

PLANS OF 2005 VERTIGO CRUISE

file VERTIGO 2005 DRAFT III cruise activities.xls

Load Ship July 19-20th						survey	survey	survey	survey	particle collections I	day 1	day 2	day 3	day 4	day 5	day 6	day 7
hours	21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul	30-Jul	31-Jul	1-Aug	2-Aug	3-Aug	4-Aug	5-Aug	6-Aug
	day 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
0	steam to K2	steam to K2	steam to K2	steam to K2	steam to K2	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	Steam to main station	Steam/dump	IONESS	MULVFS	NBST's 150 out	bio cast-tow	bio cast-tow	IONESS
2	steam to K2	steam to K2	steam to K2	steam to K2	steam to K2	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	Steam to main station	Steam/dump	IONESS	MULVFS	Recover respirometer			IONESS
4	steam to K2	steam to K2	steam to K2	steam to K2	steam to K2	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	CTD #17 @47 161	bio cast- CTD #18	CTD #20	bio cast- CTD #23	bio cast-tow	bio cast- CTD #31		bio cast- CTD #39
6	steam to K2	steam to K2	steam to K2	steam to K2	deploy short NBST test	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	Trull trap in- 300			CTD #24	CTD #27		CTD #36	
8	steam to K2	steam to K2	steam to K2	steam to K2	MOCNESS test	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	Trull trap in- 300	MULVFS	CTD #21	TM Go-Flo casts	CTD #28	CTD #32	CTD #37	CTD #40
10	steam to K2	CTD #1	steam to K2	CTD #3	MOCNESS test	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	Launch 150 Clap & NBST	MULVFS	IONESS	TM Go-Flo casts		CTD #33	IONESS	CTD #41
12	steam to K2	CTD #1	steam to K2	steam to K2		SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	Launch 150 Clap & NBST	MULVFS	IONESS	CTD #25	CTD #29		IONESS	
14	steam to K2	steam to K2	CTD #2	steam to K2	MULVFS test	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	Launch 300 Clap & NBST	MULVFS	IONESS			CTD #34	IONESS	Trull trap out
16	steam to K2	steam to K2	steam to K2	steam to K2	MULVFS test	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	Launch 300 Clap & NBST	MULVFS	CTD #22 ETS/bacteria	CTD #26	CTD #30	CTD #35	CTD #38	Trull trap out
18	steam to K2	steam to K2	steam to K2	steam to K2	plankton net test- Silver/Tanner	SS#1 CTD #4-16	SS#1 CTD #4-16	Steam to main station	SS#1 CTD #4-16	Launch 500 Clap & NBST	CTD #19 1000 no bottles	MULVFS	Clap 150 out	Clap 300 out	Clap 500 out	optical trap test	optical trap retrieve
20 depart 2000	steam to K2	steam to K2	steam to K2	steam to K2	recover 12hr NBST	SS#1 CTD #4-16	SS#1 CTD #4-16	Steam to main station	SS#1 CTD #4-16	Launch respirometer	bio cast-tow	MULVFS	NBST's 150 out	NBST's 300 out	Clap 500 out		SS#2 CTD#42-58
22 steam to K2	steam to K2	steam to K2	steam to K2	steam to K2	SS#1 CTD #4-16	SS#1 CTD #4-16	SS#1 CTD #4-16	Steam to main station	SS#1 CTD #4-16	Steam/dump	IONESS	MULVFS	NBST's 150 out	NBST's 300 out	NBST's 500 out	IONESS	SS#2 CTD#42-58

