



Universidad de Concepción

DATA REPORT

CTD-0

FIORDO AYSÉN

Septiembre-2009

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Concepción, Diciembre de 2010.

Campaña de primavera, septiembre del 2009

Las mediciones hidrográficas al interior del fiordo Aysén, se realizaron entre los días 23 y 27 de septiembre del 2009, efectuando 65 perfiles con un CTD SeaBird modelo 25 (SN: 0457) incluidos sensores oxígeno y fluorescencia, los cuales se detallan en la Tabla 1. En la Tabla 2, se muestra la configuración utilizada para CTD SBE 0437 utilizado en esta campaña.

Además de las mediciones con CTD-OF, se efectuaron en algunas estaciones, lances de redes de tipo Bongo y Tucker para recolección de organismos zooplanctónicos. El resumen de las estaciones se muestra en la Tabla 3. Estas mediciones bioceanográficas se realizaron a bordo de la embarcación “Río Cisnes”, la cual fue equipada con instrumento GPS y ecosonda.

Las mediciones incluyeron una transecta a lo largo del fiordo, y 3 transectas perpendiculares al eje del fiordo. La transecta a lo largo, constó de 16 estaciones desde la cabeza a la boca del fiordo, mientras que las secciones a lo ancho, constaron de 5 estaciones en las cercanías de caleta Gato y río Cuervo, y con 3 estaciones en la transecta realizada frente al río Cóndor.

Las secciones realizadas en río Cuervo y río Cóndor, fueron estaciones yo-yo las cuales se midieron durante 6 y 27 horas, respectivamente, permitiendo visualizar los efectos de la marea en este sector. Las muestras de zooplancton se obtuvieron de ciertas estaciones en la sección a lo largo del fiordo, y en las estaciones centrales de las transectas a lo ancho medidas en río Cuervo y caleta Gato (Tabla 1 y Figura 1).

Protocolo de medición

El protocolo utilizado para realizar los perfiles de CTD SBE 0437, fue el siguiente:

1. Se observaba la superficie del mar, para evitar contaminar la celda de conductividad con aceite u otra sustancia ajena al agua de mar.
2. El equipo se encendía en cubierta y se mantenía por aproximadamente 1 minuto a la espera que la bomba encendiera.
3. Se estabilizaba por un minuto en el agua, lo más cercano a la superficie y confirmando que el equipo quedara siempre bajo el agua.
4. Se procedía a realizar el perfil hasta la profundidad deseada virándolo inmediatamente una vez que se alcanzaba la profundidad.
5. Una vez en cubierta se apagaba inmediatamente.
6. La profundidad era estimada en base a marcas efectuadas en la cuerda.

Procesamiento de datos

El procesamiento de los datos se realizó en dos etapas, la primera, utilizando las rutinas propuestas por el fabricante de CTD SeaBird modelo 25, con el software SBE Data Processing de SeaBird, y en la segunda etapa, se usó el programa Matlab.

A continuación, se describen los módulos del primer programa utilizado:

DATA CONVERSION: Convierte los datos originales en formato hexadecimal a formato ASCII y en unidades de ingeniería. Las variables de salida fueron presión, temperatura, conductividad, concentración de oxígeno y fluorescencia (en Volts).

SECTION: Se seleccionaron los datos correspondientes a la bajada y subida del CTD, eliminando los datos correspondientes al periodo de estabilización de los sensores.

WILL EDIT: Marca como malos los datos escapados, en base a la desviación estándar de un bloque de 20 datos. Este módulo se aplicó tres veces para cada perfil y los datos marcados fueron eliminados.

FILTER: Este módulo es un filtro de paso bajo que se aplica sobre una o más columnas de datos, así cumple el rol de suavizar las altas frecuencias (cambios rápidos). Para producir cero desfase, el filtro es aplicado hacia adelante y hacia atrás a través de los datos, utilizando constantes de tiempo típicas recomendadas por el fabricante, de 0.5 s para la presión y 0.1 s para la temperatura y conductividad.

ALIGN CTD: Alinea en el tiempo las observaciones de los demás sensores respecto al sensor de presión, intentando que los datos obtenidos correspondan a la misma parcela de agua. En la campaña de primavera para medir el fiordo Aysén, se aplicó un rezago de 0.1 s para el sensor de conductividad, de 7.0 s para el de fluorescencia, y de 3.7 s para el sensor de oxígeno.

CELL THERMAL MASS: Remueve el efecto de la “masa termal de la celda” de las mediciones de conductividad. Esta corrige las pequeñas diferencias de conductividad producidos por fuertes cambios de temperatura. Los valores utilizados corresponden a los recomendados por el fabricante ($\text{Alpha}=0.004$ y $1/\text{beta}=8$).

Posteriormente se verificó que efectivamente se eliminaran estas variaciones graficando los perfiles de conductividad y temperatura, eliminando datos donde aún se presentaron valores de conductividad anómalos (spikes) en puntos de fuertes gradientes de temperatura.

WINDOW FILTER: Este módulo filtra los datos, el cual calcula un valor promedio, tomando en cuenta los valores de datos alrededor de un punto central. El tamaño de la ventana utilizado fue de 5 puntos.

DERIVE: Permite derivar distintas variables. En este caso se derivaron las variables de salinidad, Sigma-t y oxígeno disuelto (usando una ventana de 2 s para el cálculo de la concentración de oxígeno, valor por defecto).

BIN AVERAGE: Este programa permite promediar los datos a intervalos elegidos por el usuario en función de la presión. El valor utilizado en este caso fue de 0.5 dbar. Note que la escala total para el sensor de presión es 1000 m con una precisión de 0.1% (1m) y una resolución de 0.015% (0.15m).

SPLIT: Separa los datos de subida y bajada, en archivos diferentes.

En la segunda etapa del procesamiento, se utilizó el software Matlab donde se eliminaron las inversiones de densidad (valores menores a 0 kg m^{-3}). Además con este software se realizaron las graficas y se extrajeron algunos datos representativos de cada perfil (temperatura, salinidad, sigma-t, oxígeno y fluorescencia).

Tablas

Tabla 1. Números de serie y fecha de calibración en sensores de CTD (SBE 0457).

Sensores	Número de serie	Fecha de calibración
Temperatura	5047	26-11-2008
Conductividad	3489	07-11-2008
Presión	0664	16-12-2008
Oxígeno	1520	09-12-2008
Fluorómetro	1311	18-11-2008

Tabla 2. Configuración de CTD (SBE 0457).

Variable	Configuración
Scans por segundo	8
Frecuencia mínima de conductividad para el encendido de la bomba	0
Encendido de la bomba	45 s
Tipo de batería	Alcalinas
Voltajes externos	2

Tabla 3. Resumen de estaciones en Fiordo Aysén, campaña de primavera (Septiembre - 2009): nombre del archivo (perfil n°_ cast n°), L.C. (Longitud del Cable).

Est.	Archivo	Fecha			UTC		Latitud (S)		Longitud (W)		Profundidad (m)			Zooplankton
		día	mes	año	hora	min	(°)	(min)	(°)	(min)	Eco	L.C.	Z-CTD	
C1	d01_cast42	23	9	2009	1	45	45	25.626	72	50.136	136	100	70	
C2	d02_cast44	23	9	2009	3	16	45	26.166	72	52.059	124	100	103	Bongo
C3	d03_cast45	23	9	2009	6	30	45	23.855	72	50.601	140	100	110	
C4	d04_cast00	23	9	2009	7	10	45	25.278	72	52.295	170	150	157	
C6	d05_cast01	23	9	2009	8	5	45	26.338	72	53.895	180	150	146	
C7	d06_cast02	23	9	2009	15	0	45	26.334	72	55.723	190	150	84	
C8	d07_cast03	23	9	2009	16	30	45	25.435	72	58.766	200	170	161	
C9	d08_cast04	23	9	2009	18	40	45	23.719	73	2.195	209	170	175	Bongo
C11	d09_cast05	23	9	2009	20	25	45	22.843	73	3.321	214	180	189	
C12	d10_cast06	23	9	2009	21	25	45	21.978	73	4.792	142	110	110	
C13	d11_cast07	23	9	2009	22	5	45	20.385	73	6.226	340	300	306	Bongo
C15	d12_cast08	24	9	2009	1	5	45	17.935	73	9.166	342		305	
C16	d13_cast09	24	9	2009	3	0	45	16.337	73	12.158	310	280	287	Bongo
C18	d14_cast10	24	9	2009	5	45	45	18.013	73	17.697	222	180	164	
C20	d15_cast11	24	9	2009	6	50	45	20.062	73	20.831	74	50	53	Bongo
C21	d16_cast12	24	9	2009	8	36	45	21.750	73	23.698	275	240	232	
GS	d17_cast13	24	9	2009	14	47	45	19.073	73	8.765	122	70	59	
G1	d18_cast14	24	9	2009	15	34	45	18.870	73	8.396	342	300	209	
GC	d19_cast15	24	9	2009	16	47	45	18.584	73	8.047	340	300	203	Tucker
G2	d20_cast16	24	9	2009	18	25	45	18.295	73	7.682			289	

Est.	Archivo	Fecha			UTC		Latitud (S)		Longitud (W)		Profundidad (m)			Zooplankton
		día	mes	año	hora	min	(°)	(min)	(°)	(min)	Eco	L.C.	Z-CTD	
GN	d21_cast17	24	9	2009	19	46	45	18.101	73	7.196	330	290	252	
CN	d22_cast18	25	9	2009	21	40	45	25.692	72	54.675	50	30	30	
CC	d23_cast19	25	9	2009	23	55	45	26.569	72	54.640	182	150	136	Tucker
CS	d24_cast20	26	9	2009	0	35	45	27.390	72	54.845	165	130	131	
CN	d25_cast21	26	9	2009	2	30	45	25.692	72	54.675		30	33	
CC	d26_cast22	26	9	2009	3	10	45	26.569	72	54.640		100	96	Tucker
CS	d27_cast23	26	9	2009	3	47	45	27.390	72	54.845		100	104	
CN	d28_cast24	26	9	2009	5	30	45	25.718	72	54.656		30	33	
CC	d29_cast25	26	9	2009	6	23	45	26.593	72	54.747		100	107	Tucker
CS	d30_cast26	26	9	2009	7	7	45	27.436	72	54.852		100	104	
CN	d31_cast27	26	9	2009	8	55	45	25.725	72	54.684		30	32	
CC	d32_cast28	26	9	2009	9	28	45	26.595	72	54.797		100	104	Tucker
CS	d33_cast29	26	9	2009	10	9	45	27.365	72	54.822		100	103	
CN	d34_cast30	26	9	2009	12	8	45	25.718	72	54.656		30	33	
CC	d35_cast31	26	9	2009	12	29	45	26.591	72	54.774		100	103	Tucker
CS	d36_cast32	26	9	2009	13	0	45	27.350	72	54.986		100	103	
CN	d37_cast33	26	9	2009	14	59	45	25.718	72	54.656		30	33	
CC	d38_cast34	26	9	2009	15	22	45	26.451	72	54.744		100	123	Tucker
CS	d39_cast35	26	9	2009	16	1	45	27.405	72	54.744		100	113	
CN	d40_cast36	26	9	2009	17	20	45	25.654	72	54.568		30	31	
CC	d41_cast37	26	9	2009	18	12	45	26.720	72	54.676		100	98	Tucker
CS	d42_cast39	26	9	2009	18	53	45	27.399	72	54.819		100	98	
CN	d43_cast40	26	9	2009	20	40	45	25.728	72	54.622		30	32	
CC	d44_cast41	26	9	2009	21	5	45	26.624	72	54.731		100	101	Tucker
CS	d45_cast42	26	9	2009	21	45	45	27.316	72	54.865		100	101	
CN	d46_cast43	27	9	2009	0	15	45	25.740	72	54.707		30	32	
CC	d47_cast44	27	9	2009	0	35	45	26.609	72	54.854		100	103	
CS	d48_cast45	27	9	2009	1	0	45	27.299	72	54.868		100	103	
CUN	d49_cast46	27	9	2009	12	0	45	21.194	73	3.779	150	120	120	
CU1	d50_cast47	27	9	2009	12	40	45	21.492	73	4.307	220	180	179	
CUC	d51_cast48	27	9	2009	13	35	45	22.051	73	5.160	77	50	53	
CU2	d52_cast49	27	9	2009	14	10	45	22.569	73	6.11	210	170	173	
CUS	d53_cast50	27	9	2009	14	55	45	22.978	73	6.683	140	100	108	
CUS	d54_cast00	27	9	2009	17	0	45	23.041	73	6.419		70	74.5	
CUC	d55_cast01	27	9	2009	17	40	45	22.116	73	5.164		50	53.5	
CUN	d56_cast02	27	9	2009	18	23	45	22.212	73	3.675	120	70	74	
CUS	d57_cast03	27	9	2009	19	0	45	22.977	73	6.337		70	73	
CUC	d58_cast04	27	9	2009	19	29	45	22.091	73	5.133		50	53.5	
CUN	d59_cast05	27	9	2009	20	30	45	21.356	73	3.434		35	34.5	
CUN	d60_cast06	27	9	2009	20	40	45	21.242	73	3.763		70	73.5	
CUS	d61_cast07	27	9	2009	21	58	45	22.978	73	6.599		70	74.5	
CUC	d62_cast08	27	9	2009	22	27	45	22.085	73	5.188		50	54	
CUN	d63_cast09	27	9	2009	22	53	45	21.252	73	3.752		70	73	
CUC	d64_cast10	27	9	2009	23	22	45	22.133	73	5.040		50	53	
CUS	d65_cast11	27	9	2009	23	50	45	22.967	73	6.545		70	74.5	

Tabla 4. Descripción de los datos.

Dato	Unidad	Descripción
Presión	dB	Decibares
Temperatura	°C	Centígrado
Salinidad		Practical salinity units (PSU)
Sigma-t	kg m ⁻³	kilógramo (metro cúbico -1000) ⁻¹
Oxígeno	mL L ⁻¹	mililitros litro ⁻¹
Fluorescencia		Voltaje
z-CTD	m	Máxima profundidad del instrumento
Hora	hh:mm	Hora:Minutos (UTC)
Fecha	dd\mm\aa	Día\ Mes\ Año (UTC)

Tabla 5. Salinidad obtenida desde muestras de agua (botellas). Fiordo Aysén. Campaña de primavera, Septiembre-2009.

Estación	Botella	Profundidad (m)	Salinidad 1	Salinidad 2	Promedio	Desviación Estándar
C02	1	0	1.1487	1.1493	1.1490	0.0004
C02	4	0	1.1487	1.1487	1.1487	0.0000
C02	35	5	2.9766	2.9766	2.9766	0.0000
C02	25	5	2.9730	2.9730	2.9730	0.0000
C02	32	20	27.2789	27.2787	27.2788	0.0001
C02	26	20	27.2751	27.2760	27.2756	0.0007
C02	5	50	29.2716	29.2728	29.2722	0.0008
C02	28	50	29.2865	29.2869	29.2867	0.0003
C04	27	0	0.7256	0.7248	0.7252	0.0006
C06	36	0	1.8690	1.8691	1.8690	0.0001
C09	16	0	15.3275	15.3273	15.3274	0.0001
C13	31	0	18.6294	18.6283	18.6289	0.0008
C16	11	0	22.9233	22.9224	22.9229	0.0007
C20	23	0	22.0823	22.0813	22.0818	0.0007

Figuras

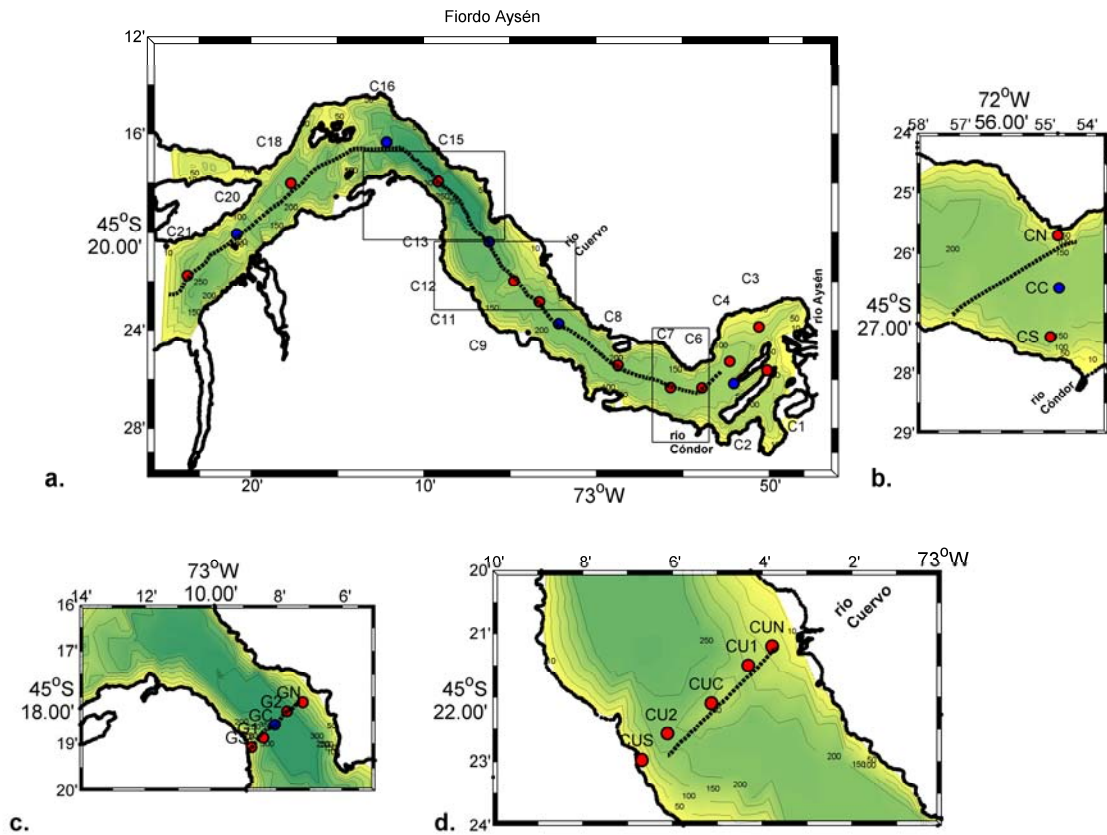


Figura 1. Posiciones nominales de la campaña de primavera, en el Fierdo Aysén. Septiembre - 2009. Transecta a lo largo del fierdo (a), transecta a lo ancho del fierdo, en Cónдор (b), Gato (c), y Cuervo (d). Círculos rojos, representan estaciones de CTD; y círculos azules, señalan estaciones de CTD & Zooplankton.

