

CCE-P0704 ACTIVITY SCHEDULE

2 April

0800 Depart San Diego Harbor
1300 ETA test station, **33°12'N, 118°23'W** enroute to study region
1300 MVP test deployment
1400 GO-Flo bottles, test cast procedures, fill & soak
1500 MVP test #2
1600 MOCNESS test
1800 CTD test cast (CTD #1)
1900 Oozeki trawl test
2100 Continue transit to Point Conception study region

3 April

1600 Underway site survey - ALF
2200 ETA position **34°15'N, 120°50'W**, begin **CYCLE #1**
2300 CTD, water for zooplankton experiments

4 April

0000 Deploy sediment trap array
0100 Net tow, animals for experiments
0200 CTD, setup *in situ* experiments (200m)
0300 GO-Flo trace-metal sampling, setup grow-out experiments
0430 Deploy *in situ* (drift) array
0500 CTD, organics, bacteria, thorium (600 m)
0600 Deploy SOLOPC
0630 MVP – small bow-tie survey
1030 Bongo, zooplankton biomass & gut pig sampling
1130 CTD (¹⁴C-PP, PvsE), simultaneous Radiometer off stern
1300 IOP cast (hydrowire)
1430 MOCNESS, zooplankton sampling
1730 Thorium pump, Lihini surface pump
1900 CTD, water for evening experiments
2000 GO Flo trace-metal sampling & experiments
2100 Net tow, animals for experiments
2200 Bongo, zooplankton biomass & gut pig sampling
2300 MOCNESS, zooplankton sampling

5 April

0200 CTD, setup *in situ* experiments (200m)
0430 Recover/redeploy *in situ* array
0500 MVP – small bow-tie survey
1000 Bongo, zooplankton biomass & gut pig sampling
1100 CTD, simultaneous Radiometer off stern
1200 IOP cast (hydrowire)
1300 Bongo, zooplankton biomass & gut pig sampling
1400 Lihini, surface pump
1600 Bongo, zooplankton biomass & gut pig sampling

1800 Bongo, zooplankton biomass & gut pig sampling
1900 CTD, dilution experiment
2000 Bongo, zooplankton biomass & gut pig sampling
2200 Bongo, zooplankton biomass & gut pig sampling
2230 MOCNESS, zooplankton sampling

6 April

0100 Bongo/LOPC, zooplankton biomass & gut pig sampling
0200 CTD, setup *in situ* experiments (200m)
0400 Recover/redeploy *in situ* array
0430 Bongo, zooplankton biomass & gut pig sampling
0630 Bongo, zooplankton biomass & gut pig sampling
0730 GO-Flo trace-metal sampling
1000 Bongo/LOPC, zooplankton biomass & gut pig sampling
1100 CTD, simultaneous Radiometer off stern
1200 IOP cast (hydrowire)
1300 MOCNESS, zooplankton sampling
1800 CTD, water for evening experiments
1900 GO-Flo trace-metal sampling & experiments
2000 Thorium pump (deep cast)
2200 Net tow, animals for experiments
2300 Bongo, zooplankton biomass & gut pig sampling

7 April

0200 CTD, setup *in situ* experiments (200m)
0430 Recover/redeploy *in situ* array
0500 CTD organics, bacteria, thorium (600 m, at array position)
0600 MVP bow-tie survey
1000 Bongo, zooplankton biomass & gut pig sampling
1100 CTD, simultaneous Radiometer off stern (at array position)
1200 IOP cast (hydrowire) (at array position)
1300 MOCNESS, zooplankton sampling
1630 Oozeki trawl, deep (2 h) – [*Net damaged in screws*]
1800 CTD, water for evening experiments
1900 GO-Flo trace metal sampling, simultaneous Lihini surface pump
2100 Net tow, animals for experiments
2130 Bongo, zooplankton biomass & gut pig sampling
2200 Net tow, animals for experiments & gut pigment blanks
2300 MOCNESS, zooplankton sampling

8 April

0200 CTD, in situ & Th & organics (final samples only)
0300 Thorium pump
0400 Recover *in situ* (drift) array
0500 Recover sediment trap array
0630 CTD, bacteria experiments
0800 Recover SOLOPC
1100 Transit – Begin MVP transect to offshore CYCLE #2

