

CRUISEID-ADCP – Acoustic Doppler Current Profiler

Os38bb (38 kHz broad band)
 Os38nb (38 kHz narrow band)
 Wh300 (300 kHz Workhorse)

CRUISEID-CTD – Conductivity, Temperature, Depth

File Extensions

.DAT/HEX – CTD Cast Data File
.HDR – CTD Cast Header File
.CON – CTD Cast Configuration File
.BL – CTD Cast Bottle File

SeaBird Software – software to manipulate and export CTD data to text, spreadsheets, etc.

CRUISEID-Underwaydata

Calibrations info

CALIBRATIONS

USSW CALIBRATIONS: SBE45 thermosalinograph, SBE38 remote temperature probe, & WETStar fluorometer calibration documentation.

MET CALIBRATIONS: Calibration documentation for all Meteorological Instrumentation including Eppley PIR, PSP, and Biospherical PAR sensors.

PROC TOOLS: We have provided some useful tools for processing the logged data in this directory.

CRUISEID-Rawdata (UN-CORRECTED/UN-PROCESSED)

Standard Abbreviations: YEAR: Calendar year JDAY: Julian Day HR: Hour MIN: Minute MSEC: Millisecond CODE: System logging code
SOG: Speed Over Ground COG: Course Over Ground EL: Elevation #SATs: Number of Satellites used in position fix
QUAL: Signal Quality; 3=PYCode; 2=Differential; 1=GPS; 0=DR HDOP: Horizontal Dilution Of Precision

Primary-Logger

ADU5: Ashtech ADU5 GPS; ([adu5_jday_raw](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	LATITUDE (deg)	LONGITUDE (deg)	EL (m)	HDOP	SOG (kts)	COG (deg)	#SATs	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	QUAL
2006	350	17	12	29	0	*gpa	21.3155	-157.887	27	2.1	0.1	202.68	6	12	0	0	29	0	5	0	0	26	17	0	0	48	0	0	1		
2006	350	17	12	30	0	*gpa	21.3155	-157.887	27	2.1	0.09	214.35	6	12	0	0	29	0	5	0	0	26	17	0	0	48	0	0	1		
2006	350	17	12	31	0	*gpa	21.3155	-157.887	27	2.1	0.29	185.56	6	12	0	0	29	0	5	0	0	26	17	0	0	48	0	0	1		
2006	350	17	12	32	0	*gpa	21.3155	-157.887	27	2.1	0.15	182.34	6	12	0	0	29	0	5	0	0	26	17	0	0	48	0	0	1		

FORMATS OF LOGGED DATA: *UPDATED 23-Jul-10*

ATTD: True Heading - derived from Ashtech ADU5; ([attd_jday_raw](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	SECONDS IN WEEK	TRUE HEADING (deg)	PITCH (deg)	ROLL (deg)	MRMS	BRMS	AFLAG
2006	323	2	6	52	0	attd	7627	85.20	0	0	0.0024	1321.653	1
2006	323	2	6	53	0	attd	7628	85.12	0	0	0.0022	1320.950	1
2006	323	2	6	54	0	attd	7629	84.92	0	0	0.0028	1321.153	1
2006	323	2	6	55	0	attd	7630	84.91	0	0	0.0024	1321.343	1

BAROM: Vaisala Digital Barometer; ([barom_jday_raw](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	PRESSURE (mBar)	UNITS
2006	350	17	12	29	88	bar1	1019.34	mbar
2006	350	17	12	30	70	bar1	1019.34	mbar
2006	350	17	12	31	71	bar1	1019.34	mbar
2006	350	17	12	32	70	bar1	1019.33	mbar

CTD: SeaBird 911+ Conductivity, Temperature, Depth System; ([ctd_jday/hr/min](#))

DEPTH (decibars)	TEMPERATURE (°C)	SALINITY (units)	OXYGEN (units)	FLUORESCENCE (units)	SCAN#
15.3361	24.79486	35.03756	4.41452	0.15263	1
16.4216	24.79611	35.03785	4.43613	0.15873	25
17.0742	24.79448	35.03796	4.43855	0.17949	49
15.7289	24.79665	35.03793	4.43055	0.15140	73

DPTH: Kongsberg-Simrad EM122/EM1002 Multibeam Depths; ([dpth_jday_raw](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	EM122_DEPTH (meters)	EM1002_DEPTH (meters)
2006	352	15	26	6	420	dpth	0	480.6
2006	352	15	26	7	932	dpth	0	480.9
2006	352	15	26	9	486	dpth	0	480.41
2006	352	15	26	11	42	dpth	0	480.35

