

CCE-P1706 DAILY ACTIVITY SCHEDULE

(1 June – 2 July 2017) *R/V Roger Revelle*

Listed are intended times; consult Event Log for actual times.

1 June

0800 Depart MARFAC
1400 CTD test cast
1600 Trace Metal rosette test
1700 Bongo test
1800 MVP test
1900 MOCNESS test
2030 Transit to Santa Barbara Basin

2 June – Santa Barbara Basin (34° 16.5'N, 120° 1.5' W)

0900 CTD cast
1000 Bongo tow
1100 Ring net tow
1200 TM rosette cast
1530 Transit to waypoint for beginning of Seasoar:
2000 Deploy Seasoar

3 June – SEASOAR - Waypoint 1: 34° 13.69'N, 120° 49.53' W
to Waypoint 2: 36° 34.70'N, 122° 16.10' W
connecting leg to Waypoint 3: 36° 27.26'N, 122° 34.42' W

4 June – SEASOAR - Waypoint 3: 36° 27.26'N, 122° 34.42' W
to Waypoint 4: 34° 6.25'N, 121° 7.32' W
connecting leg to Waypoint 5: 33° 58.84'N, 121° 25.06' W

5 June – SEASOAR - Waypoint 5: 33° 58.84'N, 121° 25.06' W
to Waypoint 6: 36° 19.82'N, 122° 52.72' W
connecting leg to Waypoint 7: 36° 12.4' N, 123° 10.57' W

6 June – SEASOAR - Waypoint 7: 36° 12.4' N, 123° 10.57' W
to Waypoint 8: 33° 51.54'N, 121° 43.08' W

1400 Recover Seasoar
1430 Ring net tow
1530 CTD cast – calibration
1900 Transit to Santa Barbara Harbor

7 June

0600 Personnel transfer, Santa Barbara harbor
0700 Transit to Cross-filament Transect
1600 Cross-filament underway survey start approx. 35° 15'N, 121° 00'W
end approx. 35° 23'N, 121° 16'W
1800 Return to survey start location
2000 Start: CTD-Bongo-TM **Transect 1** start approx. 35° 15'N, 121° 00'W
end approx. 35° 23'N, 121° 16'W

(11 stations, 2 nm intervals)

2000: T1- Sta. 1 - CTD, **TM rosette**, Vertical bongo
2115: T1- Sta. 2 - CTD, Vertical bongo, TM pole sample
2230: T1- Sta. 3 - CTD, Vertical bongo, TM pole sample
8 June 2345: T1- Sta. 4 - CTD, Vertical bongo, TM pole sample
0100: T1- Sta. 5 - CTD, Vertical bongo, TM pole sample
0215: T1- Sta. 6 - CTD, **TM rosette**, Vertical bongo
0330: T1- Sta. 7 - CTD, **TM rosette**, Vertical bongo
0445: T1- Sta. 8 - CTD, Vertical bongo, TM pole sample
0600: T1- Sta. 9 - CTD, Vertical bongo, TM pole sample
0715: T1- Sta. 10 - CTD, Vertical bongo, TM pole sample
0830: T1- Sta. 11 - CTD, **TM rosette**, Vertical bongo

8 June

1000 End: **Transect 1**
1200 MVP Transect #1 (return along axis of CTD-Transect 1)
1600 Steam to location of MVP Transect #2
1800 MVP Transect #2

9 June

0100 Sediment trap deployment, **begin CYCLE 1**
0200 CTD, sampling & *in situ* experiments
0300 Trace Metal cast
0430 Deploy driftarray #1
0600 Trace Metal cast
0700 Dispose galley waste; pump tanks (> 1.5 nm downwind of driftarray)
0830 Bongo live tows, zooplankton experiments (start 0.5 nm downwind of driftarray)
0930 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
1100 CTD, microbiology, dissolved organics
1300 MOCNESS – Day #1 (start 2 nm downwind of driftarray)
1600 C Flux Explor-Calib deployments (N=2)
1800 CTD, thorium
1900 CTD, full dilution experiments
2130 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
2230 MOCNESS – Night #1 (start 2 nm downwind of driftarray)