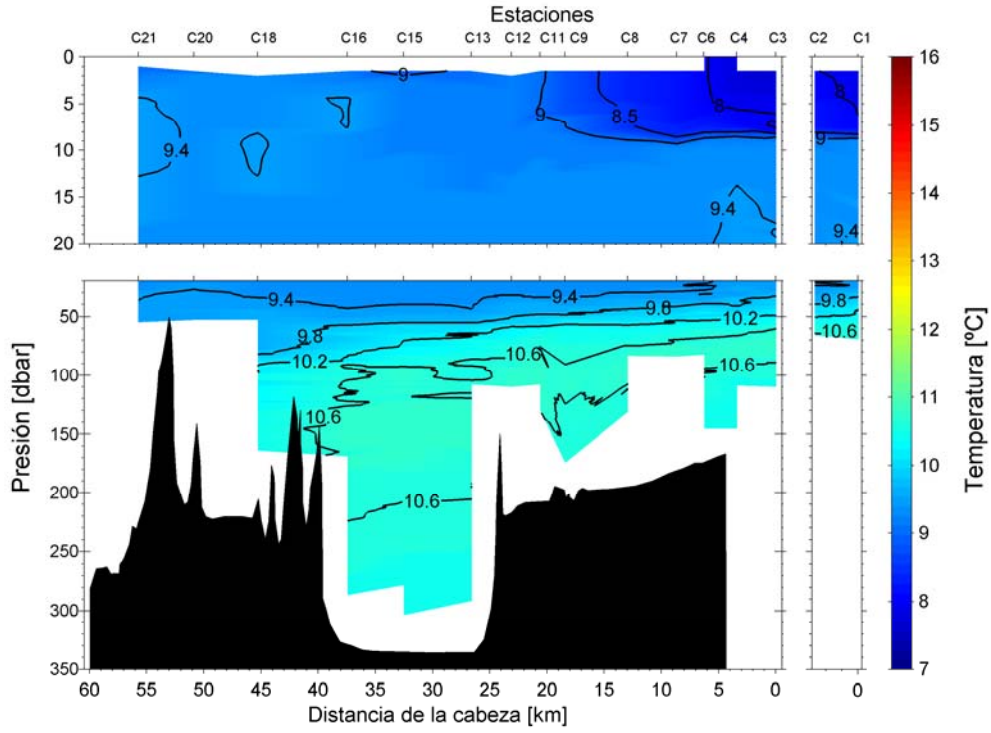


Figura 2. Transecta de temperatura a lo largo del fiordo. Fiordo Aysén septiembre-2009.

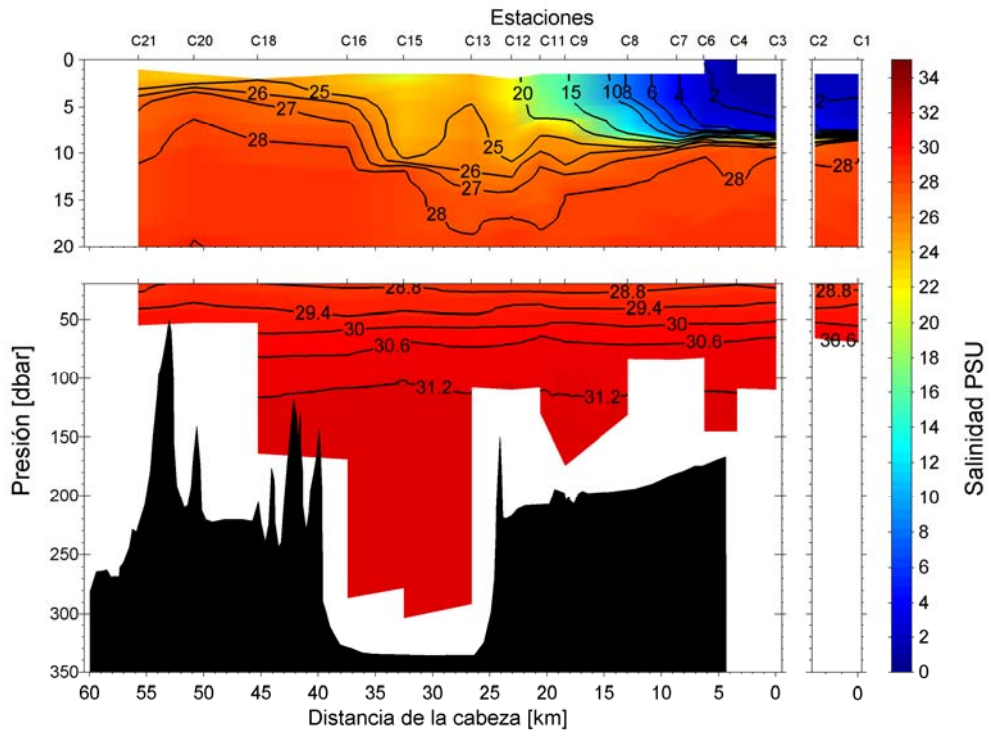


Figura 3. Transecta de salinidad a lo largo del fiordo. Fiordo Aysén septiembre-2009.

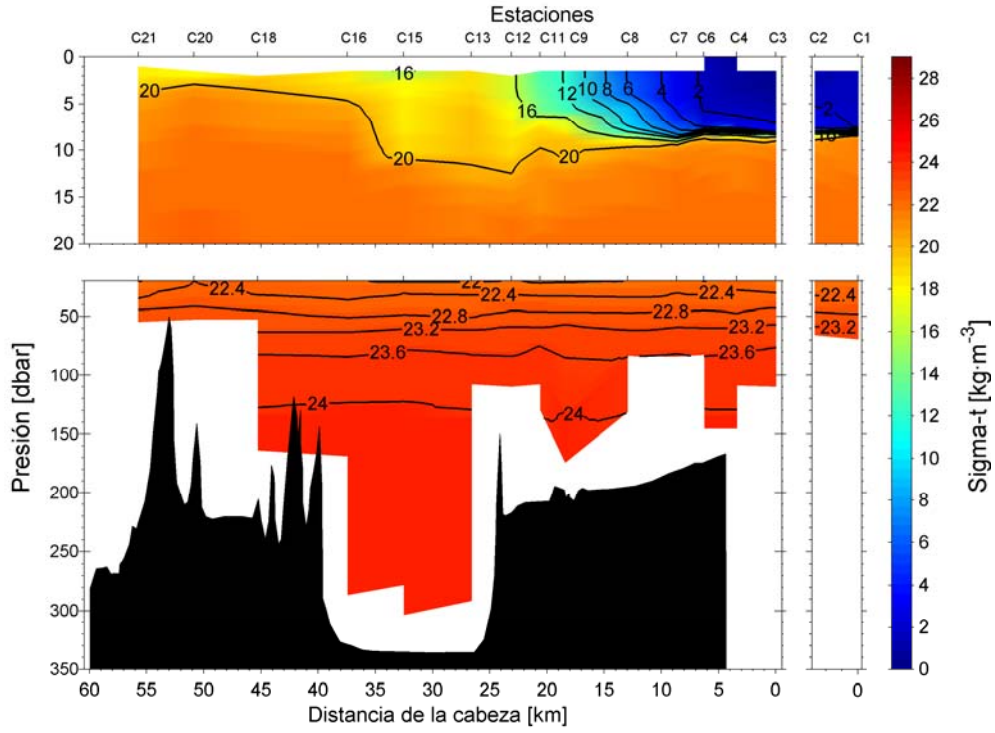


Figura 4. Transecta de sigma-t a lo largo del fiordo. Fiordo Aysén septiembre-2009.

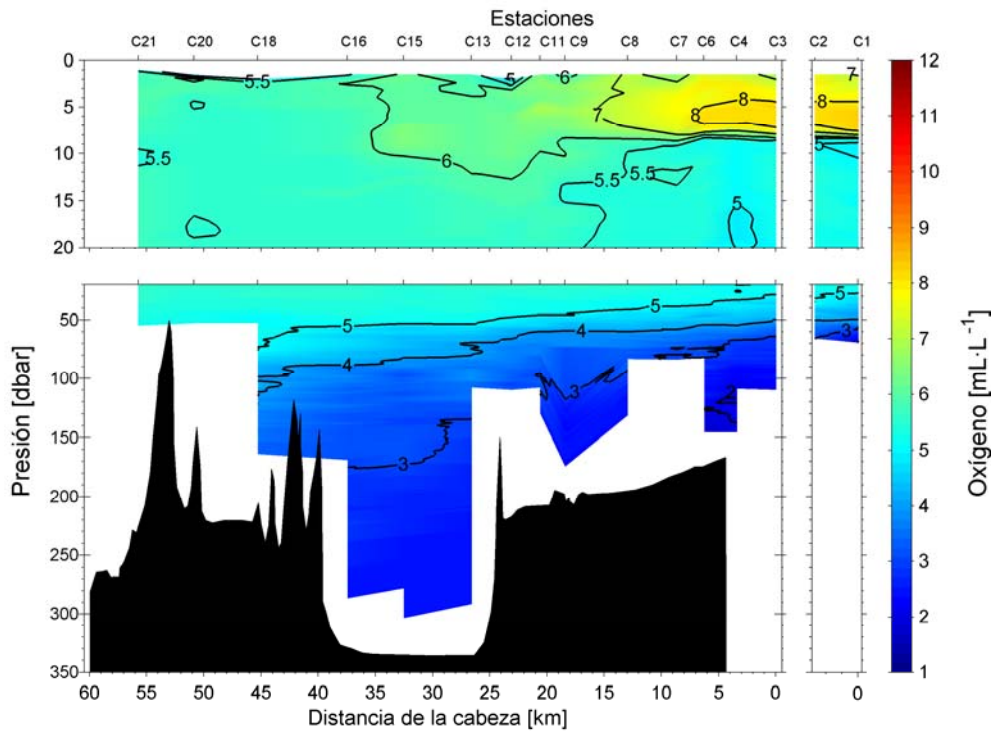


Figura 5. Transecta de oxígeno disuelto a lo largo del fiordo. Fiordo Aysén septiembre-2009.

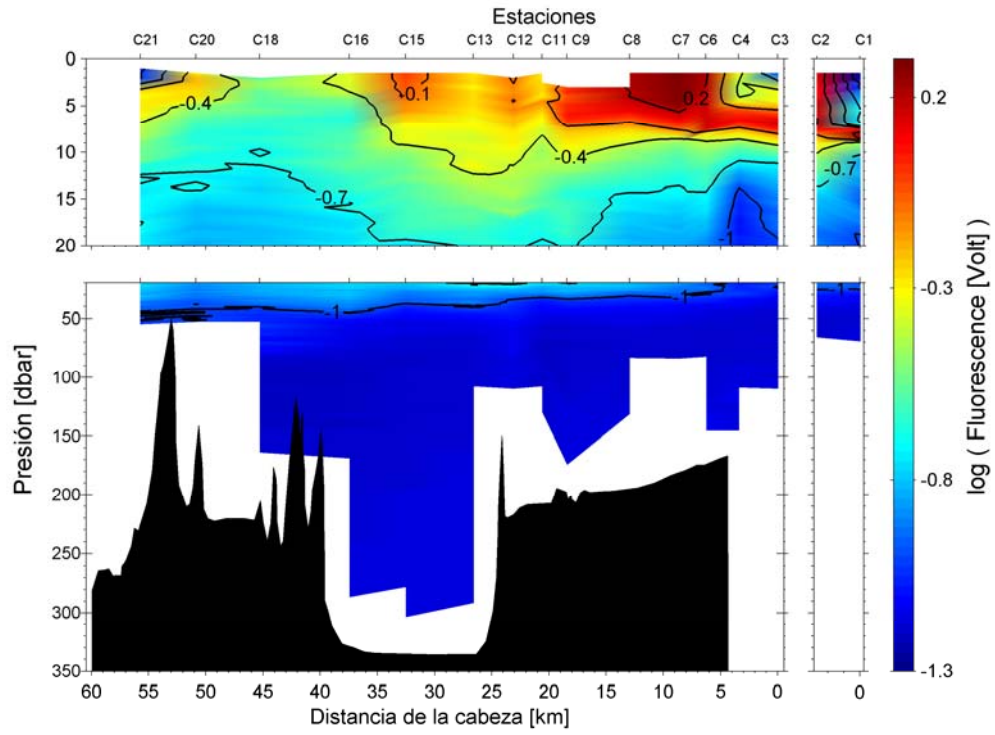


Figura 6. Transecta de fluorescencia a lo largo del fiordo. Fiordo Aysén septiembre-2009.

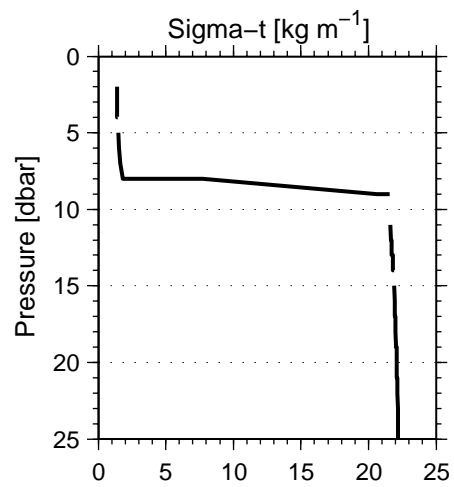
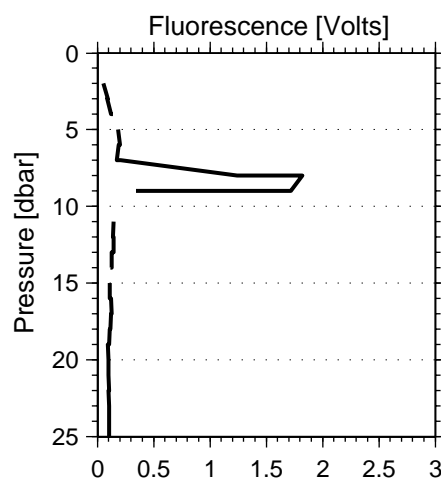
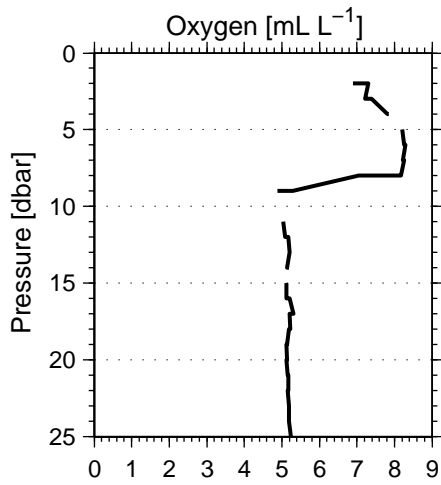
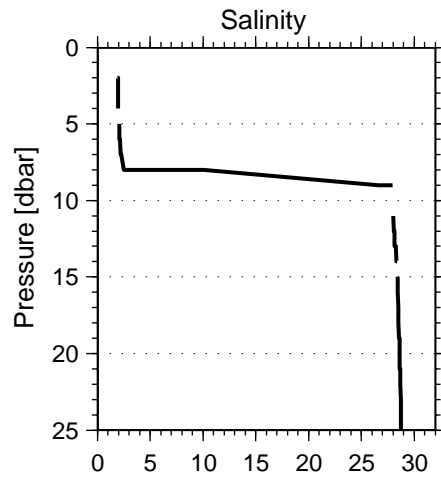
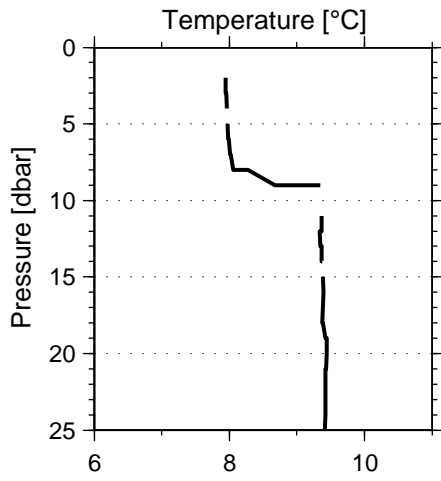
Tablas y Figuras

Perfiles de CTD

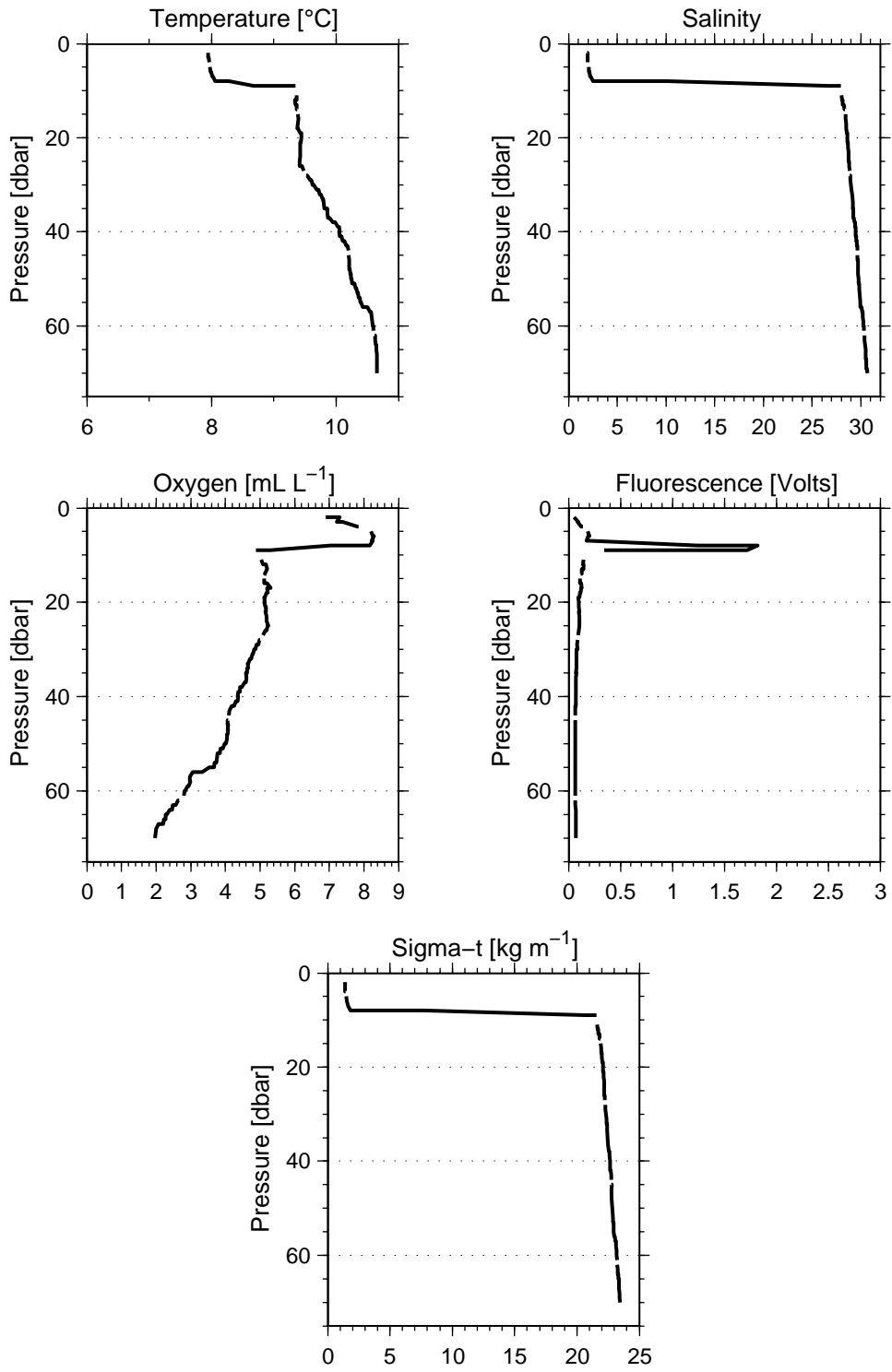
CRUISE	: Aysen September 2009	STATION	: C01	CAST	: 42
DATE	: 2009-09-23	LAT	: 45°25.626	Z-CTD	: 69.0 m
TIME	: 01:45	LON	: 72°50.136	DEPTH	: 136 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.949	1.954	1.398	7.310	0.055	-
3.0	7.955	1.961	1.404	7.389	0.089	-
4.0	7.965	1.998	1.432	7.846	0.141	-
6.0	7.996	2.149	1.549	8.299	0.188	-
8.0	8.279	10.069	7.727	7.050	1.819	-
10.0	-	-	-	-	-	-
12.0	9.341	28.131	21.695	5.170	0.144	-
14.0	9.373	28.391	21.893	5.192	0.118	-
16.0	9.395	28.467	21.949	5.200	0.122	-
18.0	9.388	28.539	22.006	5.198	0.110	-
20.0	9.442	28.649	22.084	5.129	0.099	-
22.0	9.424	28.718	22.141	5.153	0.101	-
24.0	9.420	28.779	22.189	5.183	0.105	-
26.0	9.451	28.833	22.226	5.154	0.099	-
28.0	9.534	28.914	22.276	4.989	0.085	-
30.0	9.644	28.991	22.320	4.835	0.079	-
35.0	9.855	29.250	22.489	4.595	0.074	-
40.0	10.051	29.486	22.642	4.370	0.069	-
45.0	10.204	29.693	22.779	4.070	0.067	-
50.0	10.249	29.781	22.840	3.978	0.066	-
60.0	10.599	30.317	23.199	2.822	0.066	-
69.0	10.652	30.607	23.416	1.993	0.071	-