FLUORO: Wetlabs WETStar Chlorophyll Fluorometer; ([fluoro_jday_raw](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	RAW SCALE COUNT
2006	350	17	12	28	842	flor	220
2006	350	17	12	29	922	flor	223
2006	350	17	12	31	2	flor	222
2006	350	17	12	32	82	flor	221

FORMATS OF LOGGED DATA: *UPDATED 23-Jul-10*

GRAV: Carson Gravity Meter; (*grav_jday_raw*)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	GRAVITY(DIAL)	SPRING TENSION	AVG_B	TCC	TC	VCC	AL	AX	VE	FXA	FLA	AX2
2006	350	17	12	40	938	rgrv	6990.58	6990.79	-16	-12	0	-6	-6	0	-18	-6	-12	-6
2006	350	17	12	50	933	rgrv	6990.62	6990.79	-17	-6	1	-6	-6	-6	-12	-12	-30	-6
2006	350	17	13	0	922	rgrv	6990.64	6990.79	-18	-6	1	0	0	-6	-18	-6	-12	-6
2006	350	17	13	10	914	rgrv	6990.66	6990.89	-26	-18	1	-6	-6	-12	-18	-12	-18	-6

Gravity = (3min filter) & SpringTension= (raw val)

AL = Long Ramp Acceleration

AX2 = Cross Circular Acceleration

AVG_B = Average Beam (1min)

AX = Cross Ramp Acceleration

TCC = Total Cross Couple

VE = Vertical Acceleration

TC = Total Correction

FXA = Filtered Cross Axis Acceleration

VCC = Long Circulation Acceleration

FLA = Filtered Long Axis Acceleration

GYRO: Sperry Marine Digital Gyroscope (*gyro_jday_raw*)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	HEADING (deg)
2006	350	17	12	28	374	gyr1	241.1
2006	350	17	12	29	371	gyr1	240.9
2006	350	17	12	30	373	gyr1	240.9
2006	350	17	12	31	374	gyr1	240.9

MAGY: Geometrics G-882 Cesium Marine Magnetometer; (*magy_jday_raw*)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	TOT FIELD	SIGNAL LEVEL	DEPTH (meters)
2006	28	0	35	58	444	magy	66350.18	42	0
2006	28	0	35	59	444	magy	44382.68	39	0
2006	28	0	36	0	444	magy	40180.02	39	0
2006	28	0	36	1	444	magy	37704.17	39	0

MET: RM Young Resistive Temperature Device (RTD); Rotronic Instrument Corp. Humidity Probe (HUMIDITY); RM Young Precipitation Guage (PRECIPITATION); Eppley Precision Spectral Pyranometer (PSP); Eppley Precision Infrared Radiometer (PIR); Biospherical Quantum Scalar Reference (PAR); OSI Optical Rain Gauge (ORG); (*met_jday_raw*)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	PANEL TEMP (°C)	RTD TEMP (°C)	HUMIDITY (%)	HUM TEMP (°C)	PRECIPITATION (mm)	PSP (mVolts)	PIRc (mVolts)	PIR CASE (Volts)	PIR HEMIS (Volts)	RTD Fan (mVolts)	HUM Fan (mVolts)	PAR (mVolts)	ORG Precipitation (R- if rain)	ORG Rate (mm/hr)	ORG Accumulation (mm)
2006	290	0	0	1	307	met	31.005	28.013	68.013	28.344	2.722	6.946	-0.145	2.242	2.186	2.5	2.5	1470.9		0	0.0
2006	290	0	0	2	307	met	31.005	28.013	68.013	28.344	2.722	6.943	-0.147	2.241	2.184	2.5	2.5	1463.6	R-	10.0	0.1
2006	290	0	0	3	307	met	31.005	28.013	68.013	28.344	2.722	6.959	-0.149	2.241	2.184	2.5	2.5	1476.8	R-	10.0	0.1
2006	290	0	0	4	307	met	31.005	28.013	67.947	28.344	2.728	6.977	-0.152	2.241	2.184	2.5	2.5	1481.5		0	0.1

POS-MV: Applanix POS-MV GPS/Inertial Measurement Unit; (*pos-mv_jday_raw*)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	LATITUDE (deg)	LONGITUDE (deg)	HDOP	SOG (kts)	COG (deg)	#SATs	QUAL	HEADING (deg)	ROLL (deg)	PITCH (deg)	HEAVE (deg)
2006	350	17	12	27	895	*gpo	21.31541	-157.887	0.9	0	181.4	9	1	250.85	0.24	0.58	0.14
2006	350	17	12	28	895	*gpo	21.31541	-157.887	0.9	0	190.6	9	1	250.88	0.26	0.59	0.14
2006	350	17	12	29	895	*gpo	21.31541	-157.887	0.9	0	230.6	9	1	250.9	0.28	0.6	0.15
2006	350	17	12	30	895	*gpo	21.31541	-157.887	0.9	0	234.9	9	1	250.92	0.3	0.61	0.15

