

W1 **BIO Workshop** **Natural supplies of iron to the North Pacific and linkages between iron supply and ecosystem responses**

Co-Sponsored by SOLAS

Co-Convenors: Fei Chai (U.S.A.), William R. Crawford (Canada) and Shigenobu Takeda (Japan)

In the subarctic North Pacific Ocean, iron plays a central role in regulating phytoplankton productivity and pelagic ecosystem structure. There are several processes that supply iron from land, shelf sediment and deep waters to the upper ocean. The goal of this workshop is to examine mechanisms of these iron supply processes, including atmospheric deposition of mineral aerosols and combustion substances, lateral transport of coastal iron-enriched waters by eddies and boundary currents, and deep vertical mixing during winter or by strong tidal currents at narrow straits. Such knowledge will be used to identify key biogeochemical pathways that should be introduced into the ecosystem models and to plan international scientific programs for better understanding of marine ecosystem responses to changing iron supplies in the North Pacific.

Sunday, October 25 (9:00-15:30)

- 9:00 **Introduction by Convenors**
- 9:05 **Kenneth W. Bruland (Invited)**
Reactive iron in the subarctic North Pacific; natural iron enrichments (W1-5643)
- 9:35 **Jun Nishioka, Tsuneo Ono, Hiroaki Saito, Takeshi Nakatsuka, Shigenobu Takeda, Wm. K. Johnson and C.S. Wong**
Comparison of iron distribution between the western and the eastern subarctic Pacific (W1-5750)
- 9:55 **Eric Roy, Mark Wells and Fei Chai**
The role of Haida eddies in iron transport to the eastern subarctic Pacific Ocean (W1-5681)
- 10:15 **Hiroaki Saito, Kazutaka Takahashi, Yoshiko Kondo, Jun Nishioka, Tomonori Isada, Akira Kuwata, Miwa Nakamachi, Yuji Okazaki, Yugo Shimizu and Koji Suzuki**
Factors controlling the spatial variability of spring bloom dynamics in the Oyashio Region (W1-5691)
- 10:35 **Coffee / tea break**
- 11:00 **Roberta C. Hamme, Sonia Batten, William Crawford, Kathleen Dohan, Steven Emerson, Karina Giesbrecht, Jim Gower, Maria Kavanaugh, Deirdre Lockwood, Christopher L. Sabine and Frank Whitney**
Natural volcanic iron fertilization of the Subarctic North Pacific (W1-5905)
- 11:20 **Ai Hattori-Saito, Tomonori Isada, Natsuko Komazaki, Hiroshi Hattori, Kenshi Kuma, R. Michael L. McKay, Tsutomu Ikeda and Koji Suzuki**
Fe nutrition in micro-sized diatoms in the Oyashio region of the NW subarctic Pacific during spring 2007 (W1-5748)
- 11:40 **Keisuke Uchimoto, Tomohiro Nakamura, Jun Nishioka, Humio Mitsudera, Michiyo Yamamoto-Kawai, Kazuhiro Misumi and Daisuke Tsumune**
A simulation of chlorofluorocarbons in the Sea of Okhotsk (W1-5751)
- 12:00 **Kazuhiro Misumi, Daisuke Tsumune, Yoshikatsu Yoshida, Takeshi Yoshimura, Keisuke Uchimoto, Tomohiro Nakamura, Jun Nishioka, Humio Mitsudera, Frank O. Bryan, Keith Lindsay, J. Keith Moore and Scott C. Doney**
Numerical simulation of iron export from the Sea of Okhotsk to the North Pacific (W1-5907)

- 12:20 **Lunch**
- 14:00 **Yasuhiro Yamanaka, S. Lan Smith, Hiroshi Sumata, Naoki Yoshie, Taketo Hashioka, Takeshi Okunishi, Masahiko Shigemitsu, Maki N. Noguchi and Naosuke Okada (Invited)**
New NEMURO-based model incorporating the iron cycle (W1-5836)
- 14:30 **Stephanie Dutkiewicz, Fanny Monteiro and Mick Follows (Invited)**
Interplay between ecosystem structures and iron availability in a global marine ecosystem model (W1-5759)
- 15:00 **Discussions**
- 15:30 **Workshop ends**
Coffee / tea break
- 16:00 **WG-22 Meeting**
- 18:00 **Meeting ends**

W1 Poster

- W1-5936 **Youngju Lee and Joong Ki Choi**
Effect of Asian dust on the picophytoplankton growth rate and cell cycle