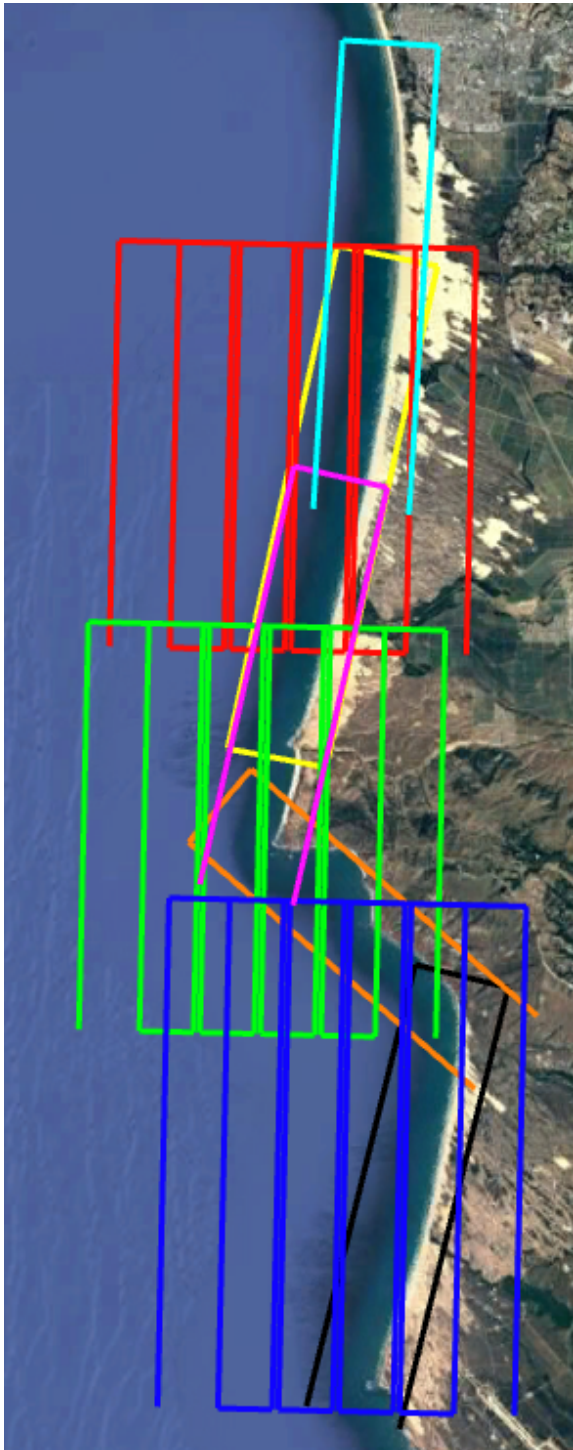


APL-UW Inner Shelf DRI Airborne Observations

Flight patterns

Flight pattern names



A1: Oceano Alongshore Track

N: Oceano Box

B1: Guadalupe Alongshore Track

A2: Pt Sal Alongshore Track

C: Pt Sal Box

A3: Lions Head Alongshore Track

S: Purisima box

A4: Purisima Alongshore Track

Channels:

IR = Infrared, EO = Visible, RAD = Radiometer, SAR = Radar, G = Gimbal IR
Inner Shelf DRI - APL Plane - Daily Flight Table