FORMATS OF LOGGED DATA: *UPDATED 23-Jul-10*

RPM: Shipboard Propulsion System; (*rpm_jday_raw*)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	PORT (rpm)	STBD (rpm)	BOW THRUSTER (%)	BOW THRUSTER AZIMUTH (deg)
2006	350	17	59	58	810	*rpm	0	-89.1	64.8	263.5
2006	350	17	59	59	810	*rpm	0	-89.1	65.2	263.5
2006	350	18	0	0	810	*rpm	0	-89	65.6	264.5
2006	350	18	0	1	810	*rpm	0	-89.1	66	259.1

SIMRAD: Simrad GPS; (*simrad_jday_raw*)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	LATITUDE (deg)	LONGITUDE (deg)	HEIGHT (m)	HDOP	SOG (kts)	COG (hdg)	#SATs	QUAL
2006	350	17	12	28	50	*sim	21.31549	-157.887	28	1.5	0	0.1	8	1
2006	350	17	12	29	28	*sim	21.31549	-157.887	28	1.5	0	0.1	8	1
2006	350	17	12	30	7	*sim	21.31549	-157.887	28	1.5	0	0.1	8	1
2006	350	17	12	30	87	*sim	21.31549	-157.887	28	1.5	0	0.1	8	1

SSV: Applied MicroSystems Sound Velocity & Temperature; (*ssv_jday_raw*)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	TEMP (°C)	SOUND SPEED (m/s)
2008	77	0	0	0	286	*ssv	28.452	1541.88
2008	77	0	0	1	175	*ssv	28.45	1542.42
2008	77	0	0	2	61	*ssv	28.45	1542.48
2008	77	0	0	2	950	*ssv	28.452	1541.75

STW: Magnetic Speed Log (Speed Thru Water); (*stw_jday_raw*)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	SPEED THRU WATER (kts)	CROSS TRACT SPEED (kts)	COG (deg)	SOG (kts)
2006	351	4	7	4	717	stw1	0.2	-2.6	0	0
2006	351	4	7	5	717	stw1	0.2	-2.6	0	0
2006	351	4	7	6	717	stw1	0.2	-2.6	0	0
2006	351	4	7	7	717	stw1	0.2	-2.6	0	0

uTHSL: Seabird SBE45 MicroThermosalinograph; (*uthsl_jday_raw*)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	TEMP (°C)	COND (Siemens/m)	SALINITY (PSU)	RTEMP (°C)
2008	77	12	0	1	241	uthsl	28.929701	5.77001	35.334599	28.929701
2008	77	12	0	2	241	uthsl	28.929899	5.77012	35.335201	28.929899
2008	77	12	0	3	241	uthsl	28.9296	5.77021	35.336102	28.9296
2008	77	12	0	4	241	uthsl	28.930099	5.77035	35.336601	28.930099

*REMOTE TEMP is the sensor closest to uncontaminated scientific seawater intake, 8 meters below surface.

FORMATS OF LOGGED DATA: *UPDATED 23-Jul-10*

WINCH322: Caley Oceanographic Winch; ([winch322_jday_raw](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	RATE (meters/min)	WIRE OUT (meters)	TENSION (lbs)
2006	353	4	47	46	901	w322	32	206.6	565
2006	353	4	47	47	893	w322	32	206.8	579
2006	353	4	47	48	369	w322	32	207.4	561
2006	353	4	47	50	67	w322	32	208.1	439

WINCH680: Dynacon Hydrographic Winch; ([winch680_jday_raw](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	RATE (meters/min)	WIRE OUT (meters)	TENSION (lbs)
2006	335	7	33	25	793	w680	20	462.9	386
2006	335	7	33	26	367	w680	20	462.9	388
2006	335	7	33	27	212	w680	20	463.2	386
2006	335	7	33	28	21	w680	20	463.6	382

WIND1: RM Young Anemometer; ([wind1_jday_raw](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	PORT WIND RELATIVE SPD (kts)	PORT WIND RELATIVE HDG (deg)	SOG (kts)	COG (deg)	POSMV HDG (deg)	WIND TRUE SPD (kts)	WIND TRUE HDG (deg)
2006	350	17	12	30	614	rwd1	6	167	0	230.6	250.9	6	57.9
2006	350	17	12	32	605	rwd1	5	161	0	230.1	250.9	5	51.9
2006	350	17	12	34	606	rwd1	5	166	0	195.8	251	5	57
2006	350	17	12	36	605	rwd1	6	159	0.1	141	251	6	49

