

1.1 Warming Coastal Seas & Shrinking Sea Ice

Summary

Project Leader(s)

Gratton, Yves
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This project will correlate sub-surface ocean properties recorded by moored instruments to satellite records of surface temperature, chlorophyll, suspended sediments and sea ice type and thermodynamic state. The objectives are 1) to provide long-term detailed observations of the ocean-sea-ice-atmosphere coupling in the Canadian High Arctic, 2) to identify the oceanic/atmospheric processes underlying changes in these variables and 3) to provide baseline physical information required to understand the complexities of physical-biological coupling in the high arctic marine environment.

People

Network Investigators

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Partners

IPY Federal Program Office
Royal Military College of Canada
Indian and Northern Affairs Canada - Northern Scientific Training Program
Fonds québécois de recherche sur la nature et les technologies
Conseil National de la Recherche Scientifique-Laboratoire d'Océanographie de Villefranche
Fisheries and Oceans Canada - Freshwater Institute
NASA - National Aeronautics and Space Administration
Fisheries and Oceans Canada - Maurice Lamontagne Institute
Québec-Océan
Natural Resources Canada - Polar Continental Shelf Project

Publications

Articles Published in Refereed Publications

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Non-Refereed Contributions

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Rail, M.-E. and Gratton, Y., 2006, Seasonal Evolution of the Circulation, Heat and Salt Budget in the North Water Polynya, Baffin Bay, Baffin Bay., CMOS Annual Congress Proceedings, Toronto, Ont., May 29-June 1, 1, Published

April, A., Gratton, Y. and Barber, D., 2006, Formation et fonte de la glace de mer de la polynie NOW, 74e Congrès Annuel de l'ACFAS Proceedings, McGill University, Montréal, Qc., May 15-19., 1, Published

Gratton, Y., Kamali Nezhad, M., Galbraith, P., Prieur, L. and Bélanger, C., 2006, Water Column Variability at the CASES Winter Station (Franklin Bay, Canada), CASES workshop Proceedings, Winnipeg, Man., February, 1, Published

Lukovich, J.V., Barber, D., 2007, Sea Ice Response to Stratosphere-Surface Coupling in the Beaufort Sea, 2007 ArcticNet Annual Conference Proceedings, 27, Published

Prinsenburg, S., Wang, F., Su, J., Wright, D., Golloway, G., Lu, Y. , 2007, Arctic Ocean and Caa Circulations in Global Ocean-Ice Modeling, 2007 ArcticNet Annual Conference Proceedings, 31, Published

Dumont, D., Gratton, Y., Arbetter, T., 2007, Modeling of the North Water Polynya Ice Bridge, 2007 ArcticNet Annual Conference Proceedings, 49, Published

Prinsenberg, S., Hamilton, J., Lu, Youyu, L., Su, J., 2007, Observation and Simulation by Models: The 1998 to 2004 Variability of Oceanographic Fluxes Through the Canadian Archipelago, 2007 ArcticNet Annual Conference Proceedings, 85, Published

Specialized Publications

Langlois, A., Fisco, T., Galley, R. and Barber, D.G., 2006, CASES Subgroup 2.2: Ice-atmopshere interactions and biological linkages, Data Report , CEOS-Tech-2004-09-01, 276 p., Published

Barber, D.G. and Massom, R.A., 2007, The Role of Sea Ice in Arctic and Antarctic Polynyas., In W.O. Smith and D.G. Barber (eds). Polynyas:Windows to the World. Elsevier Oceanography Series 74. , 1-54, Published

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- Guillot, P., 2007, Processing Note for the ArcticNet Cruise 0603, Québec-Océan Technical Report, Rimouski, 88pp., Published
- Guillot, P., 2007, Rapport sur le traitement des données ADCP (Acoustic Doppler Current Profiler), Québec-Océan Technical Report, Rimouski, 93pp., Published
- Guillot, P., 2007, Dissolved Oxygen Tests to Configure Sea-Bird Data Processing for Cruise, ArcticNet Cruise 0602, Québec-Océan Technical Report, Rimouski, 35pp., Published
- Guillot, P., 2007, Dissolved Oxygen Tests to Configure Sea-Bird Data Processing for Cruise, ArcticNet Cruise 0603, Québec-Océan Technical Report, Rimouski, 53pp., Published
- Kamakinezhad, M. and Rail, M.-E., 2007, Protocole de traitement des données des appareils des lignes de mouillages, INRS-Eau, Terre et Environnement Technical Report, Quebec, 1, Published
- Kamakinezhad, M. and Rail, M.-E., 2007, Rapport sur le contrôle de qualité des données de mouillages: ArcticNet 2004-2005, INRS-Eau, Terre et Environnement Technical Report, 1, Published
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- Lago, V. and Guillot, P., 2007, Complément au protocole de traitement des données ADCP (Acoustic Doppler Current Profiler), Québec-Océan Technical Report, Québec-Rimouski, 8pp., Published
- Rail, M.-E., 2007, Rapport sur le traitement des données des appareils des lignes de mouillages: ArcticNet 2004-2005, INRS-Eau, Terre et Environnement Technical Report, 23pp., Published