Aysen September 2009
Station C01 Cast 42



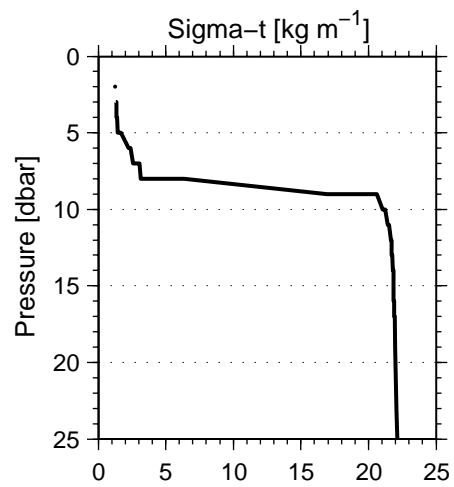
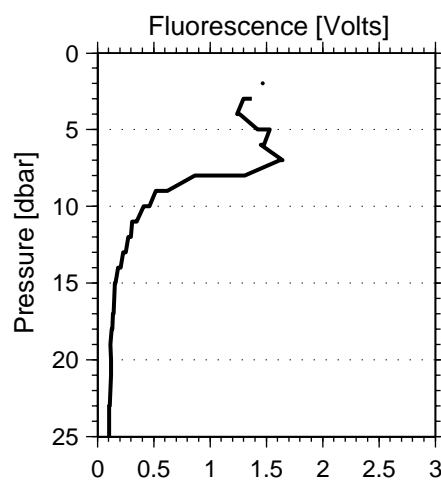
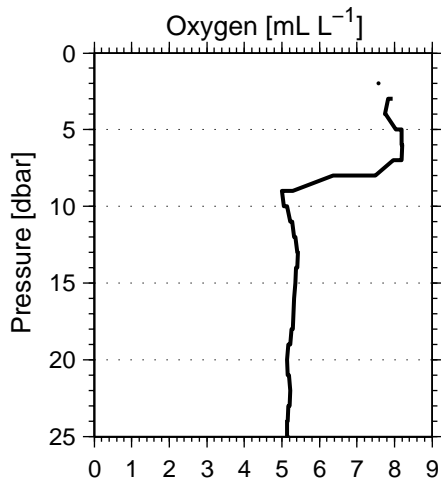
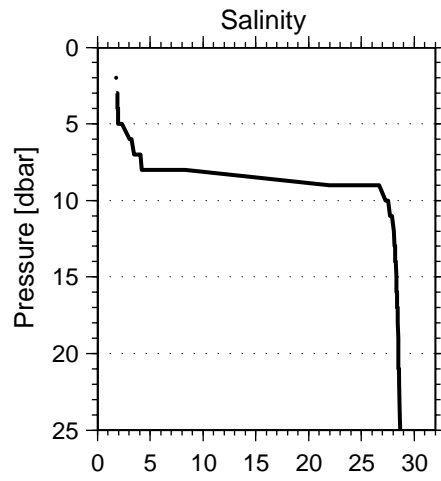
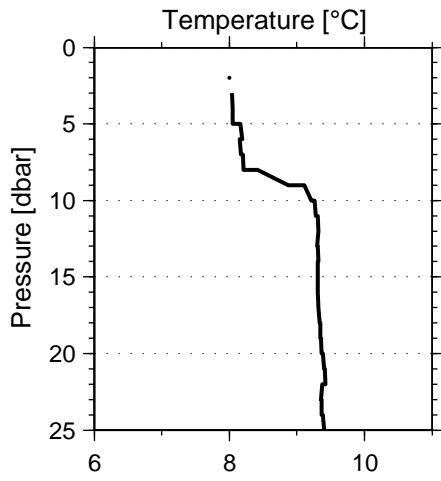
Aysen September 2009
Station C01 Cast 42



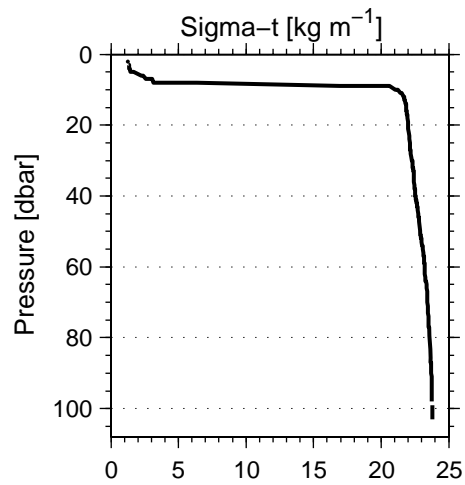
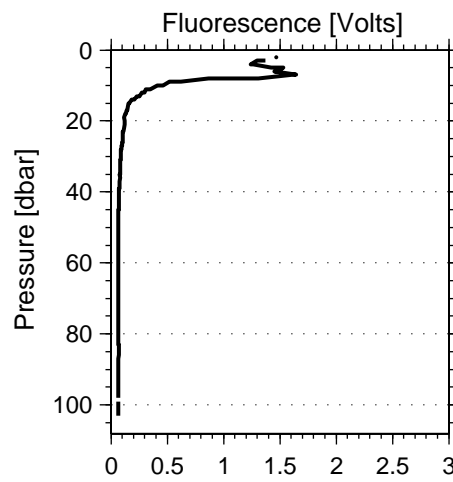
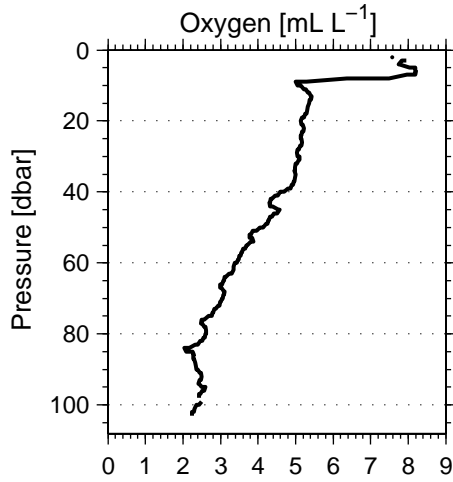
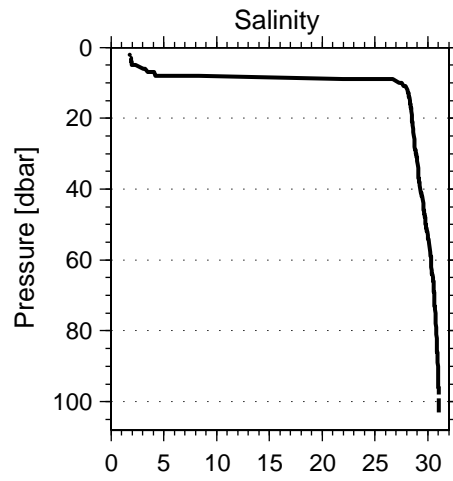
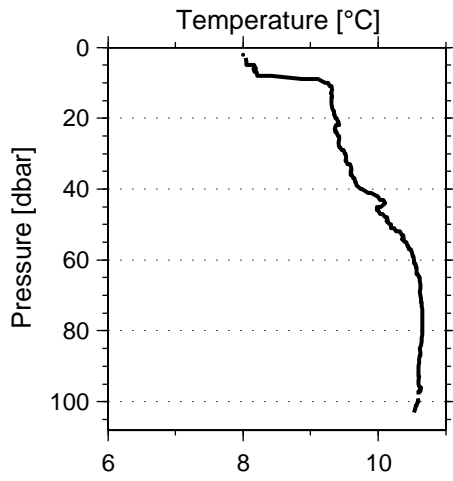
CRUISE : Aysen September 2009	STATION : C02	CAST : 44
DATE : 2009-09-23	LAT : 45°26.166	Z-CTD : 102.0 m
TIME : 03:16	LON : 72°52.059	DEPTH : 124 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	8.044	1.890	1.342	7.827	1.300	-
4.0	8.055	1.942	1.382	7.760	1.264	-
6.0	8.153	3.234	2.391	8.202	1.454	-
8.0	8.418	8.346	6.371	6.374	0.869	-
10.0	9.263	27.538	21.244	5.147	0.414	-
12.0	9.320	28.120	21.689	5.365	0.278	-
14.0	9.312	28.301	21.832	5.371	0.183	-
16.0	9.312	28.368	21.884	5.326	0.149	-
18.0	9.346	28.480	21.967	5.266	0.125	-
20.0	9.383	28.533	22.002	5.134	0.121	-
22.0	9.380	28.590	22.048	5.229	0.117	-
24.0	9.387	28.657	22.098	5.134	0.106	-
26.0	9.427	28.735	22.153	5.173	0.102	-
28.0	9.437	28.777	22.185	5.052	0.089	-
30.0	9.518	28.947	22.305	5.099	0.086	-
35.0	9.598	29.104	22.415	5.003	0.079	-
40.0	9.769	29.312	22.551	4.599	0.071	-
45.0	9.979	29.602	22.744	4.573	0.067	-
50.0	10.188	29.831	22.889	4.054	0.065	-
60.0	10.531	30.330	23.221	3.387	0.065	-
70.0	10.629	30.623	23.432	3.047	0.065	-
80.0	10.653	30.825	23.586	2.597	0.067	-
90.0	10.599	30.982	23.717	2.394	0.067	-
100.0	10.590	31.060	23.779	2.362	0.067	-
102.0	10.549	31.067	23.791	2.250	0.067	-

Aysen September 2009
Station C02 Cast 44



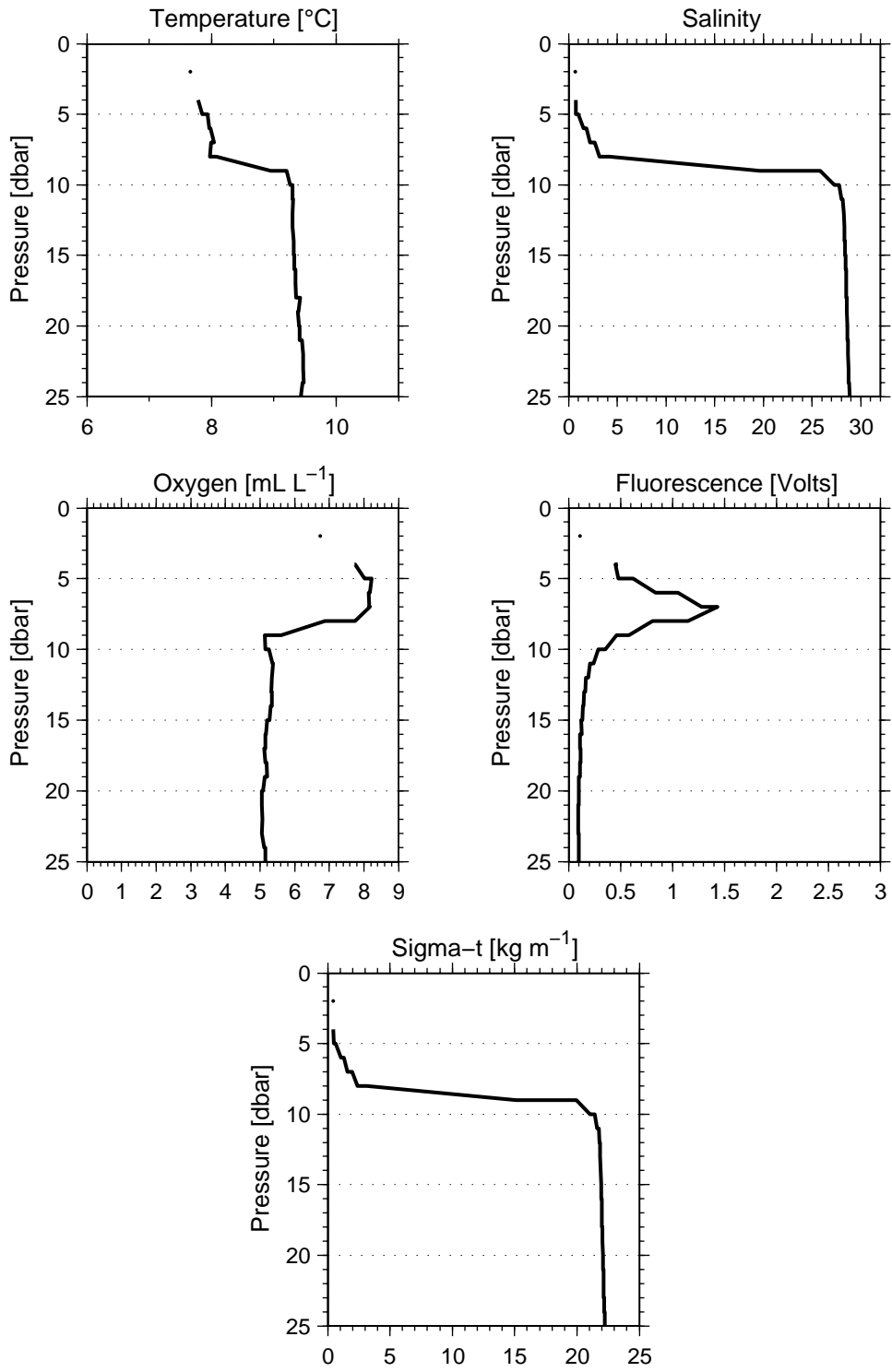
Aysen September 2009
Station C02 Cast 44



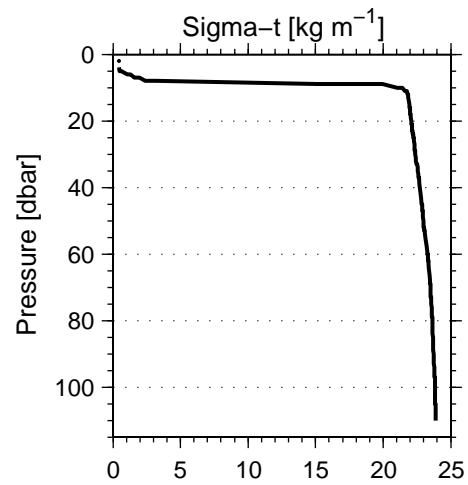
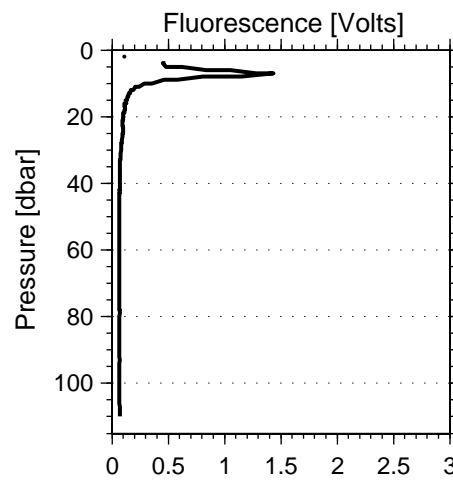
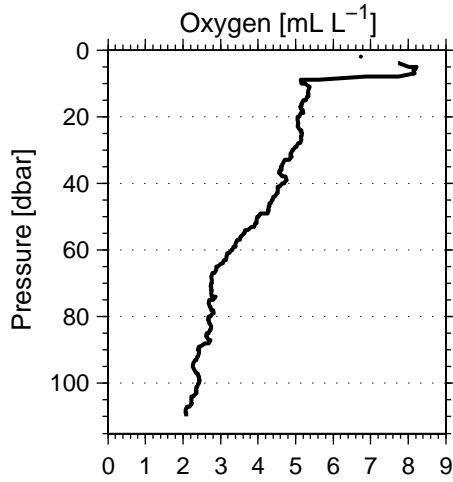
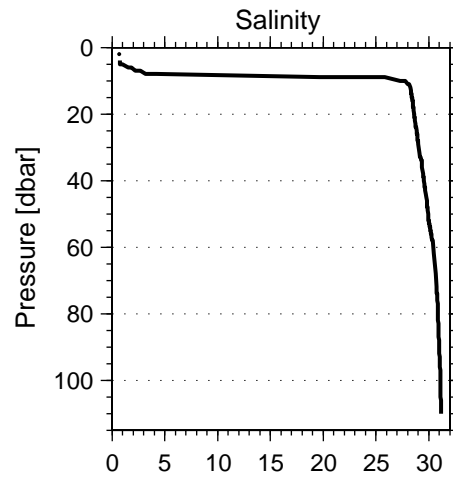
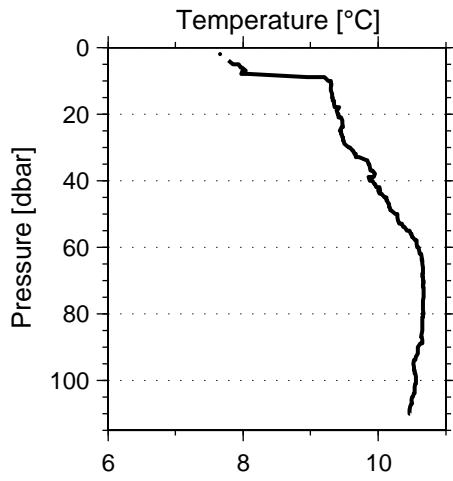
CRUISE	: Aysen September 2009	STATION	: C03	CAST	: 45
DATE	: 2009-09-23	LAT	: 45°23.855	Z-CTD	: 109.5 m
TIME	: 06:30	LON	: 72°50.601	DEPTH	: 140 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	-	-	-	-	-	-
4.0	7.783	0.757	0.464	7.744	0.451	-
6.0	7.989	1.835	1.302	8.145	1.056	-
8.0	8.077	4.219	3.169	6.886	0.810	-
10.0	9.296	27.799	21.443	5.259	0.289	-
12.0	9.299	28.302	21.835	5.337	0.169	-
14.0	9.320	28.396	21.905	5.316	0.139	-
16.0	9.351	28.486	21.970	5.157	0.113	-
18.0	9.424	28.586	22.038	5.195	0.113	-
20.0	9.416	28.635	22.077	5.054	0.099	-
22.0	9.466	28.715	22.132	5.066	0.095	-
24.0	9.460	28.816	22.212	5.148	0.099	-
26.0	9.458	28.910	22.285	5.140	0.091	-
28.0	9.485	28.980	22.335	5.077	0.084	-
30.0	9.583	29.066	22.388	4.911	0.080	-
35.0	9.871	29.375	22.584	4.622	0.072	-
40.0	9.914	29.556	22.718	4.643	0.069	-
45.0	10.124	29.815	22.887	4.369	0.066	-
50.0	10.281	29.984	22.993	3.975	0.066	-
60.0	10.598	30.453	23.306	3.291	0.065	-
70.0	10.669	30.716	23.498	2.761	0.066	-
80.0	10.666	30.892	23.636	2.679	0.067	-
90.0	10.592	31.002	23.733	2.428	0.067	-
100.0	10.560	31.122	23.833	2.410	0.067	-
109.5	10.469	31.172	23.887	2.089	0.068	-

