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Oceanography--Tom Sanford"; "Prospects for Oceanography in 2025--Michael Gregg"; "Oceanography in 2025--John Orcutt"; "Thoughts on Oceanography in 2025--Daniel Rudnick"
"The Role of Observations in the Future of Oceanography--Raffaele Ferrari"; "The Future . . . One More Time--Rob Pinkel"; "The Role of Acoustics in Ocean Observing Systems--Peter Worcester and Walter Munk"; "Oceanography in 2025--Walter Munk"; "Physical Oceanography in 2025--Chris Garrett"; "A Vision of Future Physical Oceanography Research--James J. O'Brien"; "Some Thoughts on Logistics, Mixing, and Power--J. N. Moum"; "Ageostrophic Circulation in the Ocean--Peter Niiler"
"The Future of Ocean Modeling--Sonya Legg, Alistair Adcroft, Whit Anderson, V. Balaji, John Dunne, Stephen Griffies, Robert Hallberg, Matthew Harrison, Isaac Held, Tony Rosati, Robbie Toggweiler, Geoff Vallis, and Laurent White"; "Towards Nonhydrostatic Ocean Modeling with Large-eddy Simulation--Oliver B. Fringer"; "Simulations of Marine Turbulence and Surface Waves: Potential Impacts of Petascale Technology--Peter P. Sullivan"; "Computational Simulation and Submesoscale Variability--James C. McWilliams"; "Ocean Measurements from Space in 2025--A. Freeman"
"Understanding Phytoplankton Bloom Development--Bess Ward and Mary Jane Perry"

Sommario/riassunto

On January 8 and 9, 2009, the Ocean Studies Board of the National Research Council, in response to a request from the Office of Naval Research, hosted the "Oceanography in 2025" workshop. The goal of the workshop was to bring together scientists, engineers, and technologists to explore future directions in oceanography, with an emphasis on physical processes. The focus centered on research and technology needs, trends, and barriers that may impact the field of oceanography over the next 16 years, and highlighted specific areas of interest: submesoscale processes, air-sea interactions, basic and applied research, instrumentation and vehicles, ocean infrastructure, and education. To guide the white papers and drive discussions, four questions were posed to participants: What research questions could be answered? What will remain unanswered? What new technologies could be developed? How will research be conducted?