WIND2: RM Young Anemometer; ([wind2_jday_raw](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	STARBOARD WIND RELATIVE SPD (kts)	STARBOARD WIND RELATIVE HDG (deg)	SOG (kts)	COG (deg)	POSMV HDG (deg)	WIND TRUE SPD (kts)	WIND TRUE HDG (deg)
2008	77	12	0	0	727	rwd2	23	317	12.1	181.4	176.4	17.4	102.3
2008	77	12	0	2	728	rwd2	23	315	11.8	181	176.8	17.7	101.5
2008	77	12	0	4	726	rwd2	23	314	11.8	181.1	177.3	17.8	100.9
2008	77	12	0	6	730	rwd2	24	317	11.9	182	177.2	18.3	105.3

XBT: Sippican MK21 eXpendable Bathymetric Temperature probe; ([xbt_#####](#))

DEPTH(M)	TEMP	SOUND_VEL
0.6	25.14	1534.53*
1.3	25.13	1534.52*
1.9	25.11	1534.48*
2.6	25.1	1534.45*

Secondary Logger (Secondary backup of all raw data)

All data formats are the same as Primary_Logger

FORMATS OF LOGGED DATA: *UPDATED 23-Jul-10*

CRUISEID-finaldata (CORRECTED/PROCESSED)

pCO₂-data: General Oceanics 8050 Automated Flowing pCO₂ Measuring System; (C076533106_jday-start time) (C076533106 = sensor serial number)

TYPE	ERROR	DATE (dd/mm/yy)	PC TIME	equ TEMP (°C)	std val	CO2 mv	CO2 (um/m)	H2O mv	H2O (mm/m)	LICOR TEMP (°C)	LICOR PRESSURE (mbar)	equ PRESS	H2O FLOW (liters/min)	LICOR flow	equ pump	vent flow	atm cond	equ cond
ATM	0	20/09/07	0:01:58	26.71	NaN	12969595	379.93	13149538	2.9	24.82	1018.11	0.75	2.79	90.96	106	0.89	9.9	9.9
ATM	0	20/09/07	0:03:18	26.71	NaN	12979352	379.94	13175928	2.86	24.82	1018.16	0.76	2.81	92.19	106	2.06	9.92	9.91
EQU	0	20/09/07	0:08:04	26.7	NaN	12954023	382.56	13234403	1.62	24.83	1018.37	0.84	2.8	101.79	106	-0.32	9.91	9.91
EQU	0	20/09/07	0:09:24	26.7	NaN	12961814	382.2	13248906	1.62	24.84	1018.53	0.82	2.83	100.22	106	3.06	9.9	9.89

pCO₂ Continued...

drip 1	drip 2	CONDENSER TEMP (°C)	DRY BOX TEMP (°C)	GPS TIME	LATITUDE (deg)	LONGITUDE (deg)	ATMOSPHERIC PRESSURE (mbar)	TSG TEMP (°C)	TSG SALINITY (PSU)	TEMP INTERNAL? (°C)	RELATIVE WIND SPEED (kts)	RELATIVE WIND DIR (deg)	SOG (deg)	COG (deg)	TRUE HDG (deg)	TRUE WIND SPEED (kts)	TRUE WIND DIRECTION (deg)
0.02	0.01	4.06	22.06		0	0	1015.53	26.81046	35.12822	28.07145	24	315	10.8	153.5	149.7	18.7	79
0.02	0.02	4.69	22.06		0	0	1015.49	26.81109	35.12775	28.06773	28	313	10.8	150.8	148.8	22.4	80.5
0.02	0.02	4.69	22		0	0	1015.54				28	309	11.4	153.7	150.9	23.2	76.5
0.02	0.02	4.81	22.06		0	0	1015.57				26	308	11.1	158.8	149.9	22.8	72.6

CRUISEID-ADU5: Ashtech ADU5 GPS; (CRUISEID_ADU5)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	LATITUDE (deg)	LONGITUDE (deg)	EL (m)	HDOP	SOG (kts)	COG (deg)	#SATs	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	QUAL		
2006	350	17	12	29	0	*gpa	21.3155	-157.887	27	2.1	0.1	202.68	6	12	0	0	29	0	5	0	0	26	17	0	0	48	0	1
2006	350	17	12	30	0	*gpa	21.3155	-157.887	27	2.1	0.09	214.35	6	12	0	0	29	0	5	0	0	26	17	0	0	48	0	1
2006	350	17	12	31	0	*gpa	21.3155	-157.887	27	2.1	0.29	185.56	6	12	0	0	29	0	5	0	0	26	17	0	0	48	0	1
2006	350	17	12	32	0	*gpa	21.3155	-157.887	27	2.1	0.15	182.34	6	12	0	0	29	0	5	0	0	26	17	0	0	48	0	1