Date	Time (UTC)	Channels	Survey region / patterns (number of repeats)
09/10	20:35-21:35	IR, EO, RAD, SAR	Oceano Alongshore Tracks (2)
09/11	21:00-23:00	IR, EO, RAD	Oceano Boxes (2) and Alongshore Tracks (2)
09/12	21:35-22:30	IR, EO, RAD, SAR	Oceano Boxes (1) and Alongshore Tracks (4), Circled ships (1)
09/13	20:10-00:40	IR, EO, SAR	Oceano Box (1), Pt Sal Boxes (1) and Alongshore Tracks (5)
09/14	21:45-22:25	IR, EO, SAR	Oceano Box (1), Pt Sal Alongshore Tracks (4)
09/15	18:40-23:59	IR, EO, SAR	Oceano Boxes (4)
09/16	17:55-00:30	IR, EO, SAR	Oceano Boxes (4), Guadalupe Alongshore Tracks (3)
09/17	19:30-21:15	EO, SAR	Pt Sal Boxes (3)
09/18	20:45-22:10	EO, SAR	Pt Sal Boxes (3)
10/05	17:40-19:45	SAR	Purisima Alongshore Tracks (13)
10/06	16:20-17:20	SAR	Purisima Alongshore Tracks (6)
10/07	15:35-00:15	SAR	Pt Sal Box (1) and Alongshore Tracks (1)
10/08	--	--	No flights or small boat ops
10/09	19:20-21:00	Gimbal IR	Pt Sal Alongshore Tracks (17) and Orbits (2)
10/10	16:15-00:05	Gimbal IR, short SAR flight	Gimbal IR: Pt Sal Boxes (2) and Alongshore Tracks (9), SAR: Pt Sal Box (1) and Alongshore Track (1)
10/11	20:35-23:05	IR, EO, RAD, SAR	Oceano Boxes (2) and Alongshore Tracks (4)
10/12	--	--	No flights or small boat ops
10/13	15:40-17:35	IR, EO, RAD, SAR	Oceano Boxes (2) and Guadalupe Alongshore Track (1)
10/14	15:35-21:00	IR, EO, RAD, SAR	Pt Sal Boxes (5), Alongshore Tracks (6), and Orbit (1)
10/15	16:10-18:00	IR, EO, RAD	Purisima Box (1) and Alongshore Tracks (2), Lion's Head Alongshore Tracks (5), Pt Sal Alongshore Track (1), Oceano Alongshore Track (1)
10/16	16:00-20:35	IR, EO, RAD	Purisima Boxes (4) and Alongshore Tracks (9), Lion's Head Alongshore Tracks (2)
10/17	15:35-21:35	IR, EO, RAD	Guadalupe Alongshore Tracks (10), Oceano Boxes (4)

Inner Shelf DRI - APL plane - Detailed notes

Date in 2017	Pattern: Repeat number (start time UTC)	Notes (Times are LOCAL)
9/10	A1: 1 (~20:35)	IR, EO, radiometer, SAR. No log file. Dave and Chris. Flew full northward track and half of southward track. Returned due to CPU issues.
	A1: 2 (~21:30)	Dave and Shadi. Flew half of northward track. Returned because radar laptop died. Sounder surveyed N18-N19 starting 14:17.
9/11	A1: 1 (21:00)	IR, EO, radiometer. Dave and Chris. Radar cables disconnected all day. First flight take off ~13:47. Sounder surveyed N13-N16 near 10 m depth starting at 13:58, then N17-N18 in 20 ft depth starting 15:02. Slicks, red bloom, foam, fronts.
	A1: 2 (21:13)	
	A1: 3 (21:26)	
	N: 1 (21:40-22:21)	Stopped at N_14
	N: 2 (22:48-22:58)	Stopped halfway through, needed to return to check fuel gage issue
	N: 3 (00:02-00:55)	Aircraft returned 16:15 to refuel, back up ~16:45. Returned ~18:15. Stopped at N_18 to circle over ships. More IW coming into shore.
	Circle ships (00:55-01:05)	Circle over Sally Ride and Oceanus, strong temp front.
9/12	A1: 1 (21:35)	IR, EO, radiometer, SAR. Dave and Chris. Take off 14:15. Sampling near Oceano because airspace near Pt Sal closed. Sounder N03-N06 (plane not overhead bc of airspace closure). Most ships in the Pt Sal area surveying today. Sounder heading to N13-N16 ~15:10 while aircraft continues A1 transects. ~15:15 Chris spotted rips north of the Sounder, advised them to go 1.5 km North. ~15:27 Chris spotted rip at N16, asked Sounder to keep going a bit past N16. Chris headed back around 15:45. Notes: Guadalupe radar ops ~16:00-16:30 saw interaction of rip currents and internal waves with drone. Evening call, Kalipi offered to coordinate transects in 10m offshore of Sounder in ~5-6 m.
	A1: 2 (21:48)	Some clouds. 14:53, Sounder crossing rip?
	A1: 3 (22:01)	Clouds at south end. See the Sounder near A1_04