10 June

0200 CTD, sampling & *in situ* experiments
0300 Trace Metal cast
0500 Recover driftarray #1/Deploy driftarray #2
0600 Trace Metal cast
0700 Dispose galley waste; pump tanks (> 1.5 nm downwind of driftarray)
0830 Bongo live tow, zooplankton experiments (start 0.5 nm downwind of driftarray)
0930 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
1100 CTD, microbiology, dissolved organics
1300 MOCNESS – Day #2 (start 2 nm downwind of driftarray)
1600 Recover C Flux Explor-Calibs (N=2)
1900 C Flux Explor Deployments (N=2)
2000 CTD to 500m, copepod EPR – Bishop
2130 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
2230 MOCNESS – Night #2 (start 2 nm downwind of driftarray)

11 June

0200 CTD, sampling & *in situ* experiments
0430 Recover driftarray #2/Deploy driftarray #3
0630 Pump tanks (> 1.5 nm downwind of driftarray)
0830 Bongo live tow, zooplankton experiments (start 0.5 nm downwind of driftarray)
0930 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
1100 CTD, microbiology, dissolved organics
1600 Deploy C Flux Explor-Calibs (N=2)
1800 Pump profile (Stukel and Kranz)
2030 Bongo live tow, zooplankton experiments (start 0.5 nm downwind of driftarray)
2130 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)

12 June

0200 CTD, sampling & *in situ* experiments
0300 Trace Metal cast
0430 Recover driftarray #3
0530 Recover C Flux Explor (N=2)
0630 Recover sediment trap, **END CYCLE 1**
0730 Recover C Flux Explor-Calibs (N=2)
0900 Steam to MVP Transect (waypoints tbd, but in vicinity of
35° 00' N, 122° 00' W)
1430 MVP test casts with new tow cable
(Vacate specified ops area for Vandenberg live fire)
1800 MVP Transect #3 across filament Start: 35° 16.3' N, 122° 14.1' W
End: 34° 41.5' N, 121° 40.0' W

5th VERSION OF TODAY'S SCHEDULE !

(We will **NOT** remain on location for Cycle 2 between 1300-1900 due to Vandenberg operations.)

13 June

0200 CTD, sampling & *in situ* experiments, **Begin CYCLE 2**
0300 Trace Metal cast – deck incubation experiments
0430 Deploy driftarray #4
0530 Trace Metal cast
0730 Bongo live tow, zooplankton experiments (start 0.5 nm downwind of driftarray)
0830 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
1100 CTD, microbiology, dissolved organics
1300 Vacate Cycle 2 area for Vandenberg live fire
1830 Sediment Trap deployment
1945 CTD, Thorium
2030 C Flux Explor deployments (N=2)
2115 CTD, Full dilution experiments
2200 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
2300 MOCNESS – Night #1 (start 2 nm downwind of driftarray)

14 June

0200 CTD, sampling & *in situ* experiments
0300 Trace Metal cast
0430 Recover driftarray #4/Deploy driftarray #5
0600 Trace Metal cast
0730 Bongo live tow, zooplankton experiments (start 0.5 nm downwind of driftarray)
0830 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
1000 CTD, microbiology, dissolved organics
1300 MOCNESS – Day #1 (start 2 nm downwind of driftarray)
1600 C Flux Explor-Calib deployments (N=2)
1800 Pump tanks, burn (> 1.5 nm downwind of driftarray)
2130 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
2230 MOCNESS – Night #2 (start 2 nm downwind of driftarray)

15 June

0200 CTD, sampling & *in situ* experiments
0430 Recover driftarray #5/Deploy driftarray #6
0600 Trace Metal cast
0700 Pump tanks (> 1.5 nm downwind of driftarray)
0830 Bongo live tow, zooplankton experiments (start 0.5 nm downwind of driftarray)
0930 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
1100 CTD, microbiology, dissolved organics