CRUISEID-ATTD: True Heading - derived from Ashtech ADU5; (CRUISEID_ATTD)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	SECONDS IN WEEK	TRUE HEADING (deg)	PITCH (deg)	ROLL (deg)	MRMS	BRMS	AFLAG
2006	323	2	6	52	0	attd	7627	85.20	0	0	0.0024	1321.653	1
2006	323	2	6	53	0	attd	7628	85.12	0	0	0.0022	1320.950	1
2006	323	2	6	54	0	attd	7629	84.92	0	0	0.0028	1321.153	1
2006	323	2	6	55	0	attd	7630	84.91	0	0	0.0024	1321.343	1

CRUISEID-BAROM: Vaisala Digital Barometer; (CRUISEID_BAROM)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	PRESSURE (mBar)	UNITS
2006	350	17	12	29	88	bar1	1019.34	mbar
2006	350	17	12	30	70	bar1	1019.34	mbar
2006	350	17	12	31	71	bar1	1019.34	mbar
2006	350	17	12	32	70	bar1	1019.33	mbar

FORMATS OF LOGGED DATA: *UPDATED 23-Jul-10*

CRUISEID-FLUORO: Wetlabs WETStar Chlorophyll Fluorometer; ([CRUISEID_FLUORO](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	RAW
							SCALE_COUNT
2006	350	17	12	28	842	flor	220
2006	350	17	12	29	922	flor	223
2006	350	17	12	31	2	flor	222
2006	350	17	12	32	82	flor	221

CRUISEID-GYRO: Sperry Marine Digital Gyroscope ([CRUISEID_GYRO](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	HEADING
							(deg)
2006	350	17	12	28	374	gyr1	241.1
2006	350	17	12	29	371	gyr1	240.9
2006	350	17	12	30	373	gyr1	240.9
2006	350	17	12	31	374	gyr1	240.9

CRUISEID-RDEPTH: Depth, selecting for most accurate multibeam system given depth range (EM1002= 20m-800m; EM122=300m-7000m); ([CRUISEID_RDPHTH](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	EM122 DEPTH	EM1002 DEPTH
							(m)	(m)
2006	321	19	17	16	681	dpth	4744.62	0
2006	321	19	17	31	419	dpth	4741.73	0
2006	321	19	17	46	973	dpth	4744.53	0
2006	321	19	18	2	26	dpth	4745.93	0

CRUISEID-RGRAV: Carson Gravity Meter; ([CRUISEID_RGRAV](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	GRAVITY(DIAL)	SPRING TENSION	AVG_B	TCC	TC	VCC	AL	AX	VE	FXA	FLA	AX2
2006	350	17	12	40	938	rgrv	6990.58	6990.79	-16	-12	0	-6	-6	0	-18	-6	-12	-6
2006	350	17	12	50	933	rgrv	6990.62	6990.79	-17	-6	1	-6	-6	-6	-12	-12	-30	-6
2006	350	17	13	0	922	rgrv	6990.64	6990.79	-18	-6	1	0	0	-6	-18	-6	-12	-6
2006	350	17	13	10	914	rgrv	6990.66	6990.89	-26	-18	1	-6	-6	-12	-18	-12	-18	-6

Gravity = (3min filter) & SpringTension= (raw val)
 AL = Long Ramp Acceleration
 AX2 = Cross Circular Acceleration

AVG_B = Average Beam (1min)
 AX = Cross Ramp Acceleration
 TCC = Total Cross Couple
 VE = Vertical Acceleration

TC = Total Correction
 VCC = Long Circulation Acceleration
 FXA = Filtered Cross Axis Acceleration
 FLA = Filtered Long Axis Acceleration

CRUISEID-RMAGY: Geometrics G-882 Cesium Marine Magnetometer; ([CRUISEID_RMAGY](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	TOT FIELD	SIGNAL LEVEL	DEPTH
									(meters)
2006	28	0	35	58	444	magy	66350.18	42	0
2006	28	0	35	59	444	magy	44382.68	39	0
2006	28	0	36	0	444	magy	40180.02	39	0
2006	28	0	36	1	444	magy	37704.17	39	0

FORMATS OF LOGGED DATA: *UPDATED 23-Jul-10*

CRUISEID-RPM: Shipboard Propulsion System; ([CRUISEID_RPM](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	PORT (rpm)	STBD (rpm)	BOW THRUSTER (%)	BOW THRUSTER AZIMUTH (deg)
2006	350	17	59	58	810	*rpm	0	-89.1	64.8	263.5
2006	350	17	59	59	810	*rpm	0	-89.1	65.2	263.5
2006	350	18	0	0	810	*rpm	0	-89	65.6	264.5
2006	350	18	0	1	810	*rpm	0	-89.1	66	259.1