9 April

1000 ETA position **33°39.5'N, 123°08'W**, begin CYCLE #2
1000 Deploy sediment trap array
1100 Bongo, zooplankton biomass & gut pig sampling
1200 CTD (¹⁴C-PP, PvsE), simultaneous Radiometer off stern
1300 IOP cast (hydrowire), biochem pump
1400 MOCNESS, zooplankton sampling
1700 Deploy SOLOPC
1800 Thorium pump, Lihini surface pump
1900 CTD, water for evening experiments
1930 GO-Flo trace-metal sampling & experiments
2100 Net tow, animals for experiments
2200 Bongo, zooplankton biomass & gut pig sampling
2300 MOCNESS, zooplankton sampling

10 April

0200 CTD, setup *in situ* experiments (200m)
0300 GO-Flo trace-metal sampling
0430 Deploy *in situ* array
0500 MVP – small bow-tie survey
1000 Bongo, zooplankton biomass & gut pig sampling
1100 CTD (¹⁴C-PP, PvsE)
1200 IOP cast (hydrowire)
1300 Bongo, zooplankton biomass & gut pig sampling
1400 Lihini surface pump, thorium pump
1600 Bongo, zooplankton biomass & gut pig sampling
1630 VPR test deployment
1800 Bongo, zooplankton biomass & gut pig sampling
1900 CTD, dilution experiment, thorium & organics
2000 Bongo, zooplankton biomass & gut pig sampling
2200 Bongo, zooplankton biomass & gut pig sampling

11 April

0100 Bongo/LOPC, zooplankton biomass & gut pig sampling
0130 Proceed to drift array station
0200 CTD, setup *in situ* experiments (200m)
0400 Recover/redeploy *in situ* array
0430 Bongo, zooplankton biomass & gut pig sampling
0630 Bongo, zooplankton biomass & gut pig sampling
0730 GO-Flo trace-metal sampling
1000 Bongo/LOPC, zooplankton biomass & gut pig sampling
1100 CTD, radiometer & biochem pump
1200 IOP cast (hydrowire)
1300 MOCNESS, zooplankton sampling
1500 VPR test deployment
1800 CTD, water for evening experiments
1900 GO-Flo trace metal sampling, simultaneous Lihini surface pump

2000 Oozeki trawl, euphotic zone (1 h)
2130 Net tow, animals for experiments
2200 Bongo, zooplankton biomass & gut pig sampling
2300 Oozeki trawl, deep (2 h)

12 April

0130 Proceed to drift array location
0200 CTD, setup *in situ* experiments (200m)
0400 Deploy *in situ* array
0430 Oozeki trawl, euphotic zone (1 h)
0530 GO-Flo trace-metal sampling
0700 Oozeki trawl, deep (2 h)
1000 Bongo, zooplankton biomass & gut pig sampling
1100 CTD, simultaneous Radiometer off stern (at array position)
1200 IOP cast (hydrowire) (at array position)
1300 Oozeki trawl, shallow (2 h)
1630 Oozeki trawl, deep (2 h)
1900 Thorium pump, simultaneous Lihini surface pump (array position)
2100 IOP cast (hydrowire)
2130 CTD Bio-optics (200 m); water for evening experiments
2200 Net tow, animals for experiments
2230 Bongo, zooplankton biomass & gut pig sampling
2300 MOCNESS, zooplankton sampling

13 April

0200 CTD, in situ & Th & organics (final samples only)
0400 Recover *in situ* (drift) array
0530 Recover sediment trap array
0700 Recover SOLOPC (asap after sediment trap recovery)
0900 Transit to Santa Barbara Harbor

14 April

1200 MVP site survey
1930 ETA position **34°13.2'N, 120°37.2'W**, begin **CYCLE #3**
2000 CTD, water for evening experiments
2100 Net tow, animals for experiments
2130 Bongo, zooplankton biomass & gut pig sampling
2200 MOCNESS, zooplankton sampling

15 April

0100 Deploy sediment trap array
0200 CTD, setup *in situ* experiments (200m)
0300 GO-Flo trace-metal sampling, setup grow-out experiments
0430 Deploy *in situ* (drift) array, **34°13.6'N, 121°11.6'W**
0800 Recover sediment trap (ran aground)
0900 Transit to position **34°13.6'N, 121°11.6'W**, begin **CYCLE #4**
1030 Bongo, zooplankton biomass & gut pig sampling
1130 CTD (¹⁴C-PP, PvsE)