- 1300 MOCNESS – Day #2 (start 2 nm downwind of driftarray)
- 1530 C Flux Explor-Calib recoveries (N=2)
- 2000 Thorium pumping (Stukel & Kranz)
- 2200 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)

16 June

- 0200 CTD, sampling & *in situ* experiments
- 0430 Recover driftarray #6/Deploy driftarray #7
- 0600 Trace Metal cast
- 0700 C Flux Explor-Calib deployments (N=2)
- 0800 Pump tanks (> 1.5 nm downwind of driftarray)
- 0930 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
- 1100 CTD, microbiology, dissolved organics
- 1500 Deep CTD (3,500 m)
- 1800 Deep Trace Metal CTD (1,200 m)(
- 1900 Pump tanks, burn (> 1.5 nm downwind of driftarray)
- 2130 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)

17 June

- 0000 Deploy sediment trap (to leave drifting at Cycle 2)
- 0200 CTD, sampling & *in situ* experiments
- 0400 Recover driftarray #7
- 0700 Recover C Flux Explor (N=2)
- 0830 Recover sediment trap – **END CYCLE 2**
- 1030 Recover C Flux Explor-Calibs (N=2)
- 1115 Steam to start of MVP Transect; Pump tanks

- 1400 Start: **MVP Transect** (NW -> SE) start: 35° 07.5' N, 122° 36.0' W
@ 11 kts. end: 34° 13.7' N, 122° 04.1' W
- 1900 End: MVP Transect

- 1930 Start: **CTD-Bongo-TM Transect 2** start: 34° 22.65' N, 122° 09.42' W
(SE -> NW) end: 35° 07.5' N, 122° 36.0' W

(11 stations, 5.0 nm intervals)

- 1930: T2- Sta. 1 - CTD, **TM rosette**, Vertical bongo
- 2145: T2- Sta. 2 - CTD, Vertical bongo, TM pole sample
- 2330: T2- Sta. 3 - CTD, Vertical bongo, TM pole sample
- 18 June** 0100: T2- Sta. 4 - CTD, Vertical bongo, TM pole sample
- 0230: T2- Sta. 5 - CTD, Vertical bongo, TM pole sample
- 0415: T2- Sta. 6 - CTD, **TM rosette**, Vertical bongo
- 0600: T2- Sta. 7 - CTD, **TM rosette**, Vertical bongo

0745: T2- Sta. 8 - CTD, Vertical bongo, TM pole sample
0930: T2- Sta. 9 - CTD, Vertical bongo, TM pole sample
1045: T2- Sta. 10 - CTD, Vertical bongo, TM pole sample
1230: T2- Sta. 11 - CTD, **TM rosette**, Vertical bongo

1330 END **CTD-Bongo Transect 2**; Steam to MVP Transect

1630 Start: **MVP Transect** (N -> S) start: 34° 49.8' N, 123° 16.3' W
@ 11-12 kts. end: 34° 08.1' N, 123° 07.5' W

2130 End: MVP Transect

2130 Steam to CYCLE 3 location (tbd after MVP transect)

19 June

0000 Deploy sediment trap – **Begin CYCLE 3**
0200 CTD, sampling & *in situ* experiments
0300 Trace Metal cast
0430 Deploy driftarray #8
0600 Trace Metal cast
0700 Dispose galley waste; pump tanks (> 1.5 nm downwind of driftarray)
0830 Bongo live tow, zooplankton experiments (start 0.5 nm downwind of driftarray)
0930 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
1100 CTD, microbiology, dissolved organics
1300 MOCNESS – Day #1 (start 2 nm downwind of driftarray)
1600 C Flux Explor deployments (N=2) [near driftarray]
1700 CTD, thorium [near driftarray]
1800 MVP Transect, driftarray to sediment trap
1900 C Flux Explor – Calib deployment (N=1) [near sediment trap]
2000 CTD, full dilution experiments [near driftarray]
2130 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of sediment trap)
2300 MOCNESS – Night #1 (start 2 nm downwind of sediment trap)