Aysen September 2009
Station C03 Cast 45



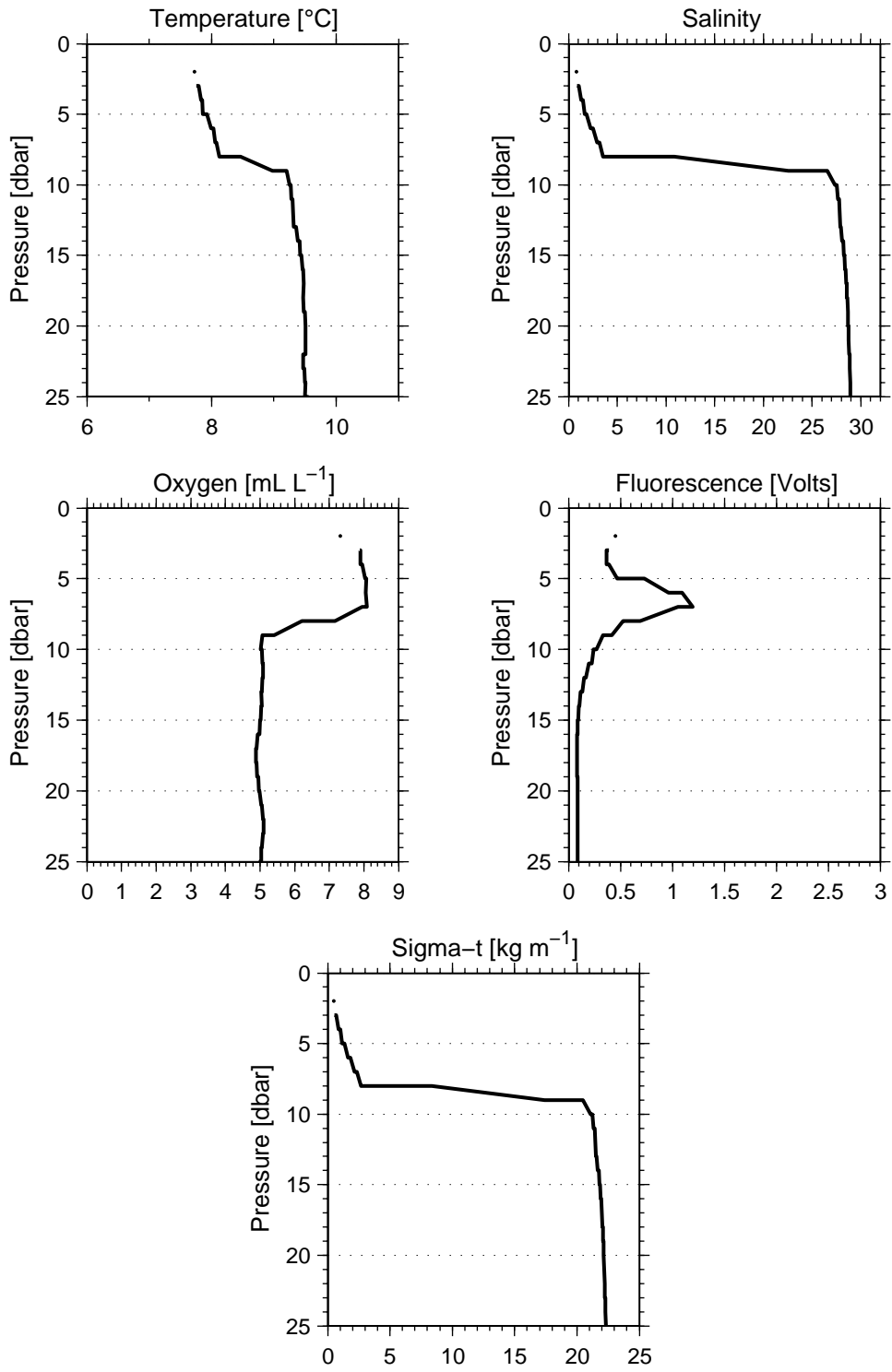
Aysen September 2009
Station C03 Cast 45



CRUISE	: Aysen September 2009	STATION	: C04	CAST	: 0
DATE	: 2009-09-23	LAT	: 45°25.278	Z-CTD	: 156.5 m
TIME	: 07:10	LON	: 72°52.295	DEPTH	: 170 m

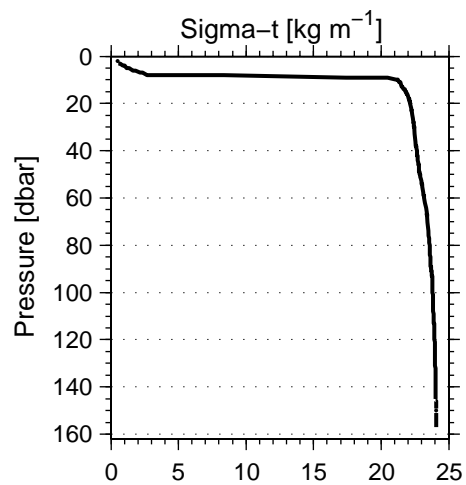
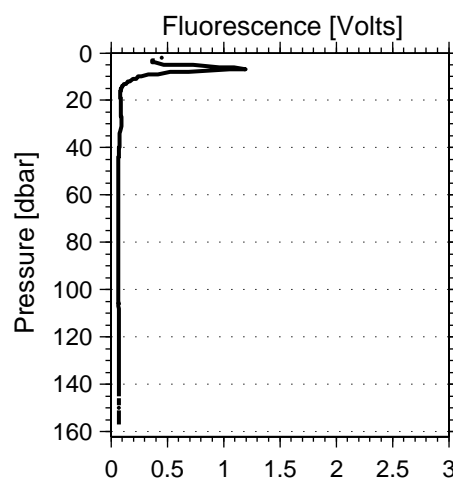
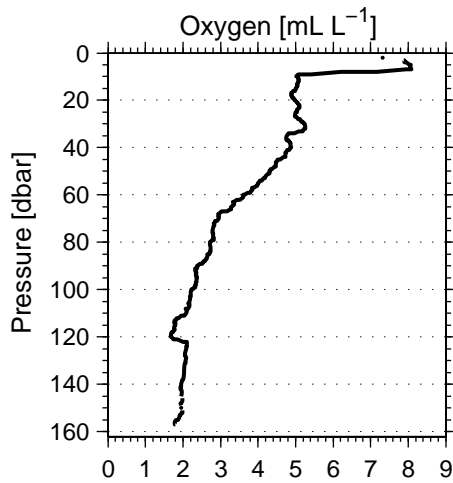
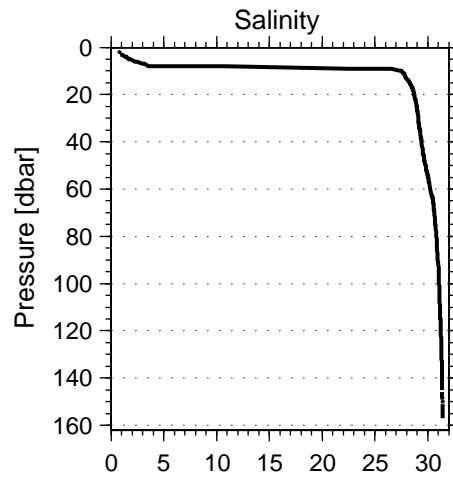
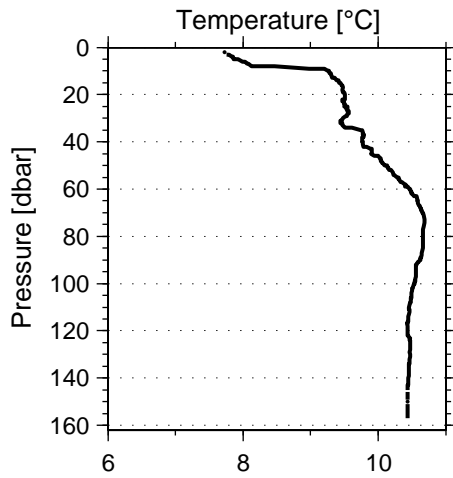
Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	7.798	1.038	0.686	7.895	0.366	-
4.0	7.855	1.456	1.012	7.953	0.390	-
6.0	8.028	2.514	1.834	8.054	1.093	-
8.0	8.466	10.876	8.341	6.214	0.527	-
10.0	9.274	27.545	21.248	5.047	0.239	-
12.0	9.307	27.866	21.493	5.077	0.149	-
14.0	9.409	28.213	21.749	5.034	0.097	-
16.0	9.474	28.484	21.951	4.932	0.085	-
18.0	9.472	28.632	22.066	4.898	0.082	-
20.0	9.505	28.737	22.143	4.988	0.086	-
22.0	9.473	28.850	22.236	5.112	0.088	-
24.0	9.513	28.941	22.301	5.037	0.087	-
26.0	9.523	28.994	22.341	4.981	0.087	-
28.0	9.548	29.075	22.400	5.124	0.094	-
30.0	9.484	29.121	22.446	5.246	0.096	-
35.0	9.767	29.283	22.529	4.759	0.076	-
40.0	9.774	29.431	22.643	4.872	0.072	-
45.0	9.900	29.581	22.741	4.528	0.067	-
50.0	10.131	29.822	22.891	4.310	0.067	-
60.0	10.479	30.290	23.198	3.604	0.065	-
70.0	10.663	30.625	23.428	2.949	0.066	-
80.0	10.667	30.842	23.597	2.711	0.066	-
90.0	10.616	30.959	23.696	2.376	0.067	-
100.0	10.536	31.089	23.811	2.227	0.067	-
125.0	10.473	31.294	23.981	2.085	0.068	-
150.0	10.438	31.395	24.066	1.950	0.071	-
156.5	10.433	31.409	24.078	1.785	0.072	-

Aysen September 2009
Station C04 Cast 0



Aysen September 2009

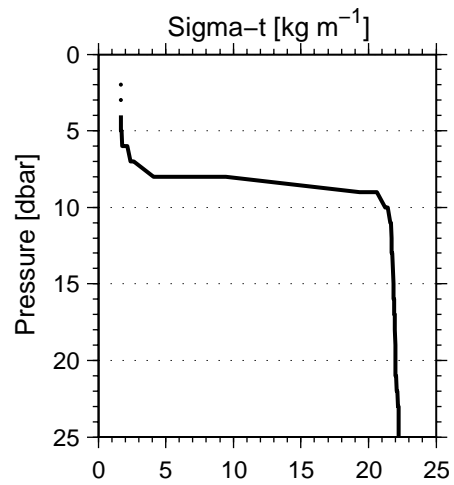
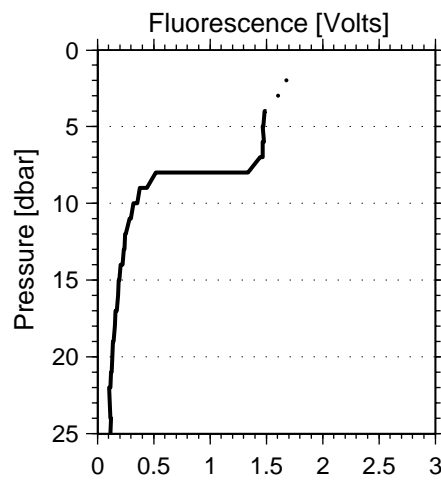
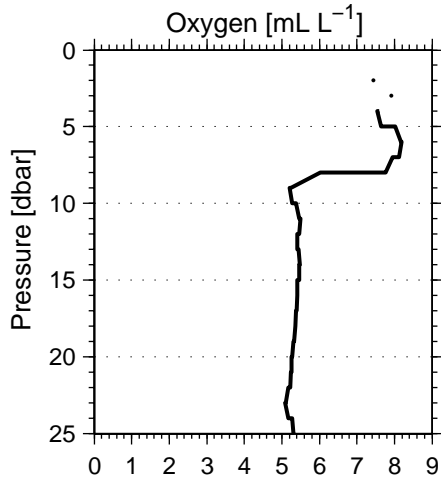
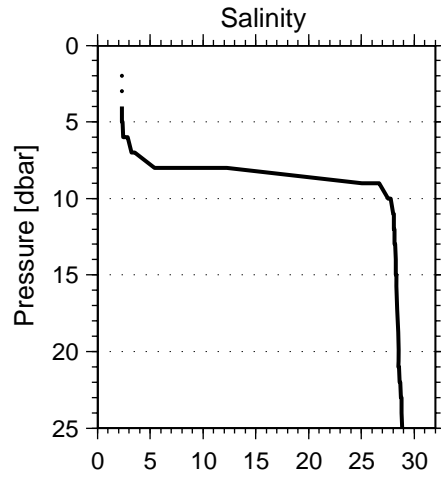
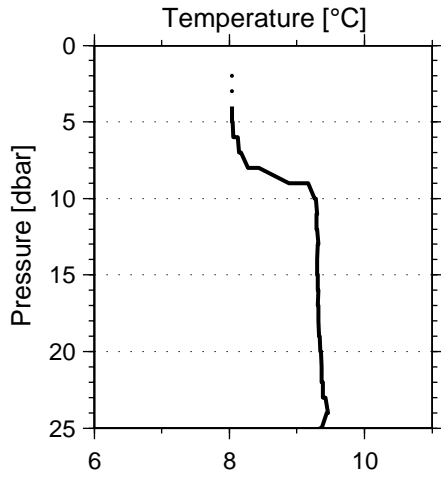
Station C04 Cast 0



CRUISE	: Aysen September 2009	STATION	: C06	CAST	: 1
DATE	: 2009-09-23	LAT	: 45°26.338	Z-CTD	: 145.0 m
TIME	: 08:05	LON	: 72°53.895	DEPTH	: 180 m

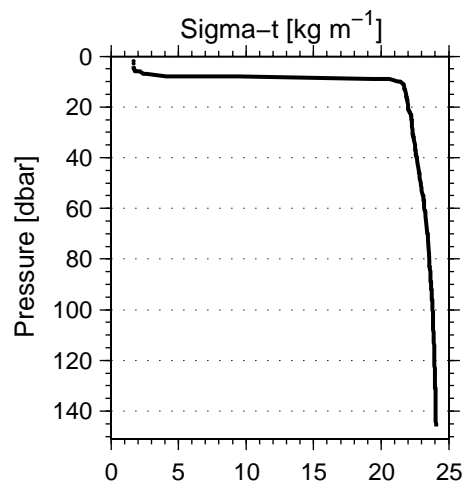
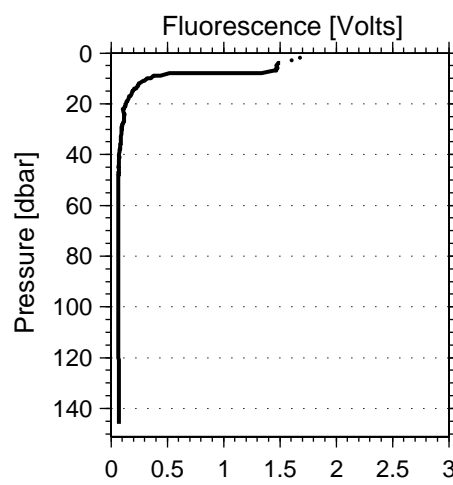
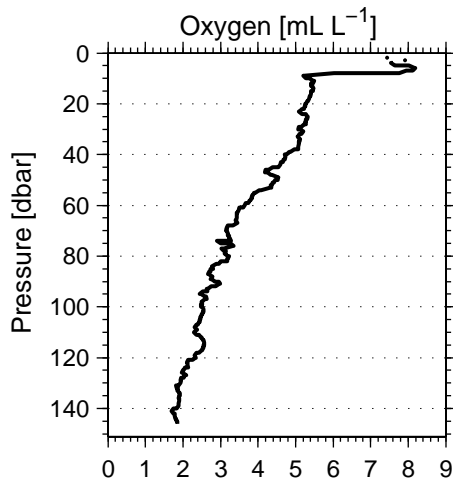
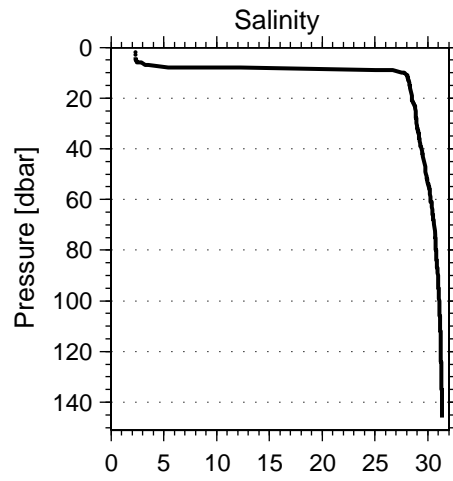
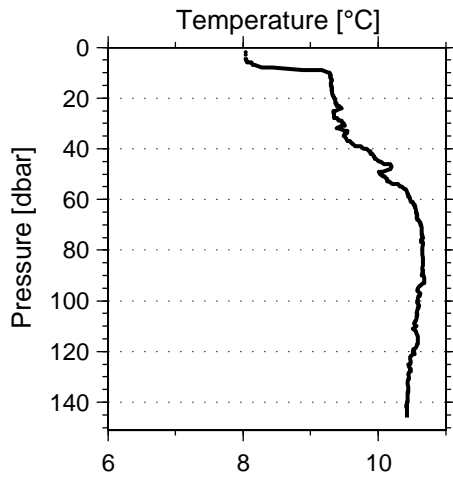
Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	-	-	-	-	-	-
4.0	8.042	2.338	1.694	7.549	1.487	-
6.0	8.122	2.905	2.135	8.190	1.468	-
8.0	8.439	12.256	9.422	6.029	0.519	-
10.0	9.280	27.770	21.423	5.381	0.322	-
12.0	9.304	28.131	21.701	5.406	0.249	-
14.0	9.300	28.277	21.815	5.468	0.206	-
16.0	9.317	28.359	21.877	5.407	0.187	-
18.0	9.319	28.468	21.961	5.364	0.157	-
20.0	9.358	28.511	21.989	5.251	0.132	-
22.0	9.385	28.712	22.142	5.176	0.103	-
24.0	9.445	28.845	22.237	5.271	0.120	-
26.0	9.344	28.868	22.270	5.282	0.116	-
28.0	9.392	28.917	22.301	5.230	0.102	-
30.0	9.487	28.965	22.324	5.126	0.101	-
35.0	9.502	29.193	22.499	5.092	0.087	-
40.0	9.833	29.431	22.634	4.721	0.072	-
45.0	10.035	29.674	22.791	4.397	0.068	-
50.0	10.045	29.856	22.932	4.461	0.067	-
60.0	10.478	30.292	23.201	3.634	0.065	-
70.0	10.640	30.634	23.439	3.156	0.065	-
80.0	10.657	30.790	23.558	3.231	0.065	-
90.0	10.669	30.985	23.708	2.965	0.065	-
100.0	10.581	31.102	23.814	2.515	0.066	-
125.0	10.449	31.280	23.975	1.995	0.070	-
145.0	10.430	31.379	24.055	1.844	0.071	-

