
Woods Hole Oceanographic Institution
**Special Biology Department
Seminar**



Tuesday, May 30, 2017
Redfield Auditorium – 12:00 Noon

**Dante's 9th Circle of Hell is Ice (a fact that is
not unrelated to the study of light and
algae in polar ocean ecosystems)**

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WHOI Biology Department**

Polar oceans contain numerous unusual interactions in marine photosynthetic ecology, one of which is the spatial juxtaposition of two distinctly different algal ecosystems: those living in sea ice, and those living in the water column below. These two systems have historically been treated separately, studied by two largely distinct research communities, yet they compete for the same resources and exchange biomass seasonally, likely with important ecological ramifications. The key to developing a synoptic understanding of photosynthesis and production in polar oceans is to understand the seasonal distribution of light and algal biomass within and below sea ice, but longstanding measurement and observational realities continue to hinder our progress with even basic questions in polar photosynthetic ecology. Here I present several lines of research that my lab is pursuing to eliminate some of these longstanding observational challenges, and illustrate some advances they have enabled in our ecological understanding of algal photosynthesis in high-latitude oceans.