CRUISEID-MET: RM Young Resistive Temperature Device (RTD); Rotronic Instrument Corp. Humidity Probe (HUMIDITY); RM Young Precipitation Gauge (PRECIPITATION); Eppley Precision Spectral Pyranometer (PSP); Eppley Precision Infrared Radiometer (PIR); Biospherical Quantum Scalar Reference (PAR); OSI Optical Rain Gauge (ORG); ([CRUISEID_MET](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	PANEL TEMP (°C)	RTD TEMP (°C)	HUMIDITY (%)	HUM TEMP (°C)	PRECIPITATION (mm)	PSP (W/m ²)	PIR (W/m ²)	TEMP PIR CASE (°K)	TEMP PIR HEMIS (°K)	RTD Fan (mVolts)	HUM Fan (mVolts)	PAR (W/m ²)	ORG Rate (mm/hr)	ORG Accumulation (mm)
2006	290	0	0	1	307	met	31.005	28.013	68.013	28.344	2.722	350.452564	350.525621	290.452564	291.752564	2.5	2.5	269.556714	0	0.0
2006	290	0	0	2	307	met	31.005	28.013	68.013	28.344	2.722	351.645764	351.672166	290.645764	292.785764	2.5	2.5	270.459112	10.0	0.1
2006	290	0	0	3	307	met	31.005	28.013	68.013	28.344	2.722	350.242264	350.242268	290.242264	292.287454	2.5	2.5	270.490214	10.0	0.1
2006	290	0	0	4	307	met	31.005	28.013	67.947	28.344	2.728	349.442564	349.111564	290.442564	291.752564	2.5	2.5	271.456787	0	0.1

CRUISEID-NAV: Master navigation file, generally derived from POS/MV data; ([CRUISEID_NAV](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	LATITUDE (deg)	LONGITUDE (deg)
2006	320	17	39	0	0	*nav	21.31542	-157.887
2006	320	17	39	10	0	*nav	21.31542	-157.887
2006	320	17	39	20	0	*nav	21.31542	-157.887
2006	320	17	39	30	0	*nav	21.31542	-157.887

CRUISEID-POS-MV: Applanix POS-MV GPS/Inertial Measurement Unit; ([CRUISEID_POS-MV](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	LATITUDE (deg)	LONGITUDE (deg)	HDOP	SOG (kts)	COG (deg)	#SATs	QUAL	HEADING (deg)	ROLL (deg)	PITCH (deg)	HEAVE (deg)
2006	350	17	12	27	895	*gpo	21.31541	-157.887	0.9	0	181.4	9	1	250.85	0.24	0.58	0.14
2006	350	17	12	28	895	*gpo	21.31541	-157.887	0.9	0	190.6	9	1	250.88	0.26	0.59	0.14
2006	350	17	12	29	895	*gpo	21.31541	-157.887	0.9	0	230.6	9	1	250.9	0.28	0.6	0.15
2006	350	17	12	30	895	*gpo	21.31541	-157.887	0.9	0	234.9	9	1	250.92	0.3	0.61	0.15

CRUISEID-RWIND1: RM Young Anemometer; ([CRUISEID_RWIND1](#))

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	PORT WIND RELATIVE SPD (kts)	PORT WIND RELATIVE HDG (deg)	SOG (kts)	COG (deg)	POSMV HDG (deg)	WIND TRUE SPD (kts)	WIND TRUE HDG (deg)
2006	350	17	12	30	614	rwd1	6	167	0	230.6	250.9	6	57.9
2006	350	17	12	32	605	rwd1	5	161	0	230.1	250.9	5	51.9
2006	350	17	12	34	606	rwd1	5	166	0	195.8	251	5	57
2006	350	17	12	36	605	rwd1	6	159	0.1	141	251	6	49

FORMATS OF LOGGED DATA: *UPDATED 23-Jul-10*

CRUISEID-RWIND2: RM Young Anemometer; (CRUISEID_RWIND2)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	STARBOARD WIND	STARBOARD WIND	SOG	COG	POSMV HDG	WIND	WIND
							RELATIVE SPD	RELATIVE HDG				TRUE SPD	TRUE HDG
							(kts)	(deg)	(kts)	(deg)	(deg)	(kts)	(deg)
2008	77	12	0	0	727	rwd2	23	317	12.1	181.4	176.4	17.4	102.3
2008	77	12	0	2	728	rwd2	23	315	11.8	181	176.8	17.7	101.5
2008	77	12	0	4	726	rwd2	23	314	11.8	181.1	177.3	17.8	100.9
2008	77	12	0	6	730	rwd2	24	317	11.9	182	177.2	18.3	105.3