Aysen September 2009
Station C06 Cast 1



Aysen September 2009

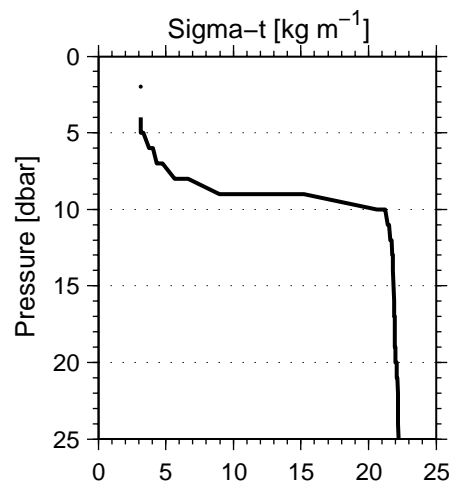
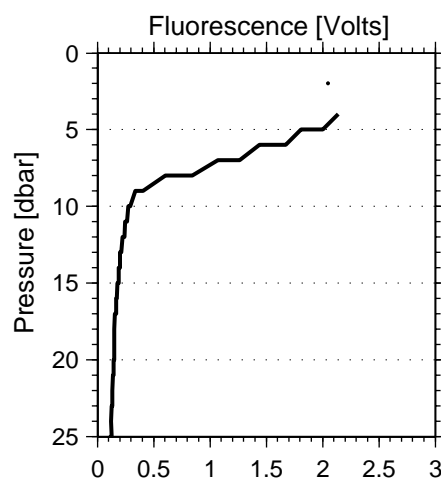
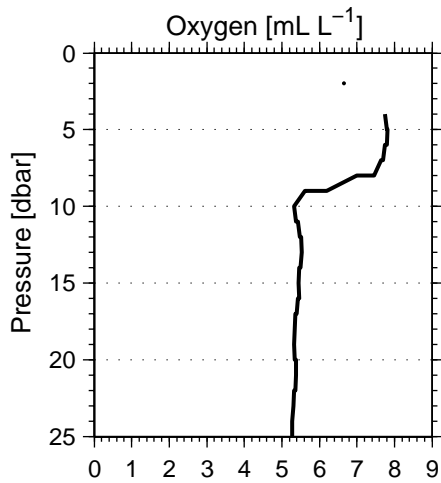
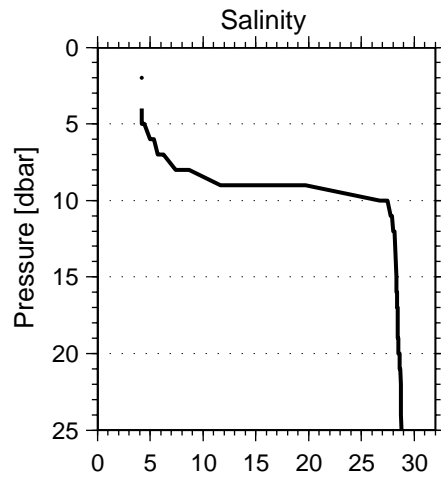
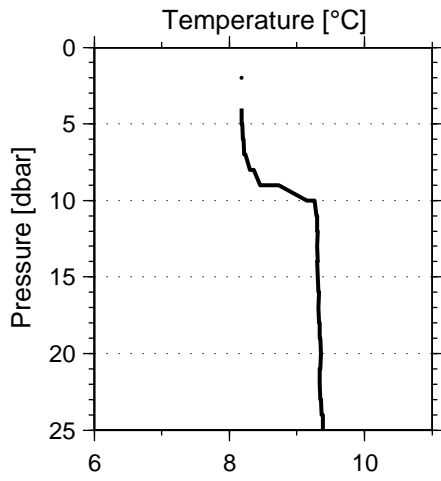
Station C06 Cast 1



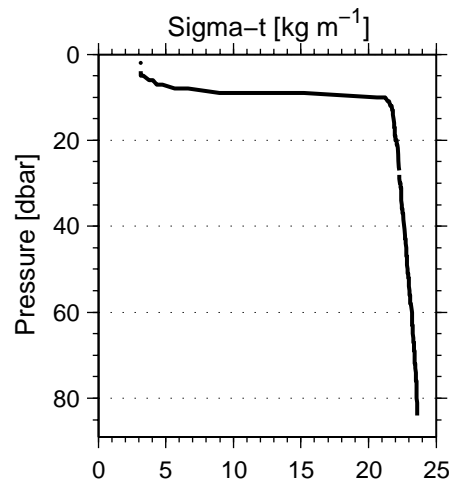
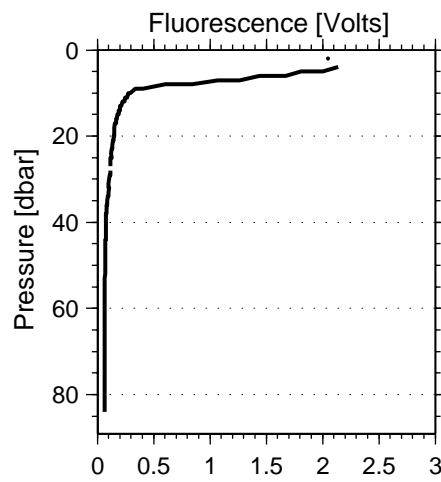
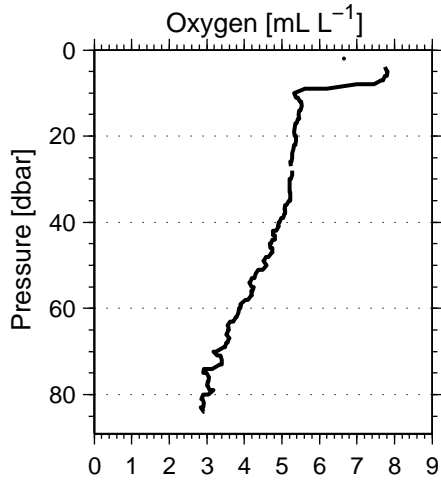
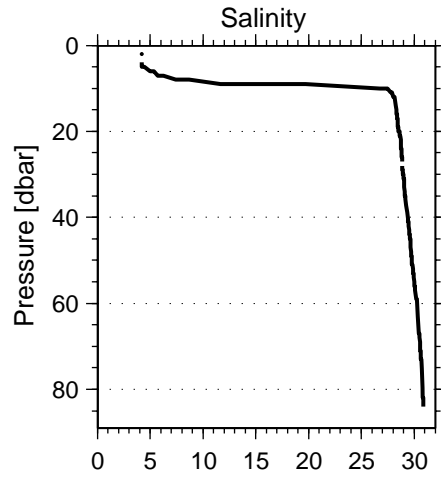
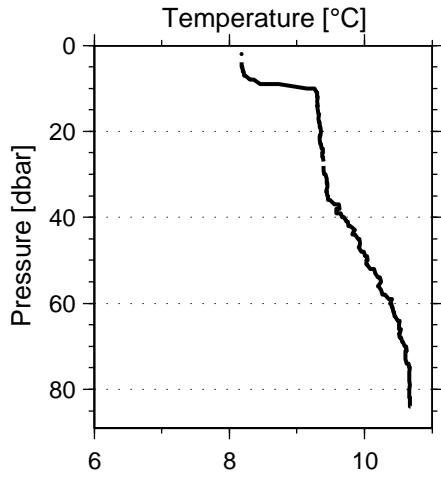
CRUISE	: Aysen September 2009	STATION	: C07	CAST	: 2
DATE	: 2009-09-23	LAT	: 45°26.334	Z-CTD	: 83.5 m
TIME	: 15:00	LON	: 72°55.723	DEPTH	: 190 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	-	-	-	-	-	-
4.0	8.181	4.188	3.138	7.742	2.139	-
6.0	8.207	5.371	4.063	7.747	1.441	-
8.0	8.366	8.697	6.652	7.005	0.606	-
10.0	9.265	27.514	21.224	5.331	0.276	-
12.0	9.306	28.145	21.711	5.514	0.226	-
14.0	9.304	28.261	21.802	5.460	0.191	-
16.0	9.325	28.381	21.892	5.437	0.165	-
18.0	9.337	28.477	21.966	5.337	0.149	-
20.0	9.356	28.608	22.065	5.374	0.143	-
22.0	9.340	28.741	22.171	5.335	0.136	-
24.0	9.383	28.792	22.205	5.272	0.123	-
26.0	9.388	28.855	22.253	5.220	0.118	-
28.0	9.396	28.886	22.276	5.274	0.114	-
30.0	9.421	28.995	22.357	5.212	0.104	-
35.0	9.458	29.153	22.475	5.184	0.086	-
40.0	9.695	29.412	22.640	4.913	0.078	-
45.0	9.923	29.644	22.786	4.686	0.073	-
50.0	10.028	29.799	22.890	4.600	0.070	-
60.0	10.396	30.290	23.212	3.864	0.065	-
70.0	10.612	30.586	23.406	3.173	0.066	-
80.0	10.667	30.817	23.577	2.908	0.066	-
83.5	10.669	30.871	23.618	2.929	0.066	-

Aysen September 2009
Station C07 Cast 2



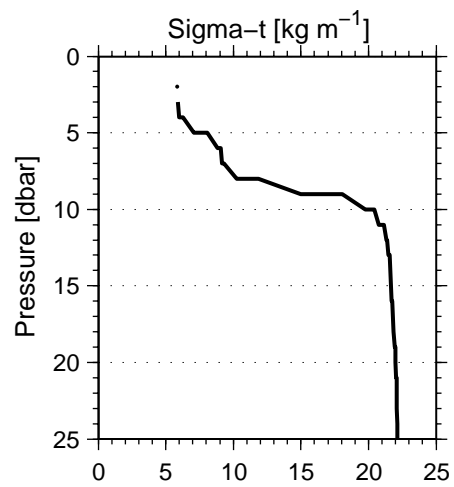
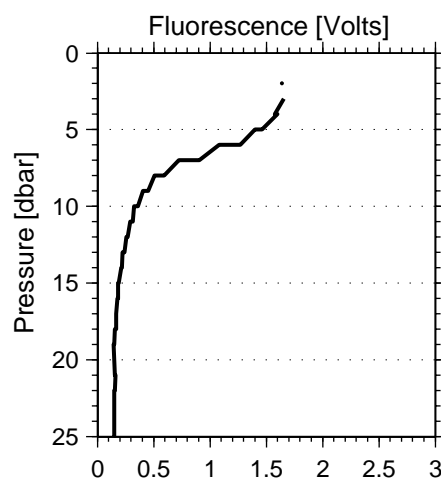
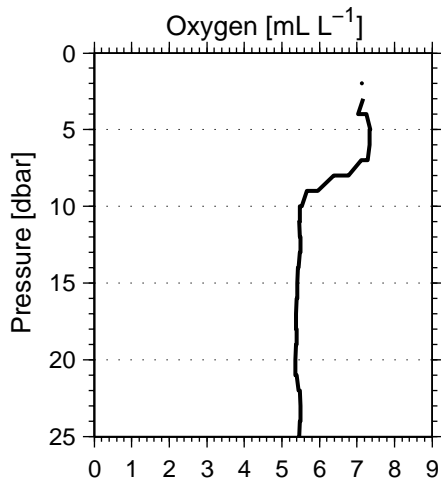
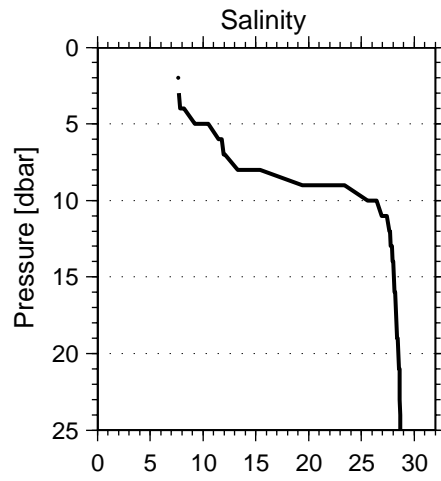
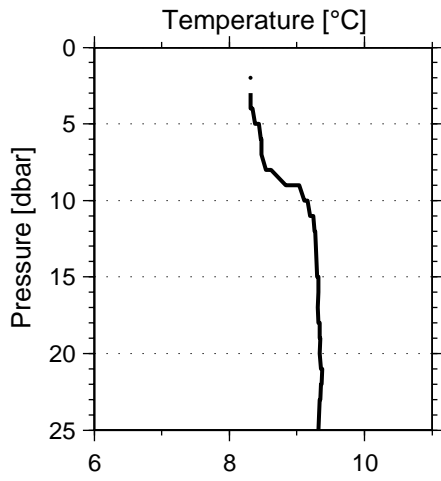
Aysen September 2009
Station C07 Cast 2



CRUISE	: Aysen September 2009	STATION	: C08	CAST	: 3
DATE	: 2009-09-23	LAT	: 45°25.435	Z-CTD	: 160.0 m
TIME	: 16:30	LOn	: 72°58.766	DEPTH	: 200 m

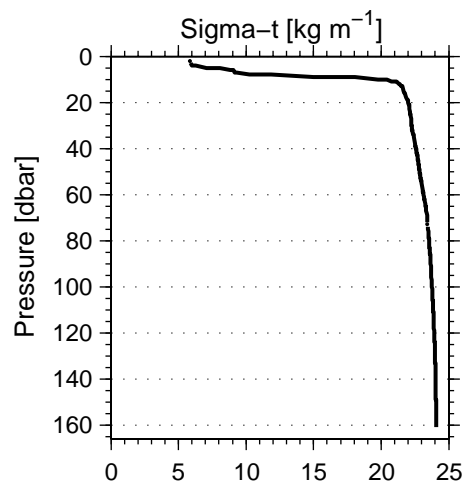
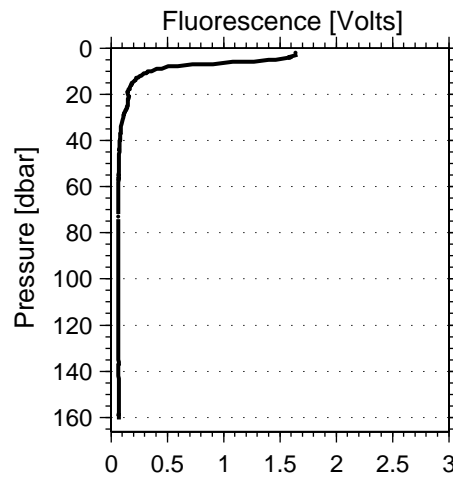
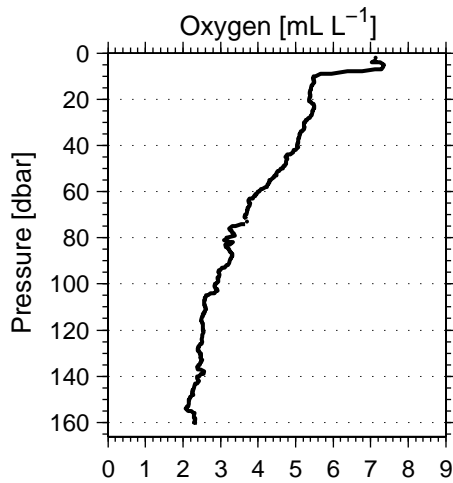
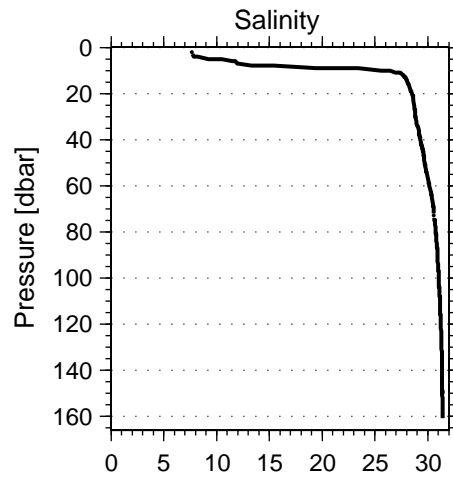
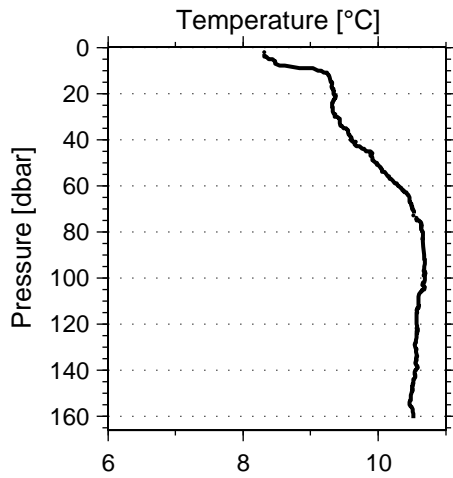
Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	8.315	7.737	5.906	7.160	1.658	-
4.0	8.339	8.230	6.289	7.257	1.599	-
6.0	8.472	11.778	9.048	7.343	1.082	-
8.0	8.622	15.428	11.880	6.380	0.511	-
10.0	9.156	26.474	20.429	5.484	0.329	-
12.0	9.269	27.729	21.392	5.495	0.257	-
14.0	9.293	28.029	21.623	5.427	0.210	-
16.0	9.316	28.210	21.760	5.394	0.178	-
18.0	9.335	28.340	21.859	5.398	0.157	-
20.0	9.337	28.535	22.011	5.355	0.152	-
22.0	9.354	28.654	22.101	5.481	0.152	-
24.0	9.323	28.706	22.147	5.479	0.152	-
26.0	9.326	28.762	22.190	5.444	0.143	-
28.0	9.330	28.805	22.223	5.340	0.118	-
30.0	9.394	28.864	22.259	5.232	0.108	-
35.0	9.527	29.125	22.443	5.105	0.089	-
40.0	9.597	29.322	22.585	5.056	0.079	-
45.0	9.886	29.589	22.749	4.757	0.074	-
50.0	9.987	29.742	22.852	4.603	0.070	-
60.0	10.308	30.170	23.133	3.997	0.067	-
70.0	10.501	30.561	23.405	3.649	0.065	-
80.0	10.660	30.782	23.551	3.162	0.065	-
90.0	10.682	30.944	23.673	3.241	0.064	-
100.0	10.696	31.067	23.767	2.861	0.066	-
125.0	10.569	31.291	23.963	2.512	0.067	-
150.0	10.491	31.394	24.056	2.157	0.070	-
160.0	10.519	31.429	24.079	2.332	0.069	-