	A1: 4 (22:15)	At A1_03, noticed unit 2 rec to /mnt/data, unit 1 is set okay, delayed start on radar (didn't miss much).
	A1: 5 (22:28)	Sounder in survey region heading to N16 rip, clouds
	A1: 6 (22:48)	mostly xλους (sic, clouds?) covers at s 2/3 of pattern. Big rip noted near A1_04
9/13	C: 1 (20:13-20:40)	IR, EO, SAR. Radiometer data missing Chris and Dave. Take off around 13:00. Come back to refuel ~15:30. C transect from 9 to 18. Noted Oceanus near 07.
	A2: 1 (21:00)	Coordinated survey with ships, bloom strong at N end of array. Sounder and Kalipi N3-N6
	A2: 2 (21:12)	
	A2: 3 (21:25)	
	A2: 4 (21:38)	
	A2: 5 (21:49)	Breaking of small waves shoreward of IW foam lines.
	N: 1 (22:04-22:20)	N track from 05 to 10 (headed back for fuel).
	C: 1 (23:41-00:37)	Cam0 door not closing, re-nuc attempts. Plumes S of Mussel Pt. Small low clouds near Sal.
	C: 2 (00:46-01:40)	Foam blobs in uniform line, IW 5-6 miles offshore, rips S of Mussel pt
		Flyover ships and IW (01:43)
9/14	N: 1 (21:47-21:26)	IR, EO, SAR. Radiometer data missing. Chris flying. Melissa on Sounder. N_05-N_18. low clouds, flying 2000'. Also recorded radar and IR en route to A2. Sounder surveying Pt Sal (noted strong cross-shore exchange) and one alongshore line
	A2: 1 (21:36-21:46)	some low clouds. Sounder starting N8-N11.
	A2: 2 (21:47-21:58)	
	A2: 3 (21:59-22:12)	clouds at s end of line
	A2: 4 (22:13-22:24)	

9/15	N: 1 (18:42-19:42)	IR, EO, SAR. Radiometer data missing Melissa and Greg flying. No small boat ops, small craft warning. IW offshore of N01 N02 7 crests. Front near aircraft point N_11? Bloom starts 4 surfzone widths out, scallop pattern bloom offshore clear toward surf, scallops O(several sz widths).
	N: 2 (20:00-20:51)	IW bands visible as bands of whitecap and no whitecap, in field of view of downlooking camera. IW between Sproul and Ride. Cam0 stayed closed for first part of track. Rips, sharks?
	N: 3 (22:13-23:02)	21:54 second flight (Chris and Greg)
	N: 4 (23:09-23:59)	A few little clouds. Stopped at N_16. Final line at end 05 to 06? (see log)
9/16	B1: 1 (17:56-18:09)	IR, EO, SAR. Radiometer data missing. Chris flying. Melissa on Sounder. Sounder surveyed N16-N8.5 08:15-09:49 12m, N8.5-N16 10:00-11:40 9m, N17-N09 11:49-13:29.
	N: 1 (18:12-19:03)	
	B1: 2 (19:11-19:23)	Front inbound at Mussel Pt
	N: 2 (19:26-20:15)	Flying right over IW/ fronts. (Recorded geometry calibration)
	B1: 3 (22:10-22:23)	Second flight.
	N: 3 (22:26-23:15)	IW packet on 01 line in camera2, N-S orientation. A few clouds.
	N: 4 (23:38-00:26)	Still clouds S end
9/17	C: 1 (19:29-20:19)	EO, SAR. Radiometer data missing. No IR. EO was on sometimes but mostly flying above clouds. Greg and Melissa flying. Rip heads N of Sal. Sounder doing Pt Sal laps.
	C: 2 (20:26-21:16)	Red bloom visible to east. Foam streaks and slicks.
	C: 3 (21:23-22:13)	100% clouds
9/18	C: 1 (20:48-21:26)	EO, SAR, Radiometer data missing. No IR. No small boat ops. Melissa flying. C_03-C_18 bc airspace hot offshore. Part of 03/04 05/06

