

Problems of atmospheric correction in Tokyo Bay

14:30-14:50 (H. Kobayashi/Univ. Yamanashi)
Water-leaving radiance and optical properties of suspended solid measured in coastal waters

14:50-15:10 (S-H. Son/IMSG, NOAA)
Primary production modeling in the Yellow and East China Seas: formulation for the vertical distribution of the diffuse attenuation coefficient.

15:10-15:30 (Y. Sakuno/Hiroshima Univ.)
Feasibility study of chlorophyll estimation based on LCI technique in the coast using ALOS AVNIR-2 data

15:30-15:50 [Break]

Session 4: Optical Theories in Ocean Colour Remote Sensing (Chair T. Hirata)

15:50-16:10 (Z-P. Lee/Mississippi State Univ.)
Ocean Color Remote Sensing: Results of optically deep and optically shallow waters

16:10-16:30 (C-C. Liu/ National Cheng Kung Univ.)
Genetic and semianalytical algorithm (GASA) for retrieving constituents of water bodies from remote sensing of ocean color

16:30-16:50 (J. Phaksopa/Kasetsart Univ.)
Influence of the bubbles on backscattering of light passing through the water and remote sensing data

16:50-18:00 **Poster Session**

Day 2 (19 December) at Audio-Visual Room

Session 5: Oceanographic Applications [1]: Polar Regions (Chair S. Shang)

9:00-9:20 (T. Hirawake/Hokkaido Univ.)
Primary productivity model in the polar oceans

9:20-9:40 (J-S. Park/KORDI)
Variability of chlorophyll-a in the southwest Atlantic sector of the Southern Ocean: Strong topographic effects and weak seasonality

9:40-10:00 (T. Iida/NIPR)
Interannual variability of coccolithophore *Emiliania huxleyi* blooms in association with changes of water column stability in the eastern Bering Sea from 1997 to 2008

10:00-10:20 [Break]

Session 6: Oceanographic Applications [2]: Oceans (Chair S. Saitoh)

10:20-10:40 (C-J. Jang/KORDI)
Response of the North Pacific ocean mixed layer depth to global warming and its impact on primary production

10:40-11:00 (K. Yamada/Keimyung Univ.)
Occurrence of spring bloom in the Japan/East Sea derived from satellite ocean color for 13 years

11:00-11:20 (M. Fujii/Hokkaido Univ.)
The value of adding optics to ecosystem models: a case study

11:20-11:40 (T. Hirata/Hokkaido Univ.)
Marine Biogeochemistry and Ecological Research under the Global Observation Mission

11:40-12:40 [Break]

Session 8: Satellite Missions (Chair J. Ishizaka)

12:40-13:00 (H. Murakami/EORC, JAXA)
Status of GCOM-C science project

13:00-13:20 (Y-H. Ahn/KORDI)
Overall In-Orbit Test Status of GOCI

Session 9: Ocean Colour Research activities in the East Asia [1] (Chair S-I. Cho)

13:20-13:40(H-S. TongPhuoc/Institute of Oceanography,Vietnam)
The application of Ocean color remote sensing techniques in Marine Science. Potential and Realistic Utilities in Vietnam

13:40-14:00 (J-H. Ryu, KORDI)
GOCI application and GOCI-II plan

14:00-14:20 (H-J. Han, KORDI)
Recent Activities and Advances of GOCI Data Processing System

14:20-14:40 [Break]

Session 10: Ocean Colour Research Activities in the East Asia [2] (Chair Y-H. Ahn)

14:40-15:00 (A. Buranapratheprat/Burapha Univ.)
Application of satellite ocean color for oceanographic studies in the Gulf of Thailand

15:00-15:20 (S. Shang/Xiamen Univ.)
Application of satellite ocean color data in biogeochemistry researches in the China Sea

15:20-16:20 **Discussions [1]:**
How can we collate our effort for effective research in Asia?

16:20-16:30 [Short Break]

16:30-17:10 **Discussions [2]:**
What do we need to achieve a conclusion from the above discussion?

17:10-17:20 Concluding Remarks (J. Ishizaka & T. Hirata)

Day 3 (20 December) at Meeting Room

09:00-12:00 **KJWOC-Discussion**
Collaboration of GOCI/SGLI Cal/Val and algorithm development

13:00- 15:30 **SGLI/GCOM domestic meeting**

Poster Presentation

16:50-18:00, 18 December 2010 (Day 1) at Meeting Room

C-J. Jang/KORDI
Mixed layer depth variability and its relation with chlorophyll in the North Pacific Ocean

J-Y. Park/KORDI
Variability of chlorophyll associated with ENSO and its biological feedback in the Equatorial Pacific

E. Siswanto/HyARC, Nagoya Univ.
A new practical method to discriminate red tide type from non-phytoplankton dominated waters using MODIS ocean color data in the western part of Seto Inland Sea, Japan

T. Shibata/HyARC, Nagoya Univ.
Changes of phytoplankton pigment and photosynthetic efficiency as a photo-adaptive response to light variation caused by wind and tide in Ariake Bay, Japan

S. C.Tripathy/HyARC, Nagoya Univ.
Modification of Vertically Generalized Production Model (VGPM) for Turbid Waters of Ariake Bay, Southwestern Japan

H.Yamaguchi/HyARC, Nagoya Univ.
Seasonal and Spring Interannual Variation of Satellite Chlorophyll-*a* with Reduced Influence of Suspended Sediment in the Yellow and East China Seas

T. Tagami/HyARC, Nagoya Univ.
Variability of Surface Residual Current observed by HF radar in Ariake Bay

T. Okumura/HyARC, Nagoya Univ.
Verification of the satellite chlorophyll-*a* concentrations and local modification of the algorithm in the Ise Bay

Y-J. Xu /HyARC, Nagoya Univ.
Relationship between interannual spring SST variability and jellyfish abundance in the northern East China and Yellow Seas

N. Kagawa/Hokkaido Univ.
Global estimation of dimethylsulfide (DMS) using phytoplankton groups detected from satellite data

A. Fujiwara/Hokkaido Univ.
Empirical approach to determine phytoplankton community size structure using optical properties in the Western Arctic Shelves

M. Hayashi/Tokai Univ.
Sensitivity Analysis of iron uptakeusing physical-biological coupled ocean carbon cycle model