Aysen September 2009
Station C08 Cast 3



Aysen September 2009

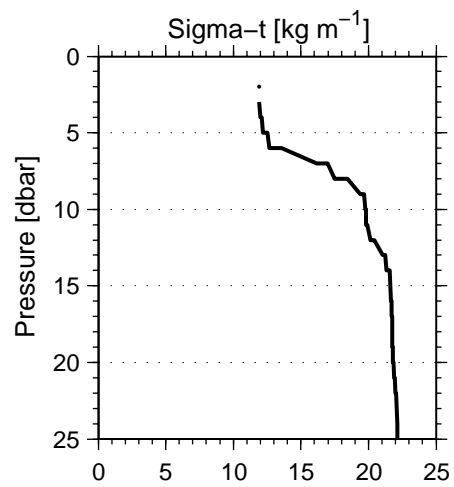
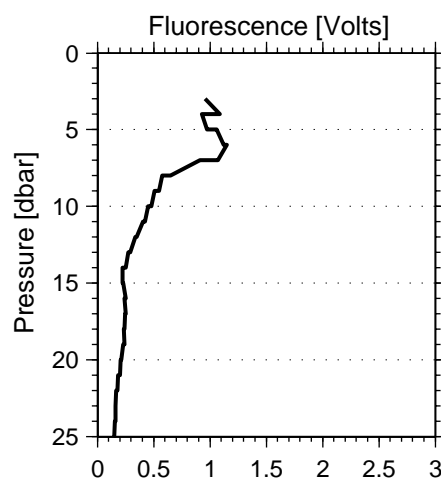
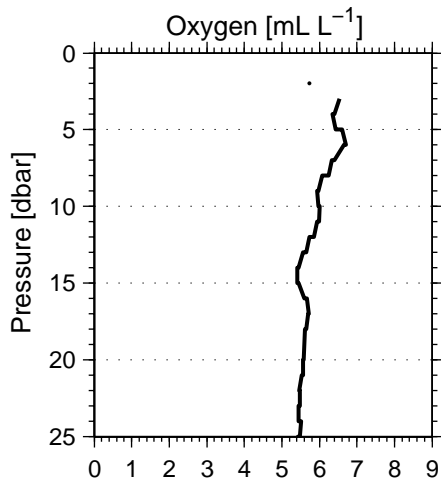
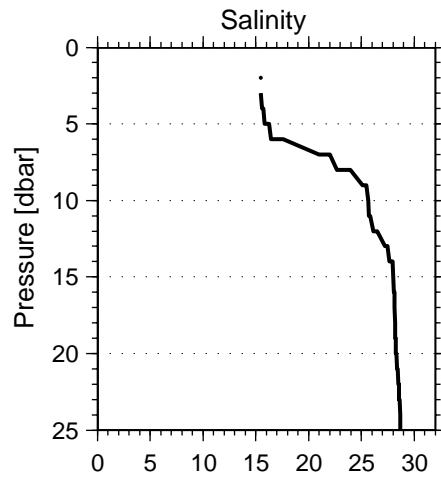
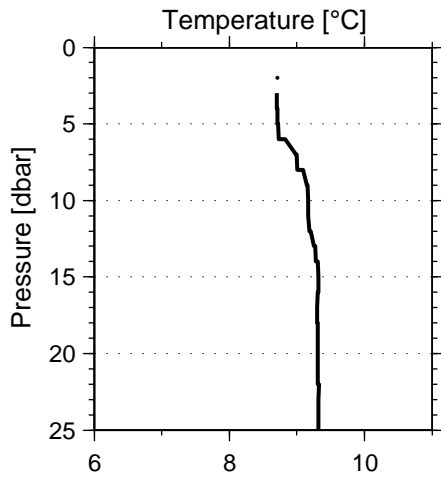
Station C08 Cast 3



CRUISE	: Aysen September 2009	STATION	: C09	CAST	: 4
DATE	: 2009-09-23	LAT	: 45°23.719	Z-CTD	: 174.0 m
TIME	: 18:40	LON	: 73°02.195	DEPTH	: 209 m

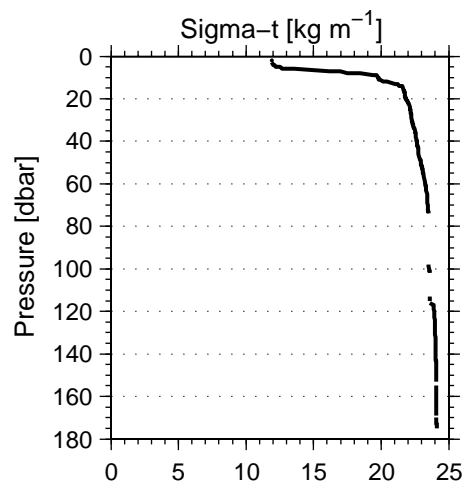
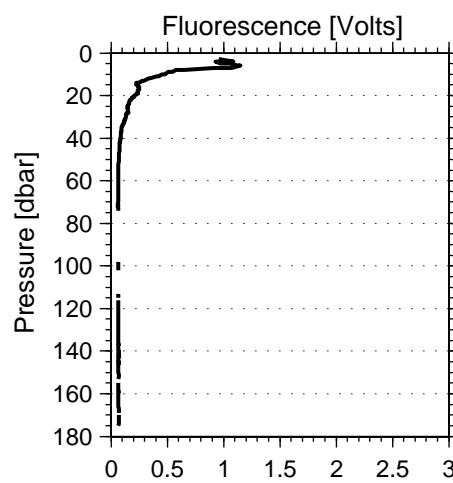
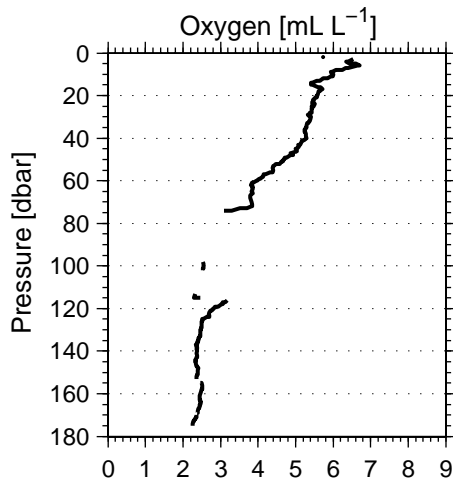
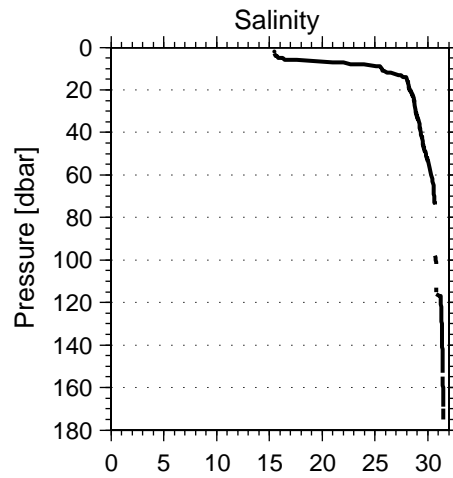
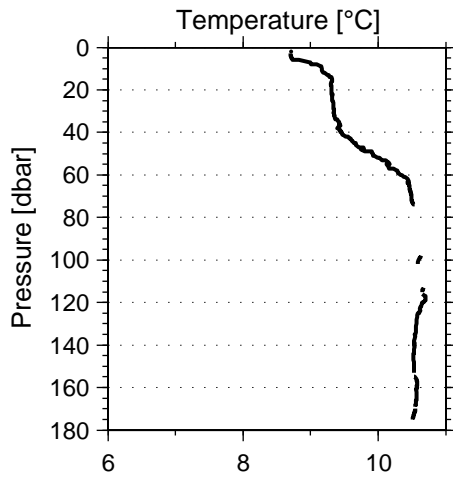
Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	8.707	15.483	11.914	6.542	0.957	-
4.0	8.711	15.714	12.094	6.352	0.931	-
6.0	8.824	17.602	13.553	6.652	1.150	-
8.0	9.089	23.941	18.462	6.079	0.579	-
10.0	9.167	25.691	19.816	6.005	0.454	-
12.0	9.204	26.491	20.435	5.739	0.340	-
14.0	9.312	27.974	21.577	5.420	0.225	-
16.0	9.306	28.150	21.715	5.660	0.241	-
18.0	9.305	28.211	21.763	5.609	0.236	-
20.0	9.308	28.329	21.854	5.560	0.210	-
22.0	9.325	28.563	22.035	5.472	0.167	-
24.0	9.323	28.686	22.131	5.507	0.155	-
26.0	9.335	28.776	22.199	5.430	0.152	-
28.0	9.339	28.798	22.216	5.375	0.137	-
30.0	9.345	28.896	22.291	5.413	0.132	-
35.0	9.419	29.201	22.519	5.275	0.095	-
40.0	9.464	29.370	22.643	5.280	0.084	-
45.0	9.669	29.570	22.768	5.006	0.076	-
50.0	9.929	29.854	22.948	4.686	0.070	-
60.0	10.352	30.351	23.267	3.964	0.065	-
70.0	10.489	30.619	23.453	3.831	0.064	-
80.0	-	-	-	-	-	-
90.0	-	-	-	-	-	-
100.0	10.596	30.780	23.561	2.550	0.065	-
125.0	10.591	31.310	23.974	2.523	0.067	-
150.0	10.531	31.424	24.073	2.403	0.068	-
174.0	10.516	31.458	24.101	2.264	0.069	-

Aysen September 2009
Station C09 Cast 4



Aysen September 2009

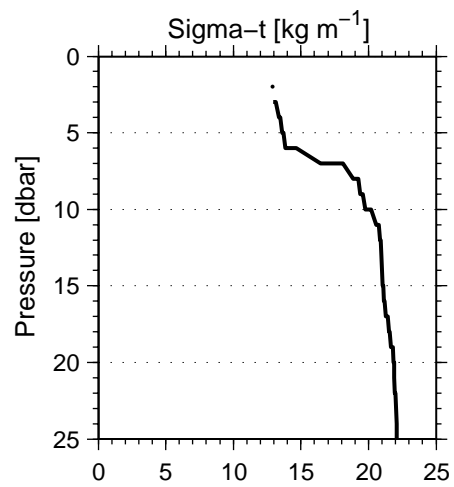
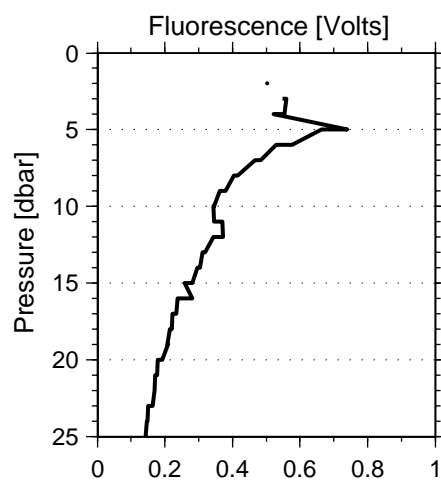
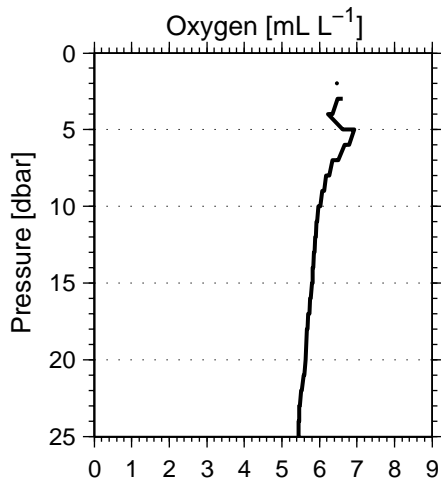
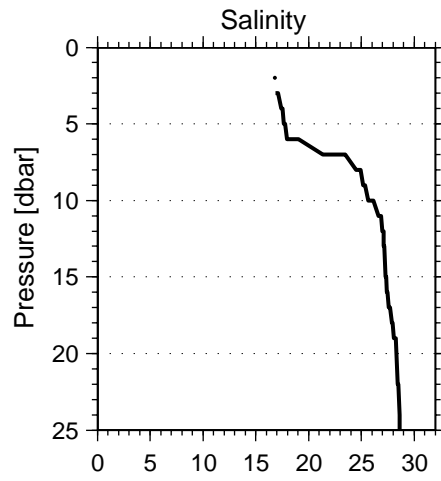
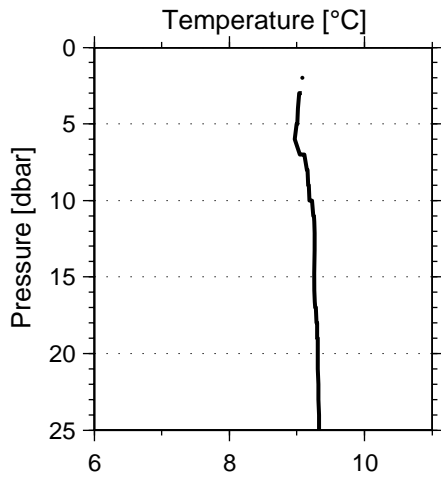
Station C09 Cast 4



CRUISE	: Aysen September 2009	STATION	: C11	CAST	: 5
DATE	: 2009-09-23	LAT	: 45°22.843	Z-CTD	: 187.5 m
TIME	: 20:25	LOX	: 73°03.321	DEPTH	: 214 m

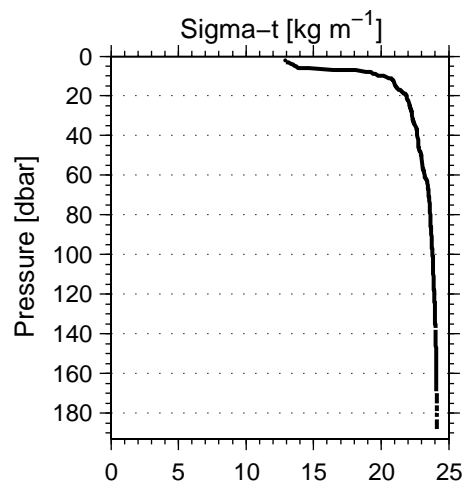
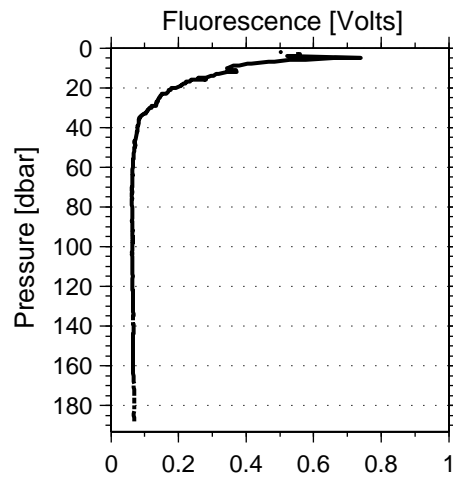
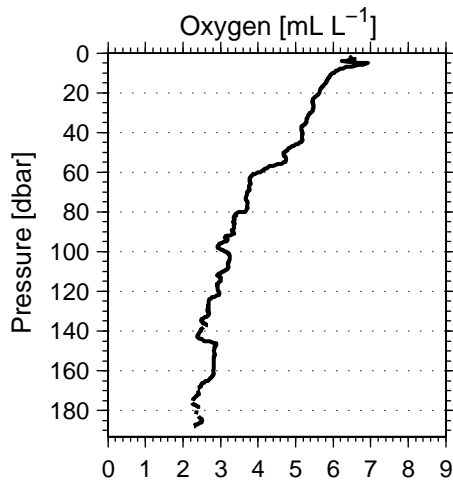
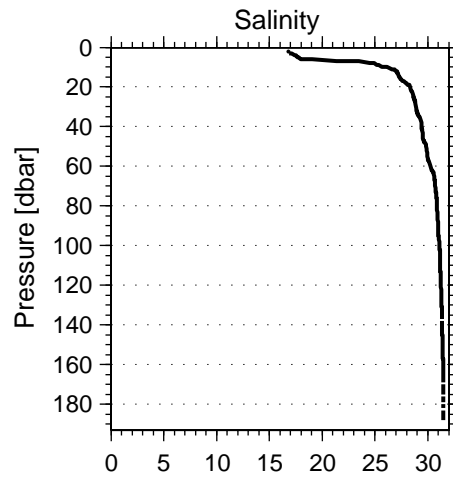
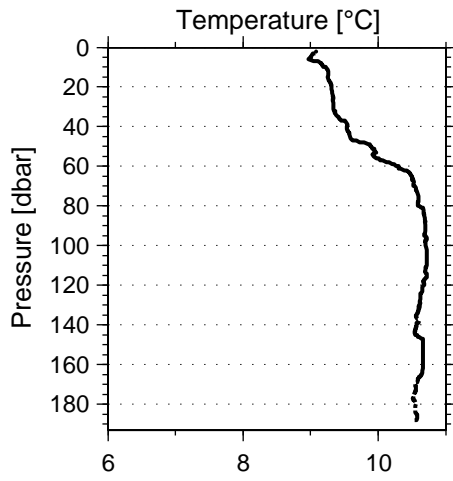
Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	9.038	17.132	13.161	6.492	0.559	-
4.0	9.015	17.548	13.488	6.225	0.522	-
6.0	8.965	19.047	14.663	6.669	0.529	-
8.0	9.158	24.938	19.230	6.186	0.404	-
10.0	9.225	26.180	20.190	5.980	0.344	-
12.0	9.260	27.094	20.898	5.890	0.343	-
14.0	9.258	27.241	21.013	5.825	0.296	-
16.0	9.266	27.468	21.189	5.755	0.237	-
18.0	9.297	27.961	21.569	5.670	0.215	-
20.0	9.309	28.359	21.878	5.630	0.179	-
22.0	9.322	28.503	21.988	5.507	0.169	-
24.0	9.332	28.634	22.089	5.453	0.148	-
26.0	9.331	28.730	22.164	5.472	0.139	-
28.0	9.335	28.847	22.255	5.469	0.136	-
30.0	9.337	28.900	22.295	5.385	0.115	-
35.0	9.415	29.223	22.536	5.276	0.084	-
40.0	9.536	29.424	22.675	5.186	0.079	-
45.0	9.587	29.554	22.768	5.112	0.074	-
50.0	9.898	29.877	22.971	4.683	0.069	-
60.0	10.302	30.296	23.232	3.990	0.065	-
70.0	10.541	30.717	23.520	3.714	0.062	-
80.0	10.611	30.882	23.637	3.483	0.063	-
90.0	10.706	31.009	23.720	3.350	0.064	-
100.0	10.702	31.127	23.813	3.166	0.064	-
125.0	10.626	31.302	23.961	2.680	0.065	-
150.0	10.663	31.439	24.062	2.825	0.065	-
175.0	-	-	-	-	-	-
187.5	10.567	31.490	24.118	2.305	0.070	-

Aysen September 2009
Station C11 Cast 5



Aysen September 2009

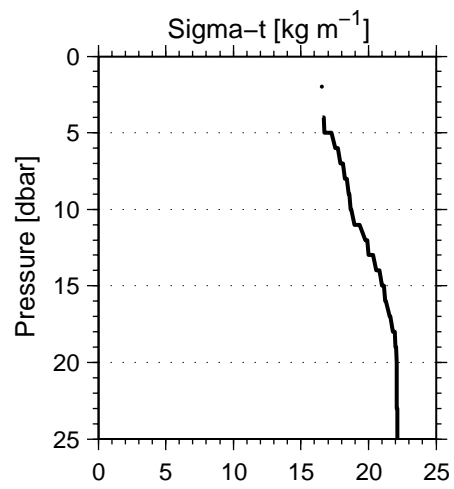
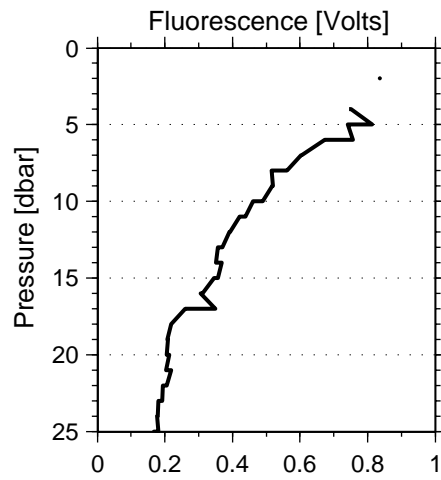
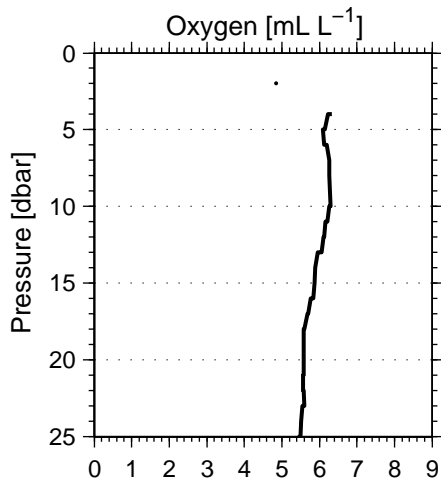
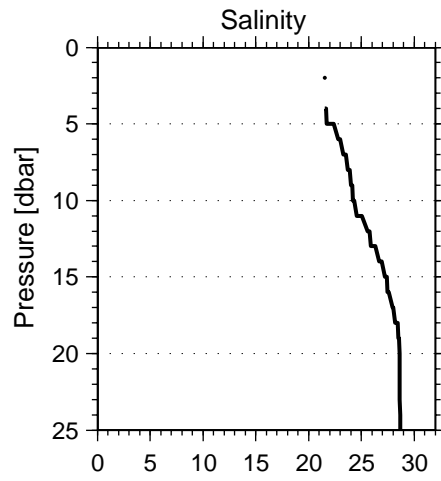
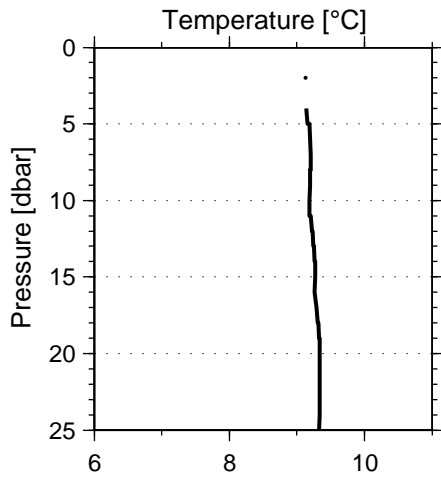
Station C11 Cast 5