		note SAR laptop time reads 17:10 while IR laptop 21:16.
	C: 2 (21:28-22:08)	C_03-C_18. Clouds everywhere except by Pismo/Avila.
10/5	A4: 1 (17:43-17:52)	SAR only. Chris flying. Melissa on Sounder. White caps. Log listed in PDT. A4 "short". Sounder started southbound survey from S08 09:45. 11:07 airplane says Sounder in big plume.
	A4: 2 (17:54-18:03)	
	A4: 3 (18:05-18:12)	
	A4: 4 (18:14-18:21)	
	A4: 5 (18:23-18:30)	
	A4: 6 (18:32-18:39)	
	A4: 7 (18:41-18:48)	
	A4: 8 (18:50-18:57)	
	A4: 9 (18:59-19:06)	
	A4: 10 (19:08-19:16)	
	A4: 11 (19:17-19:24)	
	A4: 12 (19:25-19:34)	
	A4: 13 (19:36-19:43)	
10/6	A4: 1 (16:22-16:27)	SAR only IR cameras delivered today. Log in PDT. Melissa flying. A4_03-A4_04 only first. Sounder southbound S08 at 09:02, end at 10:20 at S16.

	A4: 2 (16:28-16:39)	Sounder in slicks, rips near N and S end of our lines
	A4: 3 (16:41-16:50)	Short to avoid turbulence, large plume start of this track
	A4: 4 (16:52-17:01)	Sounder entering red bloom, short.
	A4: 5 (17:02-17:13)	Foam line S of Sounder, several rips from Sounder to South, Nice rip near Sounder 10:11.
	A4: 6 (17:14-17:20)	Interesting half circle plumes S of Pt Sal around bend. A4_01 to A4_02 only. Sounder did additional survey near Purisima later in the day.
10/7	A2: 1 (15:36-15:46)	SAR only (snippet of IR) Mussel Pt front day. Log in PDT.
	A2: 2 (15:48-15:58)	
	A2: 3 (16:00-16:10)	
	A2: 4 (16:12-16:22)	
	A2: 5 (16:24-16:35)	Sounder will keep going from N1.5 to N3.5 in different depths.
	C: 1 (16:38-17:27)	Foam line offshore of first line with 500m - 1km cusps, various slicks, light winds, rip plumes N of Mussel Pt growing, red bloom near coast S of Sal
	A2: 6 (17:32-17:42)	Red bloom sharp front btw surfzone and offshore, cusps. Swell from SW.
	A2: 7 (17:44-17:55)	Wind up a little bit, Oceanus wake red, cusps in turbid SZ water vs. red offshore water, extend 2-3 sz widths
	C: 1 (23:27-00:16)	Second log file, PDT. windy, whitecaps below. IR still having issues. Recording radiometer and camera.
10/8		No plane ops, no small boat ops, small craft advisory.
10/9	GO: 1 (19:21-~19:35)	IR (gimbal), EO(nadir), radiometer (starting 21:17). GO: Gimbal Pt Sal orbit (Scene 3), manual steering
	GO: 2 (~19:35-19:51)	GO: Gimbal Pt Sal orbit (Scene 4), manual steering