	survey	survey	survey	particle collections II	day 1	day 2	day 3	day 4	day 5	day 6	day 7	survey
	7-Aug	8-Aug	9-Aug	10-Aug	11-Aug	12-Aug	13-Aug	14-Aug	15-Aug	16-Aug	17-Aug	18-Aug
	18	19	20	21	22	23	24	25	26	27	28	29
0	SS#2 CTD#42-58	SS#2 CTD#42-58	SS#2 CTD#42-58	""	CTD#61	IONESS	MULVFS	bio cast-tow	bio cast-tow	bio cast-tow	IONESS	hold for weather
2	SS#2 CTD#42-58	SS#2 CTD#42-58	SS#2 CTD#42-58	""		IONESS	MULVFS	CTD #70	CTD #75	CTD #80	IONESS	hold for weather
4	SS#2 CTD#42-58	SS#2 CTD#42-58	SS#2 CTD#42-58	CTD #59	bio cast- CTD#62	CTD#64	bio cast- CTD #66	CTD #71	bio cast- CTD #76	CTD #81	bio cast- CTD #84	Optical trap out
6	SS#2 CTD#42-58	SS#2 CTD#42-58	SS#2 CTD#42-58	Trull trap in- 300	CTD #63	in situ pumps	CTD #67 High res Th		Deploy gel/O2 array		CTD #85 High res Th	Trull trap out
8	SS#2 CTD#42-58	SS#2 CTD#42-58	SS#2 CTD#42-58	Trull trap in- 300	MULVFS	in situ pumps	TM Go-Flo casts	CTD #72- 3000m Ba/Th	Deploy gel/O2 array	CTD #82	hold for weather	CTD #86
10	SS#2 CTD#42-58	SS#2 CTD#42-58	SS#2 CTD#42-58	Launch 150 Clap & NBST	MULVFS	IONESS	TM Go-Flo casts		Optical trap #2 in	IONESS	hold for weather	Recover respirometer
12	SS#2 CTD#42-58	SS#2 CTD#42-58	underway	Launch 300 Clap & NBST	MULVFS	IONESS	210Pb CTD #68	CTD #73- high res N	CTD #77	IONESS	hold for weather	bio cast-tow
14	SS#2 CTD#42-58	SS#2 CTD#42-58	survey	Launch 500 Clap & NBST	MULVFS	IONESS	226Ra CTD #69	CTD #74	CTD #78	IONESS	hold for weather	TM Go-Flo casts
16	SS#2 CTD#42-58	SS#2 CTD#42-58	""	Launch 500 Clap & NBST	MULVFS	CTD #65			CTD #79	CTD #83	hold for weather	Depart for Honolulu @1338 hrs
18	SS#2 CTD#42-58	SS#2 CTD#42-58	""	Optical trap in @1800			Clap & NBST's 150 out	Launch #2 respirometer	Clap 500 out	Pick up gel/O2	hold for weather	9.5 day steam
20	SS#2 CTD#42-58	SS#2 CTD#42-58	""	Launch respirometer	bio cast-tow	MULVFS	Recover optical trap	Clap 300 out	NBST's 500 out	Pick up gel/O2	hold for weather	underway sampling
22	SS#2 CTD#42-58	SS#2 CTD#42-58	""	CTD#60	IONESS	MULVFS	Recover respirometer	NBST's 300 out	NBST's 500 out	IONESS	hold for weather	

- Event type
- SS = Site Survey cast= CTD/Rosette w/trans, flu, sensors, option to trip bottles mostly 0-500m & selected sites for Saito's optical package
 - sampling scales- within 20-50km scales & coming in to station and during mid-cruise, larger 100km scales for "butterfly" survey
 - Central 5x5 km grid & launch main in-situ gear
 - includes NBST (n=7), Optical sediment trap; C explorer float (Bishop), Drogued Clap traps (n=3); Repirometer array (n=1); Trull trap array
 - Includes CTD work (and other sampling?) at n=5 grid points
 - STD biology cast- CTD (New Prod, 234Th & others- dawn; bottles tripped for ancillary nutrients, Chl, pigments, etc)
 - biology net tow- many short tows taken are not on this summary- plankton net tow for microscope work and live experiments- Silver and Steinberg and Tobar
 - F. MULVFS Pump cast (day and night pairs) assume 8 hours each
 - Deep-CTD- Ba/Th is cast dedicated to particulate Ba for Dehairs (focus on 100-1500m sampling) with 2-4 bottles tripped at 3000m for 234Th calibration
 - CTD- 500m high Res is Trull led CTD w/24 depths across pycnocline to 500m
 - Go-Flo casts for trace metals- Lamborg
 - Pick-up gear out of water (optional CTD survey casts at site of pick up)
 - IONESS- 6 hour cast
 - 210Pb LV CTD cast- need to trip 20 bottles to get 10 samples for 210Pb profile- 20 L each