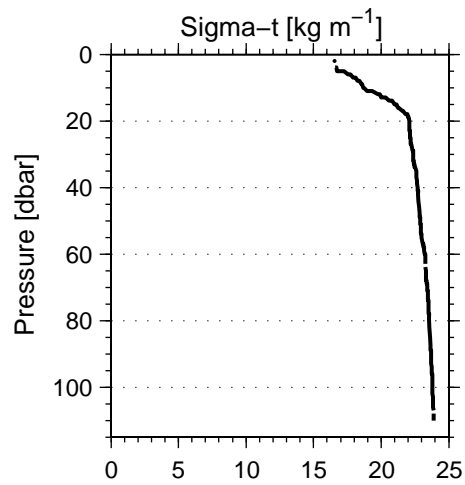
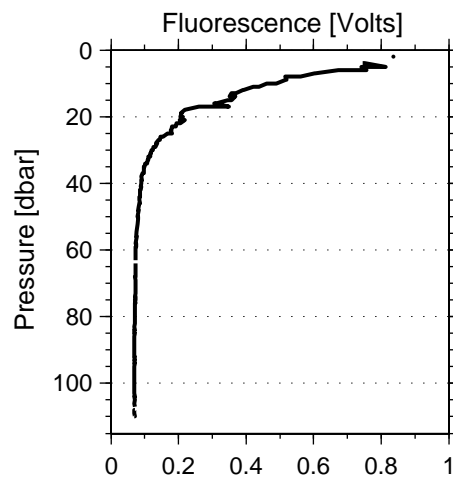
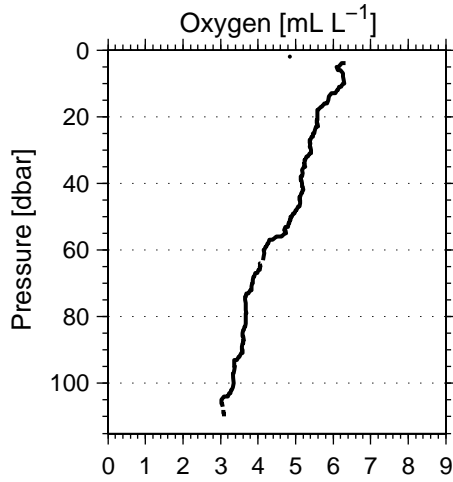
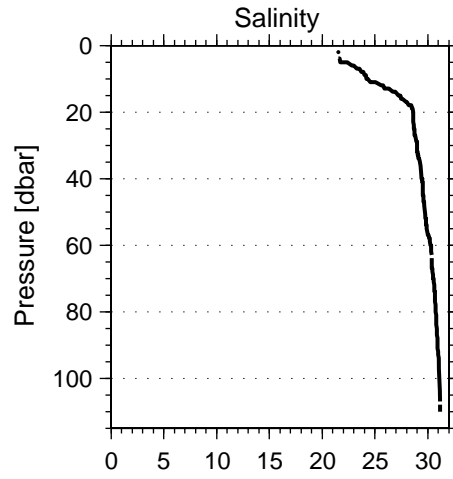
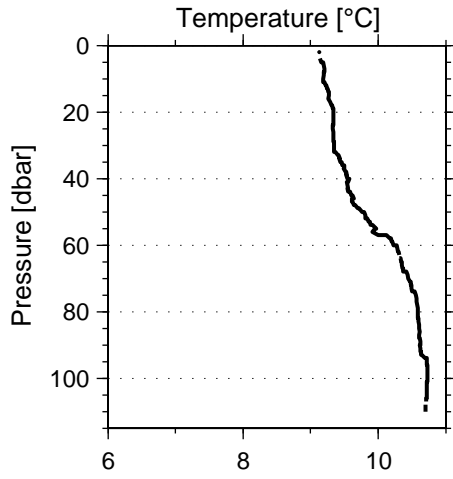
CRUISE	: Aysen September 2009	STATION	: C12	CAST	: 6
DATE	: 2009-09-23	LAT	: 45°21.978	Z-CTD	: 109.5 m
TIME	: 21:25	LON	: 73°04.792	DEPTH	: 142 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	9.133	21.521	16.570	4.850	0.835	-
3.0	-	-	-	-	-	-
4.0	9.138	21.648	16.668	6.226	0.750	-
6.0	9.200	23.005	17.717	6.197	0.674	-
8.0	9.199	23.903	18.417	6.262	0.516	-
10.0	9.185	24.320	18.745	6.271	0.462	-
12.0	9.233	25.802	19.894	6.103	0.390	-
14.0	9.267	26.969	20.799	5.888	0.368	-
16.0	9.262	27.607	21.298	5.773	0.305	-
18.0	9.323	28.426	21.928	5.577	0.219	-
20.0	9.338	28.624	22.081	5.588	0.214	-
22.0	9.338	28.653	22.103	5.583	0.195	-
24.0	9.331	28.697	22.138	5.511	0.177	-
26.0	9.334	28.759	22.186	5.428	0.147	-
28.0	9.338	28.903	22.298	5.390	0.137	-
30.0	9.345	28.999	22.372	5.416	0.121	-
35.0	9.460	29.305	22.594	5.222	0.097	-
40.0	9.571	29.470	22.705	5.181	0.089	-
45.0	9.618	29.590	22.791	5.122	0.084	-
50.0	9.791	29.752	22.891	4.874	0.080	-
60.0	10.271	30.316	23.253	4.156	0.073	-
70.0	10.450	30.549	23.405	3.837	0.072	-
80.0	10.588	30.785	23.565	3.680	0.071	-
90.0	10.621	30.947	23.686	3.592	0.070	-
100.0	10.730	31.101	23.787	3.348	0.070	-
109.5	10.698	31.195	23.866	3.095	0.070	-

Aysen September 2009
Station C12 Cast 6



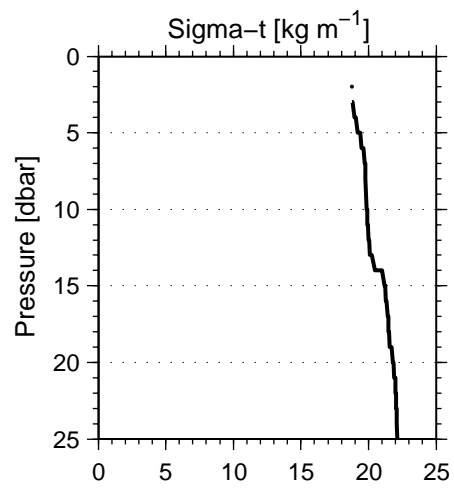
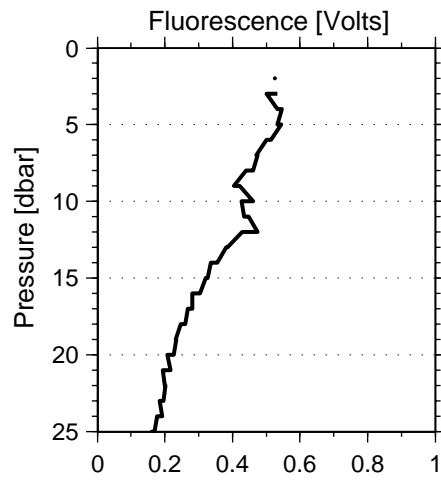
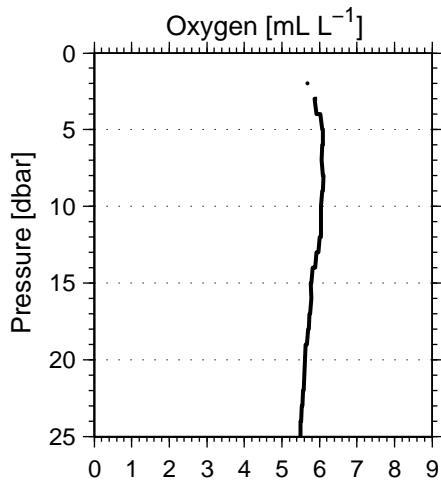
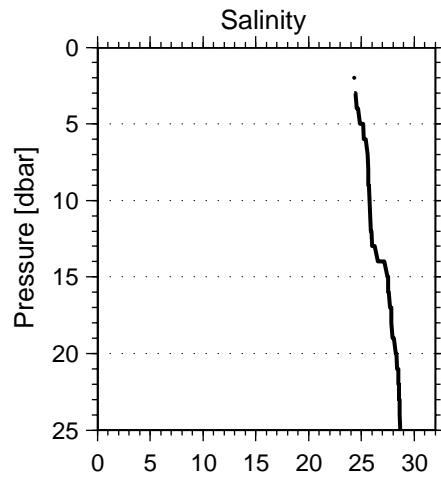
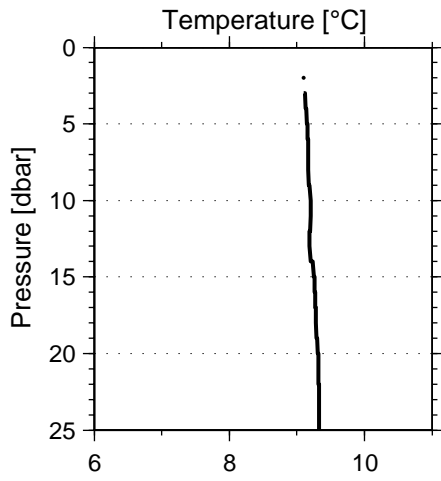
Aysen September 2009
Station C12 Cast 6



CRUISE	: Aysen September 2009	STATION	: C13	CAST	: 7
DATE	: 2009-09-23	LAT	: 45°20.385	Z-CTD	: 304.5 m
TIME	: 22:05	LOn	: 73°06.226	DEPTH	: 340 m

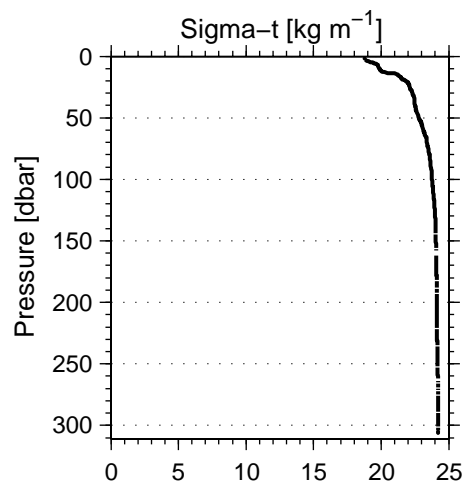
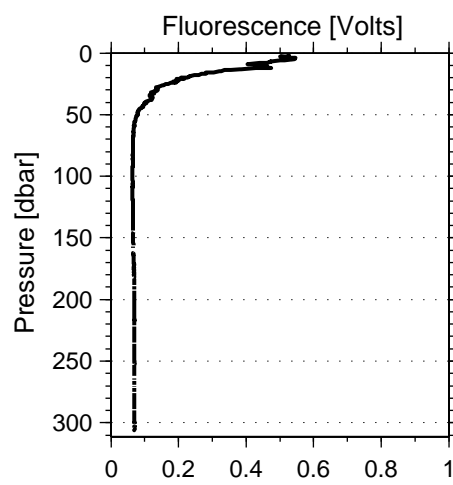
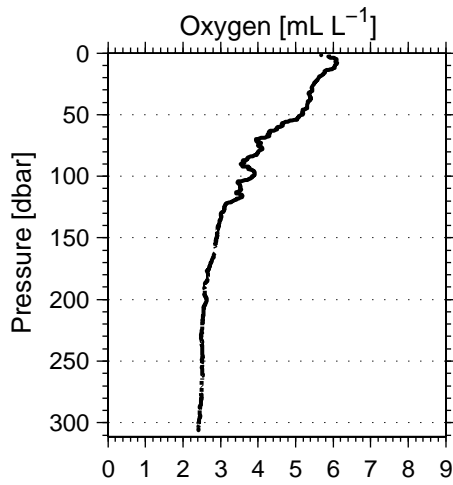
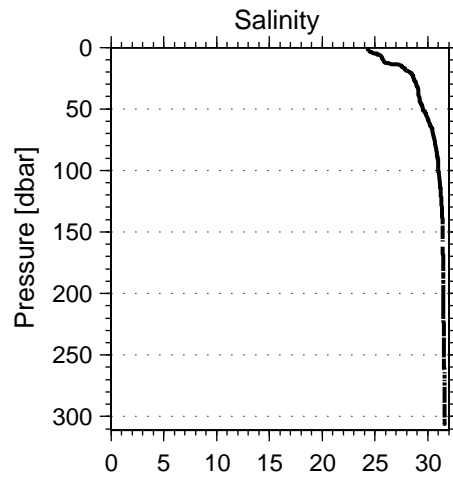
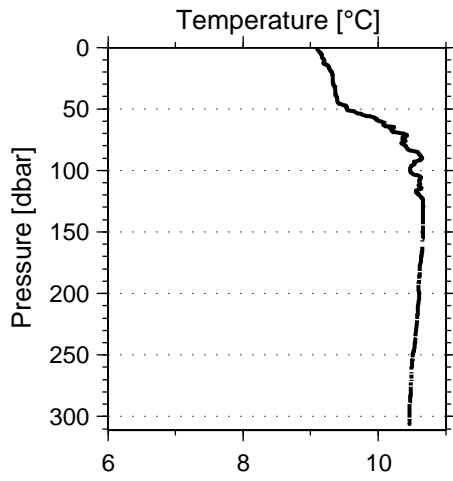
Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	9.117	24.433	18.842	5.877	0.501	-
4.0	9.137	24.695	19.043	6.032	0.546	-
6.0	9.165	25.436	19.618	6.078	0.502	-
8.0	9.171	25.654	19.787	6.118	0.440	-
10.0	9.209	25.807	19.901	6.041	0.428	-
12.0	9.186	25.983	20.041	6.013	0.429	-
14.0	9.236	27.212	20.993	5.829	0.335	-
16.0	9.268	27.633	21.317	5.780	0.281	-
18.0	9.285	27.868	21.498	5.700	0.247	-
20.0	9.321	28.339	21.860	5.613	0.208	-
22.0	9.326	28.579	22.047	5.573	0.202	-
24.0	9.328	28.663	22.112	5.505	0.176	-
26.0	9.327	28.689	22.132	5.455	0.152	-
28.0	9.331	28.854	22.261	5.426	0.134	-
30.0	9.338	28.921	22.312	5.450	0.139	-
35.0	9.369	29.110	22.455	5.372	0.116	-
40.0	9.383	29.195	22.519	5.330	0.100	-
45.0	9.413	29.333	22.622	5.278	0.087	-
50.0	9.539	29.558	22.778	5.155	0.078	-
60.0	10.037	30.109	23.130	4.531	0.068	-
70.0	10.378	30.514	23.389	3.940	0.066	-
80.0	10.405	30.765	23.581	4.002	0.065	-
90.0	10.653	30.966	23.695	3.540	0.064	-
100.0	10.473	31.021	23.768	3.849	0.064	-
125.0	10.666	31.327	23.974	3.090	0.065	-
150.0	10.662	31.423	24.049	2.895	0.066	-
175.0	10.625	31.475	24.096	2.682	0.068	-
200.0	10.606	31.498	24.117	2.636	0.068	-
225.0	10.573	31.517	24.138	2.503	0.070	-
250.0	10.516	31.560	24.181	2.517	0.070	-
275.0	-	-	-	-	-	-
300.0	10.464	31.602	24.223	2.410	0.070	-
304.5	10.461	31.605	24.225	2.409	0.071	-

Aysen September 2009
Station C13 Cast 7



Aysen September 2009

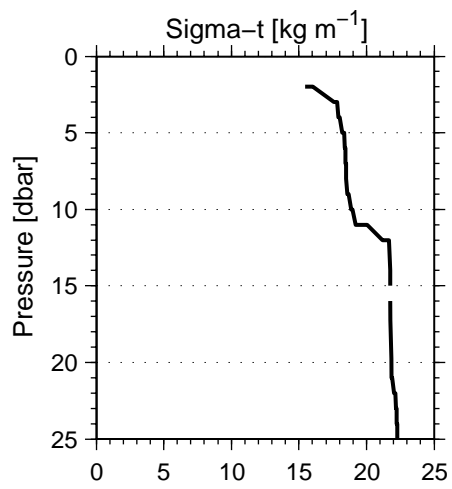
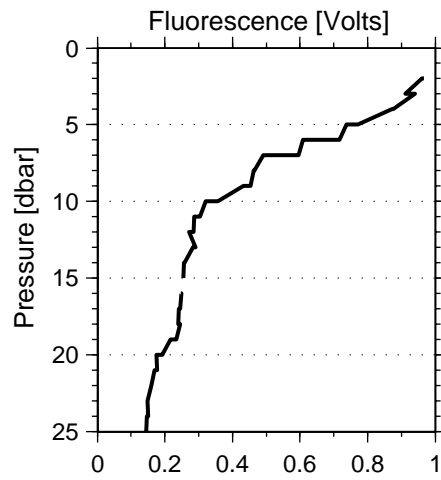
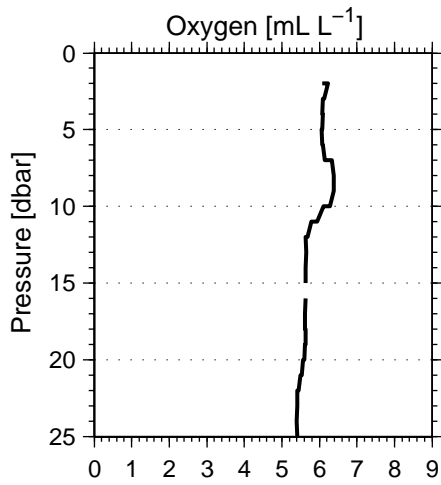
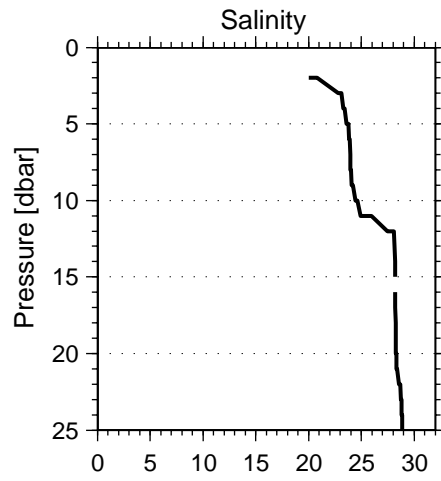
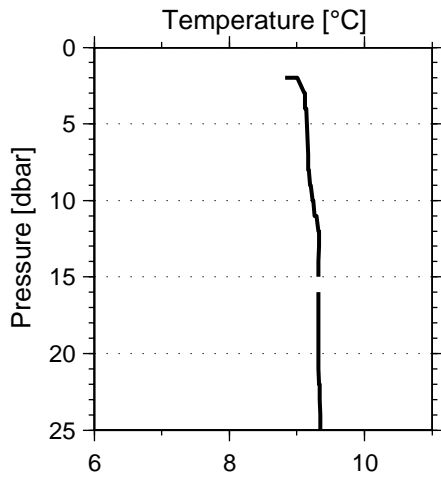
Station C13 Cast 7