GA2: 1 (~19:51-20:01)	<p>Scene 5. Log says, "N-S transects"-- I think this is gimbal version of the Alpha 2 transects (from S of Sal to ~N8 or N11, keeping the shoreline in the image, flying 500 ft). Approximately 10 transects from 19:51-21:27.</p> <p>Big 'rip' off of Mussel Pt. "Balloon" with narrow neck with big plume. Rip heads angling north. Drifters had just turned north. Radiometer was not on until last few passes. Flying 6500 ft.</p>
GA2: 2 (~20:01-20:11)	
GA2: 3 (~20:11-20:21)	Scene 6. "Killer rips". Sounder did several C transects around Pt Sal, switched to longshore N02-N08 ~13:45-15:00.
GA2: 4 (~20:21-20:31)	
GA2: 5 (~20:31-20:41)	
GA2: 6 (~20:41-20:51)	
GA2: 7 (~20:51-21:01)	20:54 gimbal GPS working on. 13:52 Sounder N2-N8 survey.
GA2: 8 (~21:01-21:11)	
GA2: 9 (~21:11-21:21)	Radiometer on now.
GA2: 10 (~20:21-20:31)	Scene 7, Scene 8. My notes say approximately 10 transects from 19:51-21:27, times for GA2 1-10 are approximate / placeholders.
GC: 1 (23:46-~00:15)	Second flight. Scene 1. C box modified for gimbal, 6500 ft.
GA2: 11 (00:19-00:29)	Gimbal version of A2 transects at 6500 ft, from 00:19-01:23. Notes do not list number of tracks, my guess is approximately 7 north-south passes during this time period (14 legs).
GA2: 12 (00:29-00:39)	
GA2: 13 (00:39-00:49)	
GA2: 14 (00:49-00:59)	

	GA2: 15 (00:59-01:01)	
	GA2: 16 (01:01-01:11)	
	GA2: 17 (01:11-01:21)	
10/10	GC: 1 (16:15-16:38)	Flight 1: Chris, IR(Gimbal) , EO (nadir) , radiometer Flight 2: Christine, EO , radiometer , SAR Flight 3: Melissa, IR(Gimbal) , EO (nadir) , radiometer Sounder front surveying (see field log) Scene 1
	GC: 2 (16:41-17:08)	Scene 2
	GA2: 1 (~17:11-17:21)	Scene 3, alongshore surveys, 17:11-~18:00, some issues with Gimbal. Not sure of number of passes, listing 5 as a placeholder for now.
	GA2: 2 (~17:21-17:31)	Scene 4, u command
	GA2: 3 (~17:31-17:41)	
	GA2: 4 (~17:41-17:51)	Scene 5, clouds heavy but clearing to S
	GA2: 5 (~17:51-18:01)	
	GC: 3 (18:10-18:32)	Scene 6. back to GC pattern, clouds mostly clear, nice front from bore or? Many whales S and W of Pt Sal Scene 7. gonna fly the front as we descend Scene 8, rec for testing fixed down pointing ('u' command), waggled wings at the end for some variability
	C: 1 (20:20-20:58)	Radar. Second flight, Christine radar. C_03 airspace restriction for C_01 and 02 partial tracks for 03-09, cloudy conditions around Pt Sal, Rips of point south of pt sal, front parallel coastline, rips north of pt sal, slicks off of mussel pt, foam off pt sal heading north along front, red bloom, front still offshore
	A2+: (21:05-21:15)	Radar. Second flight, Christine radar. heading farther north than planned to overlap Sounder, stop 2 nautical miles further north, rip north of mussel pt

	GA2: 6 (22:48)	Third flight, Melissa Gimbal. Unsure of focus. Log not clear, guessing on the patterns some here, update after looking at data. Scene 2.
	GA2: 7 (22:57-23:07)	Notes say "scene3 single swath"
	GA2: 8 (23:07-23:17)	Unsure of number of passes...
	GA2-A1: 1 (23:24-23:44)	"cool rips s of pismo pier, went n to wait out cloud" Went all the way north to Avila area
	GA2: 9 (23:53-00:03)	Notes note clear... Likely there were more passes than listed here. Big plume N08
10/11	A1: 1 (20:34-20:44)	IR, EO, radiometer, SAR. (?) Chris and Greg. Sounder 08:30 N16 to N8 survey, 10:33 N8 to N16. OSU shore radar showed them passing through rip 13:50. Aircraft took off 13:00, had to land again for some reason 13:30, restricted airspace hot so had to shift November box up to N10 to N24, also did A1 track. Sounder heading home 14:00. Chris noted 14:00 IW 2-3 miles offshore. Whitecaps. Big rip at N9-N10 2:35pm. IR signal diminished due to wind. Annika noted Sounder went through large rip. Sally Anne was really shallow (3-4 m?)
	A1: 2 (20:44-20:54)	
	N^: 1 (20:57-21:49)	Short, shifted 3 nm N, clouds at S end of pattern. Rip at N10-N9
	A1: 3 (21:50-22:00)	short
	A1: 4 (22:01-22:11)	Climbed to 3500'
	N: 2 (22:16-23:05)	Clouds. Airspace cold by now
10/12		No small boat ops, small craft warning. Also no flights
10/13	B1: 1 (15:40-15:53)	IR, EO, radiometer, SAR Sounder Sally Anne Kalipi surveying N16-N08 08:14, Oceanus offshore. APL plane surveying B1 and November. Chris sees IW offshore of Oceanus by 0.5 miles around 09:30. Sees rips N3-N6. Sees front near N6 angled NW, small boats should cross it. Chris sees rip 1km ahead of Sally Anne at 09:44. Chris sees bloom and turbid rips everywhere