CRUISEID-SPDHG: Speed and Heading, derived from ship's gyro and magnetic speed log (STW); (CRUISEID_SPDHG)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	SPEED	HEADING
							(kts)	(deg)
2006	322	18	23	0	0	sphd	7.34	195.5
2006	322	18	23	10	0	sphd	7.41	195.7
2006	322	18	23	20	0	sphd	7.52	195.8
2006	322	18	23	30	0	sphd	7.46	195.5

CRUISEID-SIMRAD: Simrad GPS; (CRUISEID_SIMRAD)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	LATITUDE	LONGITUDE	HEIGHT	HDOP	SOG	COG	#SATs	QUAL
							(deg)	(deg)	(m)					
2006	350	17	12	28	50	*sim	21.31549	-157.887	28	1.5	0	0.1	8	1
2006	350	17	12	29	28	*sim	21.31549	-157.887	28	1.5	0	0.1	8	1
2006	350	17	12	30	7	*sim	21.31549	-157.887	28	1.5	0	0.1	8	1
2006	350	17	12	30	87	*sim	21.31549	-157.887	28	1.5	0	0.1	8	1

CRUISEID-SSV: Applied MicroSystems Sound Velocity & Temperature; (CRUISEID_SSV)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	TEMP	SOUND
							(°C)	SPEED
							(m/s)	
2008	77	0	0	0	286	*ssv	28.452	1541.88
2008	77	0	0	1	175	*ssv	28.45	1542.42
2008	77	0	0	2	61	*ssv	28.45	1542.48
2008	77	0	0	2	950	*ssv	28.452	1541.75

CRUISEID-STW: Magnetic Speed Log (Speed Thru Water); (CRUISEID_STW)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	SPEED THRU WATER	CROSS TRACT SPEED	COG	SOG
							(kts)	(kts)		
							(deg)	(kts)		
2006	351	4	7	4	717	stw1	0.2	-2.6	0	0
2006	351	4	7	5	717	stw1	0.2	-2.6	0	0
2006	351	4	7	6	717	stw1	0.2	-2.6	0	0
2006	351	4	7	7	717	stw1	0.2	-2.6	0	0

FORMATS OF LOGGED DATA: *UPDATED 23-Jul-10*

CRUISEID-UTHSL: Seabird SBE45 MicroThermosalinograph; (CRUISEID_UTHSL)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	TEMP (°C)	COND (Siemens/m)	SALINITY (PSU)	RTEMP (°C)
2008	77	12	0	1	241	uthsl	28.929701	5.77001	35.334599	28.929701
2008	77	12	0	2	241	uthsl	28.929899	5.77012	35.335201	28.929899
2008	77	12	0	3	241	uthsl	28.9296	5.77021	35.336102	28.9296
2008	77	12	0	4	241	uthsl	28.930099	5.77035	35.336601	28.930099

*REMOTE TEMP is the sensor closest to uncontaminated scientific seawater intake, 8 meters below surface.

CRUISEID-UTHSL WFIX: Thermosalinograph data matched with GPS; (CRUISEID_UTHSL_WFIX)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	LATITUDE (deg)	LONGITUDE (deg)	TEMP (°C)	COND (Siemens/m)	SALINITY (PSU)	REMOTE TEMP* (°C)
2006	320	19	37	30	0	thsl	21.24665	-158.095	27.13551	5.51874	34.91502	27.14373
2006	320	19	37	40	0	thsl	21.24664	-158.096	27.13924	5.5196	34.91833	27.13936
2006	320	19	37	50	0	thsl	21.24664	-158.096	27.14049	5.51998	34.92011	27.13127
2006	320	19	38	0	0	thsl	21.24663	-158.097	27.14173	5.52045	34.92257	27.13563

*REMOTE TEMP is the sensor closest to uncontaminated scientific seawater intake, 8 meters below surface.

CRUISEID-TWIND1-ITW: True Wind data, instantaneous; (CRUISEID_TWIND1_ITW)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	WIND SPEED (kts)	WIND DIRECTION (deg)
2006	320	17	38	21	811	twnd	4.1	65.9
2006	320	17	38	23	801	twnd	4.1	66.9
2006	320	17	38	25	799	twnd	4.1	61.2
2006	320	17	38	27	803	twnd	5.1	53.3

CRUISEID-TWIND1-T1: True Wind data, 1 minute averages; (CRUISEID_TWIND1_T1)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	WIND SPEED (kts)	WIND DIRECTION (deg)
2006	320	17	41	0	0	twnd	4.28	58.7
2006	320	17	42	0	0	twnd	3.13	52
2006	320	17	43	0	0	twnd	2.91	59.9
2006	320	17	44	0	0	twnd	3.38	57.6