20 June

0200 CTD, sampling & *in situ* experiments
0300 Trace Metal cast
0430 Recover driftarray #8/Reposition and Deploy driftarray #9 **near sediment trap**
0600 Trace Metal cast
0700 Pump tanks (> 1.5 nm downwind of driftarray)
0830 Bongo live tow, zooplankton experiments (start 0.5 nm downwind of driftarray)
0930 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
1100 CTD, microbiology, dissolved organics
1300 MOCNESS – Day #2 (start 2 nm downwind of driftarray)
1600 C Flux Explor-Calib recovery (N=1)
1800 C Flux Explor recovery (N=2; N=1; shark attack)

2000 C Flux Explor-Calib deploy (N=2)
2100 Bongo live tow, zooplankton experiments (start 0.5 nm downwind of sed trap)
2130 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of sed trap)
2230 MOCNESS – Night #2 (start 2 nm downwind of sed trap)

21 June

0200 CTD, sampling & *in situ* experiments
0430 Recover driftarray #9/Reposition and Deploy driftarray #10 **near sediment trap**
0600 Trace Metal cast
0700 Pump tanks (> 1.5 nm downwind of driftarray)
0830 Bongo live tow, zooplankton experiments (start 0.5 nm downwind of driftarray)
0930 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
1100 CTD, microbiology, dissolved organics
1500 C Flux Explor-Calib recovery (N=2)
1800 Pump profile (Stukel and Kranz)
2000 C Flux Explor-Calib deploy (N=2)
2100 Bongo live tow, zooplankton experiments (start 0.5 nm downwind of sed trap)
2200 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of sed trap)

22 June

0200 CTD, sampling & *in situ* experiments
0300 Trace Metal cast
0400 Recover driftarray #10
0500 Recover sediment trap – **END CYCLE 3**
0600 Recover C Flux Explor (N=1)
0800 MVP Bow tie survey
1200 Vacate Navy ops area
1300 Deep CTD (3,500 m)
1800 **CTD-Bongo-TM Transect 3** start: **33° 49.408' N, 122° 42.893' W**
(SW -> NE) end: **34° 13.246' N, 122° 27.287' W**

(11 stations, 2.7 nm intervals)

1800: T3- Sta. 1 - CTD, **TM rosette**, Vertical bongo
1915: T3- Sta. 2 - CTD, Vertical bongo
2030: T3- Sta. 3 - CTD, Vertical bongo
2145: T3- Sta. 4 - CTD, Vertical bongo
2300: T3- Sta. 5 - CTD, Vertical bongo

23 June 0015: T3- Sta. 6 - CTD, **TM rosette**, Vertical bongo
0130 T3- Sta. 7 - CTD, Vertical bongo
0245: T3- Sta. 8 - CTD, Vertical bongo
0400: T3- Sta. 9 - CTD, Vertical bongo
0515: T3- Sta. 10 - CTD, Vertical bongo
0630: T3- Sta. 11 - CTD, **TM rosette**, Vertical bongo

0800 **END CTD-Bongo-TM Transect 3**

23 June

- 0800 Transit to **Cycle 2R** (Cycle 2-revisited; location of Cycle 2 sediment trap)
- 1200 MVP Survey
- 1800 End MVP Survey
- 1900 Deploy C Flux Explor (N=1)
- 2000 Deploy C Flux Explor-Calib (N=2)
- 2200 Deploy Sediment Trap – **Begin Cycle 4**

24 June - Cycle 4

- 0000 Recover Sediment Trap from Cycle 2R
- 0200 CTD, sampling & *in situ* experiments
- 0300 Trace Metal cast
- 0430 Deploy driftarray #11
- 0600 Trace Metal cast
- 0700 Dispose galley waste; pump tanks (> 1.5 nm downwind of driftarray)
- 0830 Bongo live tow, zooplankton experiments (start 0.5 nm downwind of driftarray)
- 0930 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
- 1100 CTD, microbiology, dissolved organics
- 1300 MOCNESS – Day #1 (start 2 nm downwind of driftarray)
- 1600 C Flux Explor – Calib recovery (N=2)
- 1730 CTD, thorium
- 1900 C Flux Explor – Calib deployment (N=2)
- 2000 CTD, full dilution experiments
- 2130 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
- 2300 MOCNESS – Night #1 (start 2 nm downwind of driftarray)