		<p>now, improved sun angle? Big plumes N13-N17, Jim may survey. Huge pod of dolphins at SW corner of Nov pattern, about 1 mile long. Oceanus: "There is a deep mixed layer (~10m) with some evidence of NLIWs headed inbound just offshore of the 23-m line." Sounder and Kalipi starting at N13 at 10:42.</p> <p>Sounder 08:20 N16 to N6, 10:08.</p>
	N: 1 (15:58-16:46)	
	N: 2 (16:54-17:36)	Notes unclear, not sure if this was a full pass.
10/14	C: 1 (15:37-16:15)	<p>IR, EO, radiometer, SAR. Sounder Pt Sal surveys. Shortened C passes 01-14.</p> <p>12:16 Chris on plane reports nice front (shore-parallel?) onshore of Sounder, rip halfway between Sal and Mussel Pt 10:12, Radar laptop battery died. 12:42 Sounder surveying through bloom front. Pictures in texts.</p>
	C: 2 (16:21-16:57)	
	C: 3 (17:04-17:40)	
	A2: 1 (17:45-17:50)	Short. There might be an extra A2_03-A2_04 pass before this
	A2: 2 (17:51-17:58)	short
	A2: 3 (17:59-18:05)	short
	C: 4 (18:54-19:28)	Second flight. IW inbound about 1.5 nm off pt aal, nw-se trend C_01-C_14
	A2: 4 (19:30-19:34)	short
	A2: 5 (19:35-19:43)	01 long, 02 short, 03 short, 04 long
	A2: 6 (19:44-19:52)	
	A2: 7 (19:53-20:01)	01, 02 short, 03 short, 04 long

	C: 5 (20:03-20:48)	Full C pattern
	O: 1 (20:50-21:00)	Orbit around pt Sal. Short run north following this (?)
10/15	A3: 1 (16:12-16:22)	IR, EO, radiometer. Lions head area. Sounder sampling interesting feature S4 to S2.75, feature near S3.2. Also NE-SW front less than 1 km away, 10:10. See field log for times Sounder crossed front lines.
	A3: 2 (16:23-16:31)	
	A4: 3 (16:36-16:41)	Southward pass only
	S-n: 1 (16:46-17:28)	S box shifted north. Sounder crossing from 17:13, EW front has moved onshore and to N. Boat wake. Second front near S4? Sounder departs 17:28
	A3: 4 (17:32-17:37)	Sounder found drifters in front, surveyed through front on way out.
	A4: 1 (17:42-17:45)	Partial, southbound only, on way to do full pass
	A4, A3, A2, A1 (17:47, 17:51, 17:53, 17:56)	Full pass. Rips N of Purisima, nice front at mussel pt, rip at N07. Following this, also did a southward pass, and back up along A4, but looks like IR cameras weren't recording.
10/16	S: 1 (16:02-16:39)	IR, EO, radiometer. Chris sees NW SE front from Pt Sal to Purisima in avg 30 m depth, dropped 2 SWIFTS. Sounder 09:33 starting longshore from S18. Chris said Sounder going through several rips 10:27. S_07-S_18
	S: 2 (16:40-17:17)	10:09, 10:20, crossing rip plumes
	A4: 1 (17:18-17:23)	03 to 04 only
	A4: 2 (17:24-17:30)	
	A4: 3 (17:35-17:46)	Sounder at N end of transect. 10:43, Sounder passing through scum line.
	A4: 4 (17:47-17:58)	Sounder 10:52 passing through front near S08-S09.