CRUISEID-TWIND1-T5: True Wind data, 5-minute averages; (CRUISEID_TWIND1_T5)

YEAR	JDAY	HR	MIN	SEC	MSEC	CODE	WIND SPEED (kts)	WIND DIRECTION (deg)
2006	320	17	55	0	0	twnd	4.75	53
2006	320	18	0	0	0	twnd	5.31	56.2
2006	320	18	5	0	0	twnd	5.51	58.5
2006	320	18	10	0	0	twnd	5.77	59.8

FORMATS OF LOGGED DATA: *UPDATED 23-Jul-10*

CRUISEID-TWIND2-ITW: *True Wind data, instantaneous;* ([CRUISEID_TWIND2_ITW](#))

<u>YEAR</u>	<u>JDAY</u>	<u>HR</u>	<u>MIN</u>	<u>SEC</u>	<u>MSEC</u>	<u>CODE</u>	WIND SPEED (kts)	WIND DIRECTION (deg)
2006	320	17	38	21	811	twnd	4.1	65.9
2006	320	17	38	23	801	twnd	4.1	66.9
2006	320	17	38	25	799	twnd	4.1	61.2
2006	320	17	38	27	803	twnd	5.1	53.3

CRUISEID-TWIND2-T1: *True Wind data, 1 minute averages;* ([CRUISEID_TWIND2_T1](#))

<u>YEAR</u>	<u>JDAY</u>	<u>HR</u>	<u>MIN</u>	<u>SEC</u>	<u>MSEC</u>	<u>CODE</u>	WIND SPEED (kts)	WIND DIRECTION (deg)
2006	320	17	41	0	0	twnd	4.28	58.7
2006	320	17	42	0	0	twnd	3.13	52
2006	320	17	43	0	0	twnd	2.91	59.9
2006	320	17	44	0	0	twnd	3.38	57.6

CRUISEID-TWIND2-T5: *True Wind data, 5-minute averages;* ([CRUISEID_WIND2_T5](#))

<u>YEAR</u>	<u>JDAY</u>	<u>HR</u>	<u>MIN</u>	<u>SEC</u>	<u>MSEC</u>	<u>CODE</u>	WIND SPEED (kts)	WIND DIRECTION (deg)
2006	320	17	55	0	0	twnd	4.75	53
2006	320	18	0	0	0	twnd	5.31	56.2
2006	320	18	5	0	0	twnd	5.51	58.5
2006	320	18	10	0	0	twnd	5.77	59.8

CRUISEID-WINCH322: *Caley Oceanographic Winch;* ([CRUISEID_WINCH322](#))

<u>YEAR</u>	<u>JDAY</u>	<u>HR</u>	<u>MIN</u>	<u>SEC</u>	<u>MSEC</u>	<u>CODE</u>	RATE (meters/min)	WIRE OUT (meters)	TENSION (lbs)
2006	353	4	47	46	901	w322	32	206.6	565
2006	353	4	47	47	893	w322	32	206.8	579
2006	353	4	47	48	369	w322	32	207.4	561
2006	353	4	47	50	67	w322	32	208.1	439

CRUISEID-WINCH680: *Dynacon Hydrographic Winch;* ([CRUISEID_WINCH680](#))

<u>YEAR</u>	<u>JDAY</u>	<u>HR</u>	<u>MIN</u>	<u>SEC</u>	<u>MSEC</u>	<u>CODE</u>	RATE (meters/min)	WIRE OUT (meters)	TENSION (lbs)
2006	335	7	33	25	793	w680	20	462.9	386
2006	335	7	33	26	367	w680	20	462.9	388
2006	335	7	33	27	212	w680	20	463.2	386
2006	335	7	33	28	21	w680	20	463.6	382

FORMATS OF LOGGED DATA: *UPDATED 23-Jul-10*

*** EDIT HISTORY ***

- 23-Jul-10: Cleaned up some formatting and added a missing final data file formats -JES
- 20-Jul-10: Updated all logged file and data structure -JES
- 6-Jun-08: Major update on file structure of all data. - *tm*
- 3-Apr-08: Sound velocity data definitions added - *tm*
Micro thermosalinograph data definitions added
Wind2 data definitions added
MET definitions corrected to reflect new Campbell data logger
Wind1 data definitions corrected to remove wind2 data

- 22-Sep-07: Raw magnetometer concatenated file name added to Prelim directory CRUISE_ID definitions – *tm*
Corrected magnetometer data definitions added
Raw gravity data header definitions corrected
pCO2 data definitions added

- 4-Apr-07: Logged CTD data added. – *tm*

- 31-Jan-07: First version submitted. – *tm*