25 June

- 0200 CTD, sampling & *in situ* experiments
- 0300 Trace Metal cast
- 0430 Recover driftarray #11/Deploy driftarray #12
- 0600 Trace Metal cast
- 0700 Dispose galley waste; pump tanks (> 1.5 nm downwind of driftarray)
- 0830 Bongo live tow, zooplankton experiments (start 0.5 nm downwind of driftarray)
- 0930 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
- 1100 CTD, microbiology, dissolved organics
- 1300 MOCNESS – Day #2 (start 2 nm downwind of driftarray)
- 1325 SpaceX launch, Vandenberg
- ~~1600 C Flux Explor – Calib recovery (N=2)~~
- 1800 Pump cast (Stukel & Kranz)
- 2000 C Flux Explor – Calib deployment (N=2)
- 2130 Bongo, zooplankton net tow, gut fluor (start 0.5 nm downwind of driftarray)
- 2300 MOCNESS – Night #2 (start 2 nm downwind of driftarray)

26 June

0200 CTD, sampling & *in situ* experiments
0300 Trace Metal cast
0400 Recover driftarray #12
0500 Recover sediment trap – **END CYCLE 4**
0630 Recover C Flux Explor (N=1)
0730 Recover C Flux Explor-Calib (N=2)
0830 Steam to beginning of **SEASOAR 2**
1300 Deploy Seasoar

26 June (1400) – 29 June (2200) - SEASOAR 2 survey across study region

28 June

1900 Science tour, all invited

29 June

2200 Recover Seasoar
2230 Steam to BBL Sta. 1

30 June – Benthic Boundary Layer (BBL) study

0200	BBL sta. 1	Cambria	35°	34.728'	121°	10.096'
0400	BBL sta. 2	Pt. Estero	35°	28.507'	121°	03.411'
0600	BBL sta. 3	Morro Bay	35°	21.621'	120°	55.541'
0800	BBL sta. 4	Shell Beach ^[prev. Line 77 sta. 49]	35°	05.090'	120°	46.250'
1000	BBL sta. 5	Vandenberg	34°	52.860'	120°	44.170'
1200	BBL sta. 6	Santa Ynez	34°	41.530'	120°	42.560'
1400	BBL sta. 7	Pt Arguello	34°	33.857'	120°	41.065'
1600	BBL sta. 8	Line 80 sta. 51	34°	27.735'	120°	31.250'
1800	BBL sta. 9	Gato	34°	25.351'	120°	24.443'
2100	Steam to Santa Cruz Basin, south of Santa Cruz Id					
	33 50'	119 40'	33 50'	119 15'		
	33 40'	119 40'	33 40'	119 15'		

1 July – Santa Cruz Basin, MVP vs. UVP5 comparison

0645 Deploy MVP
0700 MVP line 1 - Start 33° 45.0' 119° 39.84' @ 10 kts SOG
0900 MVP line 1 - END 33° 45.0' 119° 15.26'

0915 CTD sta. 1 - to 300 m 33° 45.0' 119° 15.26'
1030 CTD sta. 2 - to 300 m 33° 45.0' 119° 20.0'
1130 CTD sta. 3 - to 300 m 33° 45.0' 119° 25.0'
1230 CTD sta. 4 - to **1,000 m** 33° 45.0' 119° 30.0'
1415 CTD sta. 5 - to 300 m 33° 45.0' 119° 35.0'
1515 CTD sta. 6 - to 300 m 33° 45.0' 119° 39.84'

1530 Deploy MVP
1545 MVP line 2 - Start 33° 45.0' 119° 39.84' @ 10 kts SOG
1815 MVP line 2 - END 33° 45.0' 119° 15.26'

1800 Group photo and live concert on the fantail
Steam to Pt. Loma

2 July

0800 Arrive MARFAC