Woods Hole Oceanographic Institution Biology Department Seminar

Thursday, August 25, 2016 Redfield Auditorium – 12:00 Noon



The two sides of the bloom

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The development of the North Atlantic Bloom is studied using in situ data from nine profiling floats. The observations suggest that blooms start in late winter, when phytoplankton growth rates become lower than dilution rates triggering a decoupling of phytoplankton from their predators. The change in phytoplankton biomass is, however, low during this phase. The explosion in phytoplankton population occurs later, in early spring, when the shoaling of the mixing layer triggers a second decoupling in the phytoplankton-predator balance. We compared these results with output from a marine ecosystem model run at MIT and found that model misrepresents the dynamics of the blooms, most likely because the model does not represent the tight coupling between phytoplankton and grazers.