Summer cruise (24 July – 6 August) listing cruise participants and brief research objectives

Greyson Adams (UH)  Frank Aylward (UH)  Abby Bate (UH)  Angie Boysen (UW)

Randie Bundy (UH)  Jim Burkitt (UH)  Laura Carlson (UW)  Dave Caron (USC)

John Casey (UH)  Tara Clemente (WHOI)  James Collins (USC)  Paige Connell (USC)

Brady Cunningham (USC)  Ken Doggett (UH)  Natalie Dornan (UH)  Bryndan Durham (UW)
Institute affiliation and brief activities

**Institute**: University of Washington. PI Ginger Armbrust  
**Cruise participants**: Francois Ribalet and Bryndan Durham (Kilo Moana)  
**Research Objective**: Underway flow cytometry using SeaFlow, discrete flow cytometry sampling, eukaryote metatranscriptomics over diel cycle, effect of daylength on Prochloroococcus growth dynamics.

**Institute**: MIT. PI Ed Boyle  
**Cruise participants**: Chris Hayes (KM)  
**Research Objective**: Surface ATE and Niskin bottle sampling for Fe variability and Th isotopes. One vertical profile using VANES and 2 Niskin casts for Th
Institute: University of Southern California. PI Dave Caron
Cruise participants: Dave Caron and Paige Connell (Kilo Moana) Alyssa Gellene (KOK)
Research Objective: Kilo Moana: Phytoplankton growth and grazing using 48 hr deckboard incubations, uptake of bacteria sized-particles over the diel cycle, 18S and microscopy analysis of vertical profiles. KOK: fluorescent-labelled bacteria uptake experiments, analysis of net tows (hand-held) and sediment trap material

Institute: University of Hawaii. PI Matt Church
Cruise participants: Alex Nelson and Natalie Dornan (KOK)
Research Objective: Analysis of sinking particles using polyacrylimide gels deployed in PIT arrays, 14C assimilation in mesopelagic in particle-amended incubations, particle remineralization experiments

Institute: University of Hawaii. PI Ed DeLong
Cruise participants: Frank Aylward and Alice Vislova (Kilo Moana)
Research Objective: Bacterial metatranscriptomics over the diel cycle in the water column and using a Perceval incubator to vary daylength

Institute: Columbia University. PI Sonya Dyhrman
Cruise participants: Kyle Frischkorn, Sheean Haley, and Sonya Dyhrman (Kilo Moana)
Research Objective: Eukaryote (Niskin sampling) and Trichodesmium (net tows) metatranscriptomics over the diel cycle, nutrient enrichment experiment using a deckboard incubator

Institute: MIT. PI Mick Follows
Cruise participants: Chris Follett (KOK)
Research Objective: Elemental composition of diatom-diazotroph assemblages

Institute: University of Washington. PI Anitra Ingalls
Cruise participants: Angie Boysen and Laura Carlson (Kilo Moana)
Research Objective: Proteomics and metabolites over the diel cycle

Institute: University of Southern California. PI Seth John
Cruise participants: Brady Cunningham and Emily Townsend (KOK)
Research Objective: Trace metal analysis off water-column whole seawater and size-fractionated samples

Institute: University of Hawaii. PI Dave Karl
Cruise participants: John Casey, Sara Ferron, Morgan Linney (KM), Ken Doggett (KOK)
Research Objective: Production and respiration over the diel cyle, glycolic acid uptake and concentrations over the diel cycle, N2 fixation rate measurements, total and free DNA measurements

Institute: Technion University. PI Debbie Lindell
Cruise participants: Debbie Lindell and Dror Shitrit (KM)
Research Objective: Cyanophages and virus-like particles over the diel cycle. Possible short-term decay experiments of infective cyanophage samples
Institute: Woods Hole Oceanographic Institute. PI Dan Repeta
Cruise participants: Dan Repeta and Jordan Wingenroth (KM) Brandie Bundy (KOK)
Research Objective: KM: diel sampling of DOM, turnover measurements of amino and LMW acids, ultrafiltration to collect material for experiments. KOK: vertical profiles of ligands and analysis of ligand production during remineralization.

Institute: Woods Hole Oceanographic Institute. PI Ben Van Mooy
Cruise participants: James Collins and Justin Ossolinski (KOK)
Research Objective: Free drifting net traps to collect particles for experiments and remineralization measurements, export over the diel cycle.

Institute: Oregon State University. PI Angel White.
Cruise participants: Katie Watkins-Brandt and Marnie Jo Zirbel (Kilo Moana)
Research Objective: Measurements of transmissometry on the ships underway system. Optical profiles HyperPRO. 14C assimilation over 12/24 h period. 14C assimilation measurements to investigate how the length of the photoperiod influences Prochlorococcus growth dynamics. Microscopy counts of diazotrophs and protists.

Institute: University of California, Santa Cruz. PI Jon Zehr
Cruise participants: Hanna Farnelid, Britt Henke, and Kendra Turk-Kubo (KOK)