

Near-surface Transport in and around Cape Cod Bay, its Seasonal Variability, and Response to Wind



A colloquium sponsored by the Society of Physics Students

Margaret Gregory

UMW Alum ('21), PhD Candidate at MIT

Motivated by the potential release of radioactive wastewater from the Pilgrim Nuclear Power Station (PNPS) into Cape Cod Bay, this talk will discuss near-surface transport in and around Cape Cod Bay. Key questions include: what are the dominant transport pathways, how do they vary in time on seasonal to interannual scales, and what is the role of wind in driving this variability? In order to determine the probable spreading pathways of a hypothetical wastewater plume, a Lagrangian approach is adapted in which large ensembles of simulated trajectories are estimated using velocity fields obtained from a high-resolution numerical model. Statistical methods are then applied to the large ensembles of trajectories in order to characterize the transport.



Friday, March 29th, 2024
4:00 PM EST in Jepson 225

Please contact SPS president Carly Healy at chealy2@mail.umw.edu with any questions!

Hosted by the Department of Chemistry and Physics

Open to all who wish to attend