	S: 2 (18:01-18:28)	Short. S_09-S_18. 11:34 Sounder doubling back near S12 for rips and slicks, dropped two SWIFTS and box around them.
	A4: 5 (19:20-19:29)	Second flight. Melissa and Greg. lots of color variability in 6m at sounder, red cyan brown
	A4: 6 (19:31-19:35)	A4_01 to A4_02 only. Linear actuator error
	S: 3 (19:45-20:22)	S_07-S_18. Strong front Sal to SE, EW front near s end of line S_10, fishing boat, sharp front w bloom onshore, t signal, sounder maybe near weak front as picking up swift
	A4: 7 (20:25-20:28)	A4_03-A4_04 only
	A4: 8 (20:32-20:37)	A4_01-A4_02 only
	A3: 1 (20:37-20:47)	Big rip n of mussel, temp variability offshore whale holes, lots of bloom material. lots of rips and bloom, really cool, big rip N05 to n7, cool stuff further n too
	S: 4 (20:49-20:25)	S_07-S_18 Sounder surveying through front, slicks, some whitecapping, lots of slicks s end
	A3: 2 (20:25-20:33)	Nice clear rip S10 out into red bloom
10/17	B1: 1 (15:35)	<p>IR, EO, radiometer. Alex and Greg flying. Tilted version of North-box, with last two lines of the box (13,14,15,16) = B1 racetrack.</p> <p>OSU radar folks (Annika, Alex, Mick) following radar and flying drone.</p> <p>Sounder surveying N4-N12, N8.5-N9.5: 08:30 starting survey northbound from N4, 09:45, turning south at N12, 10:00 crossing feature, according to airplane, 08:30 Sounder surveyed northbound from N4 starting to N12 at 09:45, 10:00 crossing feature according to plane, 10:18 passing rip according to OSU, N8.3, 10:30 turning around N7.4, waves building, 10:33, N7.7 see some foam and roughness changes, 10:38, N8.1 rip on radar coincident with us, 11:04, 5 m survey southward, 11:14, Turning offshore to 10m iso, then deploying swifts, 11:18 turn north along 10 m, making CW box, Crossing some kind of line in the water around N09, southbound, 11:45 Turning offshore at N8.5 to the 8m iso, 12:09 Feature at N09, roughness change, velocity shear?, 12:48 turning south from N9.2 to N, 12:50 roughness change at N9, seems a lot like a</p>

	<i>rip, 12:53 going into second rip change in roughness, 12:58 end longshore survey, slicing back through rip head toward SWIFTS offshore.</i> IW hitting big rip head. Water is noticeably brown.
NT: 1 (15:51- 16:28) B1: 2 (~16:17)	NT_05 – NT_16. Big color change and foam line N-S 1 nm offshore of N08 (blue offshore red onshore), E-W foam line.
B1: 3 (16:30)	N-S front line inshore of 13-14 line at N10
NT: 2 (16:45-17:22)	Passing e-w front extending from pt 6 toward shore (log unclear, timing?)
B1: 4 (19:30)	Log in local time, converted to UTC here.
NT: 3 (19:44-20:00) BT: 5	Extra 15-16 line in there. Stopped box partway to switch to alongshore surveys. OSU said we're in one rip head 19:52, second larger rip head at 19:55. Front hitting rip. Drone flights 19:41. (Only half of BT transect, 15-16)
B1: 6 (20:13)	Sounder left around 20:10. See texts + images for rip turning on suddenly, front moving onshore into rip heads.
B1: 7 (20:27)	
NT: 4 (20:41-21:05) BT: 8 (13:59)	NT_09-NT_16
B1: 9 (21:07)	
NT: 5 (21:21-21:46) B1: 10 (21:34)	NT_09-NT_16 (listed as B1 in table)