1300 IOP cast (hydrowire)
1400 MOCNESS, zooplankton sampling
1530 Relocate to drift array position
2100 Recover drift array (complete night incubation in deck incubators)
2200 Transit to Cycle #4 position

16 April

0000 Deploy SOLOPC
0100 Deploy sediment trap array
0200 CTD, setup *in situ* experiments (200m)
0300 GO-Flo trace-metal sampling
0430 Deploy *in situ* array
0500 CTD, organics, bacteria, thorium (600 m)
0600 MVP – small bow-tie survey
1000 Bongo, zooplankton biomass & gut pig sampling
1100 CTD, simultaneous Radiometer off stern, biochem surface pump
1200 IOP cast (hydrowire)
1300 Bongo, zooplankton biomass & gut pig sampling
1400 Thorium pump
1600 Bongo, zooplankton biomass & gut pig sampling
1800 Bongo, zooplankton biomass & gut pig sampling
1900 CTD, full dilution experiments, thorium & organics
2000 Bongo, zooplankton biomass & gut pig sampling
2200 Bongo, zooplankton biomass & gut pig sampling

17 April

0100 Bongo/LOPC, zooplankton biomass & gut pig sampling
0200 CTD, setup *in situ* experiments (200m)
0400 Recover/redeploy *in situ* array
0430 Bongo, zooplankton biomass & gut pig sampling
0630 Bongo, zooplankton biomass & gut pig sampling
1000 Bongo/LOPC, zooplankton biomass & gut pig sampling
1100 CTD, simultaneous Radiometer off stern, biochem surface pump
1200 IOP cast (hydrowire)
1300 MOCNESS, zooplankton sampling
1800 GO-Flo trace-metal sampling & experiments
1900 CTD, water for evening experiments
2000 Thorium pump (deep cast), biochem surface pump
2100 Net tow, animals for experiments
2200 Bongo, zooplankton biomass & gut pig sampling
2300 MOCNESS, zooplankton sampling – **CANCELLED (weather)**

18 April

0130 Return to drifter position
0200 CTD, setup *in situ* experiments (200m)
0300 GO-Flo trace-metal sampling
0430 Recover/redeploy *in situ* array
0500 CTD organics, bacteria, thorium (600 m, at array position)

0600 MVP bow-tie survey
 1000 Bongo, zooplankton biomass & gut pig sampling
 1100 CTD, simultaneous Radiometer off stern, biochem surface pump
 1200 IOP cast (hydrowire)
 1300 MOCNESS, zooplankton sampling
 1630 Oozeki trawl, deep (2 h)
 1800 CTD, water for evening experiments
 1900 GO-Flo trace metal sampling, biochem surface pump
 2000 Oozeki trawl, euphotic zone (1 h) – **CANCELLED (weather)**
 2130 Net tow, animals for experiments
 2200 Bongo, zooplankton biomass & gut pig sampling
 2300 Oozeki trawl, deep (2 h) - **CANCELLED (weather)**

19 April

0130 Return to drift array position
 0200 CTD, setup *in situ* experiments (200m)
 0400 Recover/redeploy *in situ* array
 0430 Oozeki trawl, euphotic zone (1 h)
 0530 GO-Flo trace-metal sampling
 0700 Oozeki trawl, deep (2 h)
 1000 Bongo, zooplankton biomass & gut pig sampling
 1100 CTD, simultaneous Radiometer off stern, biochem surface pump
 1200 IOP cast (hydrowire) (at array position)
 1300 Oozeki trawl, shallow (1 h)
 1530 Bongo, live animals for experiments
 1630 Oozeki trawl, deep (2 h)
 1900 Thorium pump
 2000 CTD water for evening experiments
 2100 Net tow, animals for experiments
 2200 Oozeki trawl, euphotic zone (1 h)
 2300 Bongo, zooplankton biomass & gut pig sampling
 2330 MOCNESS, zooplankton sampling

20 April

0130 Proceed to drift array position
 0200 CTD, in situ & Th & organics (final samples only)
 0400 Recover *in situ* (drift) array
 0530 Recover sediment trap array
 0700 Recover SOLOPC (asap after sediment trap recovery)
 0830 MVP bow-tie survey
 1300 VPR line transect survey
 1600 Transit to San Diego (ETA 0800, 21 April)