Notes on preliminary analysis

Date	Time (UTC)	Channels	Survey region / patterns (number of repeats)	Notes
09/10	20:35-21:35	IR, EO, RAD, SAR	Oceano Alongshore Tracks (2)	Limited coord w/ Sounder, short flight
09/11	21:00-23:00	IR, EO, RAD	Oceano Boxes (2) and Alongshore Tracks (2)	Some coord w/ Sounder; slicks, red bloom, foam, fronts, but no rips noted (Feb 2018 Chris mentions good rip activity that day)
09/12	21:35-22:30	IR, EO, RAD, SAR	Oceano Boxes (1) and Alongshore Tracks (4), Circled ships (1)	Some coord w/ Sounder+Kalipi; possible rips and IW / fronts
09/13	20:10-00:40	IR, EO, SAR	Oceano Box (1), Pt Sal Boxes (1) and Alongshore Tracks (5)	Some coord w/ Sounder+Kalipi; possible rips and IW, bloom
09/14	21:45-22:25	IR, EO, SAR	Oceano Box (1), Pt Sal Alongshore Tracks (4)	Some coord w/ Sounder
09/15	18:40-23:59	IR, EO, SAR	Oceano Boxes (4)	No small boat ops, small craft warning, bloom
09/16	17:55-00:30	IR, EO, SAR	Oceano Boxes (4), Guadalupe Alongshore Tracks (3)	Good coord w/ Sounder+other; possible IW / front. Nice mixing structures offshore, IW?
09/17	19:30-21:15	EO, SAR	Pt Sal Boxes (3)	No IR, bloom
09/18	20:45-22:10	EO, SAR	Pt Sal Boxes (3)	No IR, No small boat ops
10/05	17:40-19:45	SAR	Purisima Alongshore Tracks (13)	No IR, Sounder may be in plume
10/06	16:20-17:20	SAR	Purisima Alongshore Tracks (6)	No IR, Sounder in slicks, bloom
10/07	15:35-00:15	SAR	Pt Sal Box (1) and Alongshore Tracks (1)	No IR, bloom, foam, front in nearshore, bloom
10/08	--	--	No flights or small boat ops	
10/09	19:20-21:00	Gimbal IR	Pt Sal Alongshore Tracks (17) and Orbits (2)	Gimbal, rips
10/10	16:15-00:05	Gimbal IR, short SAR flight	Gimbal IR: Pt Sal Boxes (2) and Alongshore Tracks (9), SAR: Pt Sal Box (1) and Alongshore Track (1)	Gimbal, rips, bloom

10/11	20:35-23:05	IR, EO, RAD, SAR	Oceano Boxes (2) and Alongshore Tracks (4)	Good coord w/ Sounder, rips noted
10/12	--	--	No flights or small boat ops	
10/13	15:40-17:35	IR, EO, RAD, SAR	Oceano Boxes (2) and Guadalupe Alongshore Track (1)	Good coord w/ Sounder; rips and fronts noted, bloom
10/14	15:35-21:00	IR, EO, RAD, SAR	Pt Sal Boxes (5), Alongshore Tracks (6), and Orbit (1)	Some coord w/ Sounder; possible front and rips, bloom
10/15	16:10-18:00	IR, EO, RAD	Purisima Box (1) and Alongshore Tracks (2), Lion's Head Alongshore Tracks (5), Pt Sal Alongshore Track (1), Oceano Alongshore Track (1)	Good coord w/ Sounder; sampling front and bloom
10/16	16:00-20:35	IR, EO, RAD	Purisima Boxes (4) and Alongshore Tracks (9), Lion's Head Alongshore Tracks (2)	Good coord w/ Sounder; rips and front noted, bloom
10/17	15:35-21:35	IR, EO, RAD	Guadalupe Alongshore Tracks (10), Oceano Boxes (4)	Good coord w/ Sounder; rips and moving front / IW noted