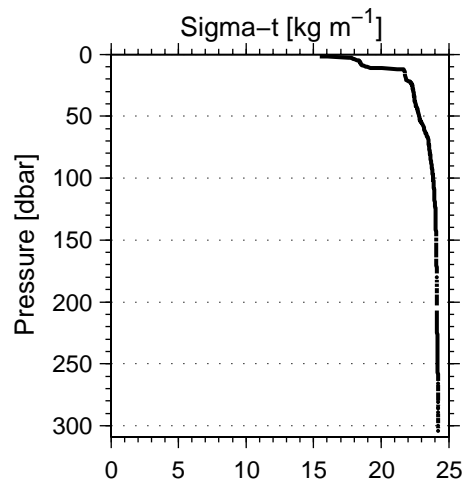
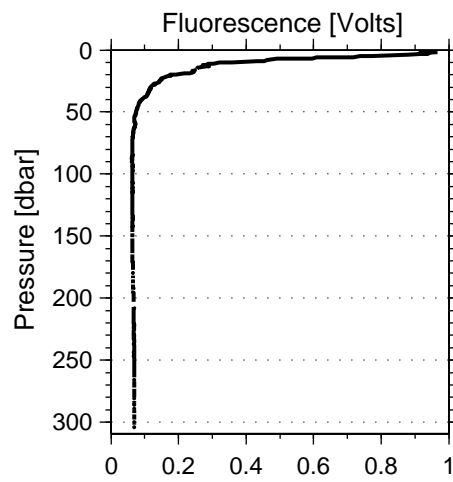
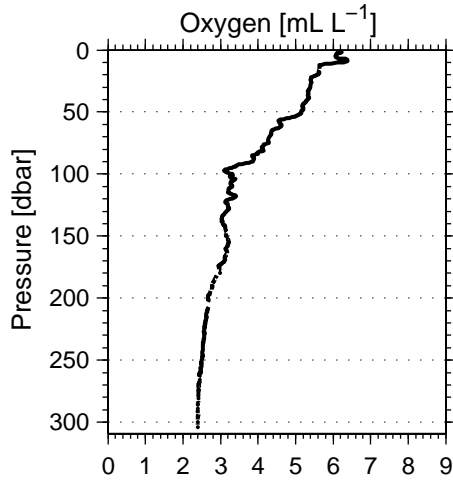
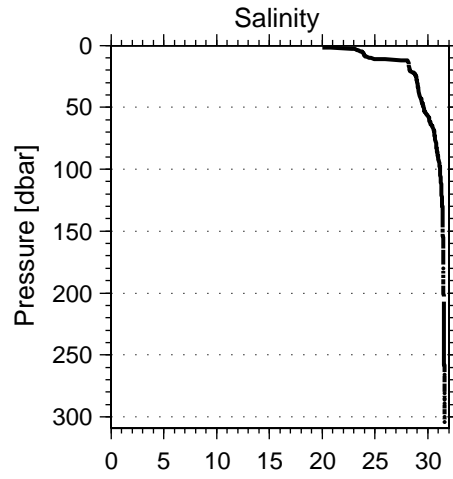
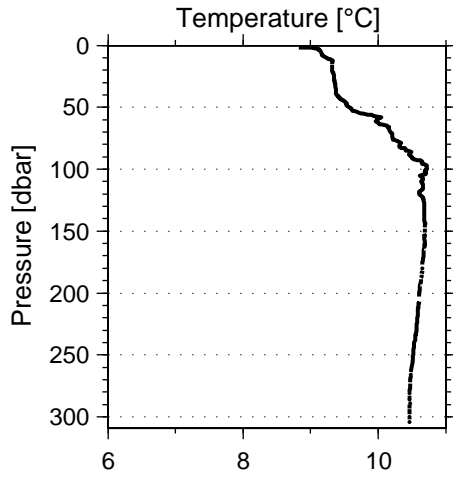
CRUISE	: Aysen September 2009	STATION	: C15	CAST	: 8
DATE	: 2009-09-24	LAT	: 45°17.935	Z-CTD	: 302.0 m
TIME	: 01:05	LON	: 73°09.166	DEPTH	: 342 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	9.010	20.788	16.014	6.232	0.962	-
3.0	9.120	23.111	17.810	6.085	0.940	-
4.0	9.135	23.407	18.040	6.096	0.872	-
6.0	9.161	23.915	18.432	6.089	0.609	-
8.0	9.180	24.005	18.499	6.385	0.463	-
10.0	9.248	24.631	18.978	6.103	0.321	-
12.0	9.326	28.085	21.661	5.638	0.272	-
14.0	9.322	28.202	21.753	5.634	0.257	-
16.0	9.319	28.223	21.770	5.630	0.248	-
18.0	9.320	28.265	21.803	5.630	0.245	-
20.0	9.321	28.313	21.840	5.567	0.176	-
22.0	9.336	28.695	22.136	5.419	0.159	-
24.0	9.344	28.866	22.268	5.395	0.146	-
26.0	9.347	28.931	22.318	5.421	0.143	-
28.0	9.354	28.990	22.364	5.396	0.124	-
30.0	9.361	29.036	22.398	5.389	0.117	-
35.0	9.373	29.113	22.457	5.343	0.109	-
40.0	9.391	29.239	22.552	5.315	0.089	-
45.0	9.513	29.470	22.714	5.169	0.081	-
50.0	9.574	29.617	22.819	5.153	0.074	-
60.0	9.986	30.176	23.190	4.624	0.072	-
70.0	10.184	30.627	23.509	4.300	0.064	-
80.0	10.327	30.805	23.625	4.133	0.064	-
90.0	10.501	30.991	23.741	3.823	0.062	-
100.0	10.716	31.171	23.844	3.315	0.064	-
125.0	10.674	31.383	24.016	3.201	0.064	-
150.0	10.694	31.446	24.062	3.156	0.064	-
175.0	10.654	31.497	24.109	2.970	0.065	-
200.0	10.603	31.515	24.131	2.670	0.067	-
225.0	10.572	31.529	24.147	2.569	0.068	-
250.0	10.518	31.566	24.186	2.496	0.068	-
275.0	10.472	31.598	24.218	2.414	0.070	-
300.0	-	-	-	-	-	-
302.0	10.468	31.602	24.222	2.394	0.070	-

Aysen September 2009
Station C15 Cast 8



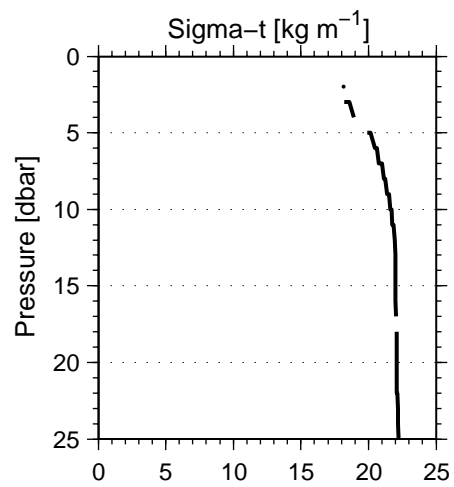
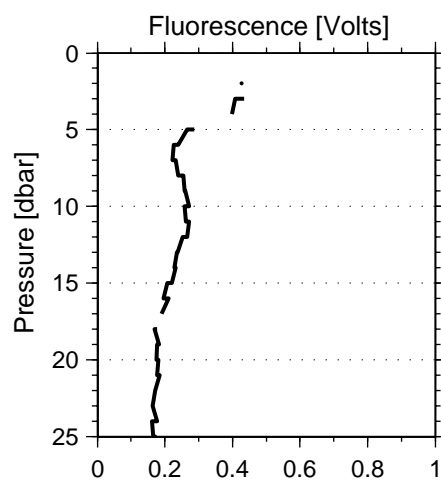
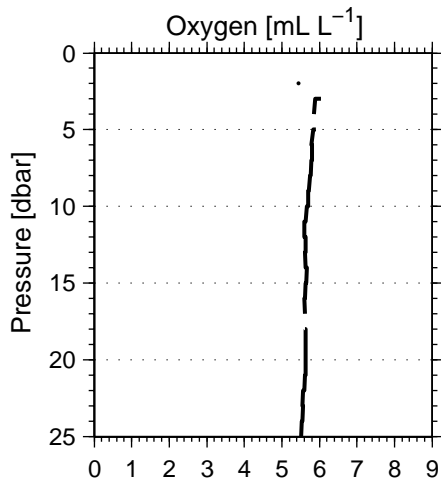
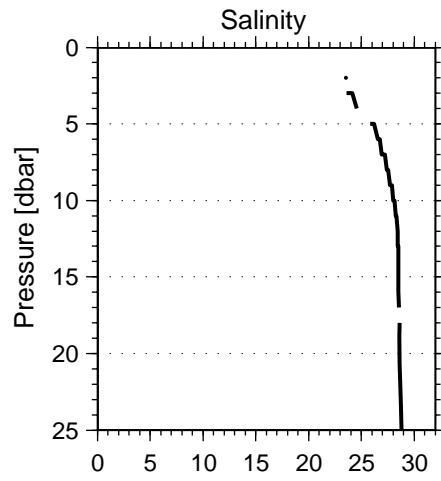
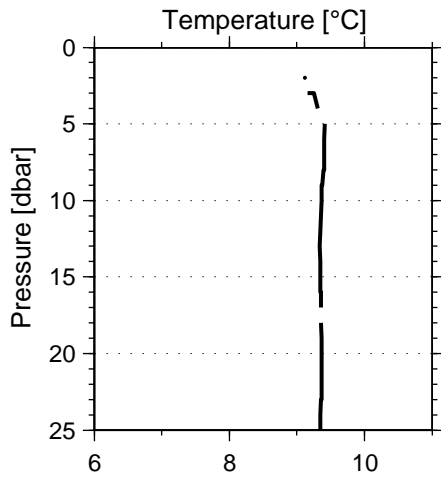
Aysen September 2009
Station C15 Cast 8



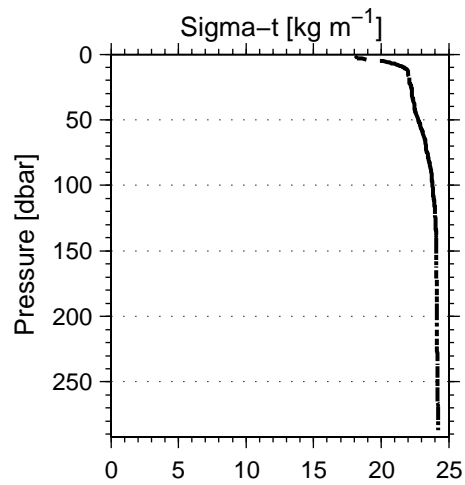
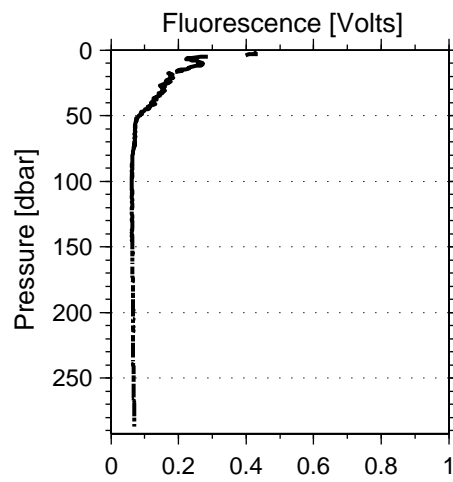
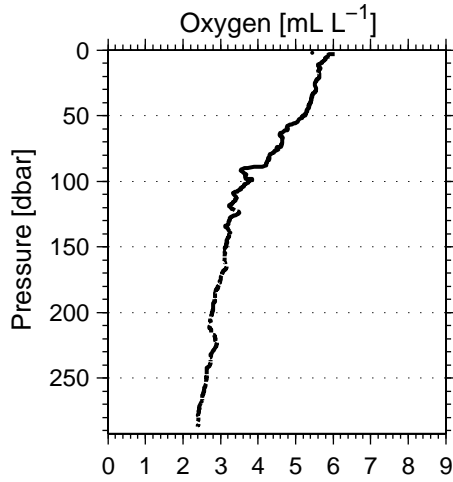
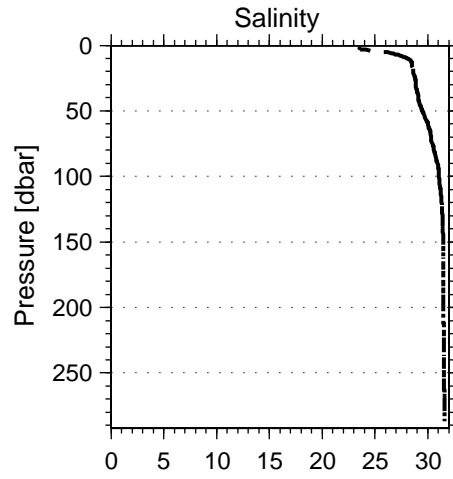
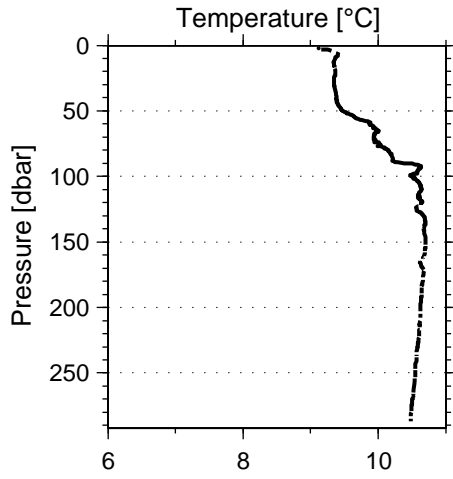
CRUISE	: Aysen September 2009	STATION	: C16	CAST	: 9
DATE	: 2009-09-24	LAT	: 45°16.337	Z-CTD	: 286.0 m
TIME	: 03:00	LON	: 73°12.158	DEPTH	: 310 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	9.254	24.146	18.599	5.889	0.409	-
4.0	-	-	-	-	-	-
6.0	9.403	26.757	20.614	5.803	0.226	-
8.0	9.392	27.570	21.250	5.749	0.256	-
10.0	9.363	28.145	21.703	5.666	0.259	-
12.0	9.343	28.460	21.952	5.628	0.254	-
14.0	9.347	28.509	21.990	5.664	0.231	-
16.0	9.353	28.541	22.013	5.607	0.212	-
18.0	9.361	28.637	22.087	5.632	0.170	-
20.0	9.364	28.656	22.101	5.626	0.182	-
22.0	9.370	28.693	22.129	5.565	0.172	-
24.0	9.347	28.804	22.220	5.535	0.162	-
26.0	9.347	28.850	22.255	5.514	0.155	-
28.0	9.352	28.872	22.272	5.540	0.161	-
30.0	9.352	28.880	22.278	5.542	0.156	-
35.0	9.370	29.018	22.383	5.449	0.139	-
40.0	9.381	29.130	22.468	5.392	0.119	-
45.0	9.406	29.256	22.563	5.314	0.102	-
50.0	9.484	29.503	22.744	5.193	0.082	-
60.0	9.864	30.016	23.085	4.797	0.071	-
70.0	9.938	30.322	23.312	4.641	0.069	-
80.0	10.154	30.598	23.492	4.303	0.064	-
90.0	10.500	30.945	23.705	3.644	0.064	-
100.0	10.505	31.060	23.794	3.743	0.062	-
125.0	10.573	31.355	24.012	3.452	0.062	-
150.0	10.704	31.471	24.079	3.130	0.063	-
175.0	10.670	31.497	24.106	3.001	0.065	-
200.0	10.627	31.511	24.124	2.776	0.066	-
225.0	10.595	31.530	24.144	2.883	0.065	-
250.0	10.548	31.561	24.177	2.628	0.067	-
275.0	10.495	31.592	24.210	2.409	0.068	-
286.0	10.486	31.597	24.215	2.403	0.070	-

Aysen September 2009
Station C16 Cast 9



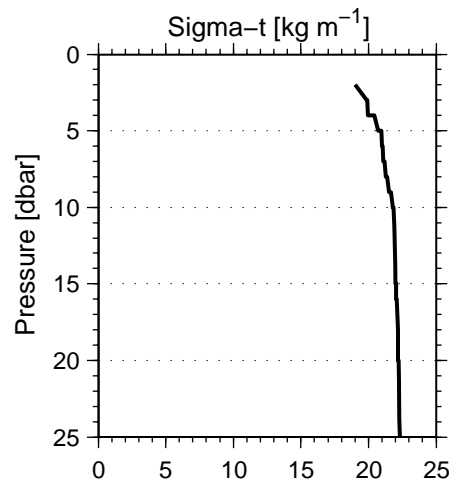
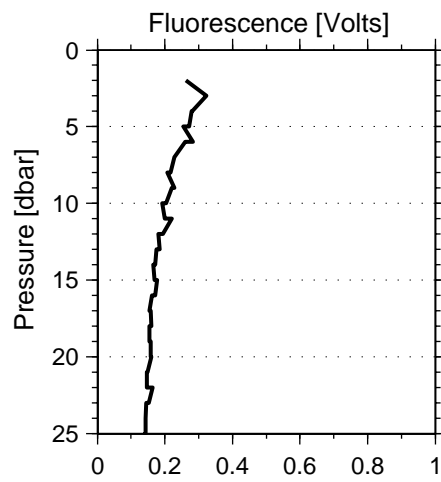
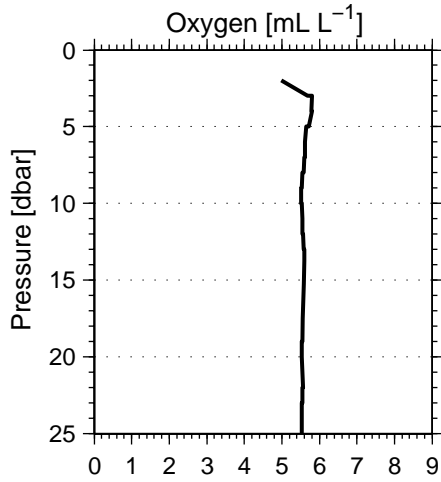
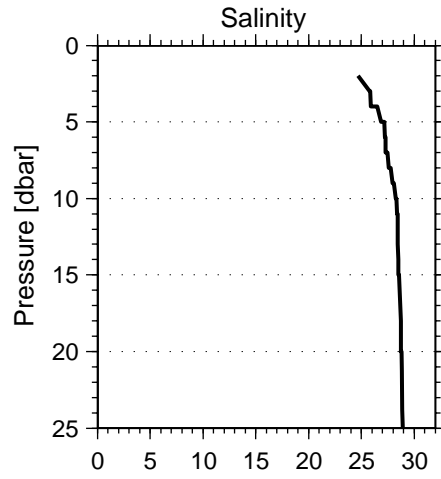
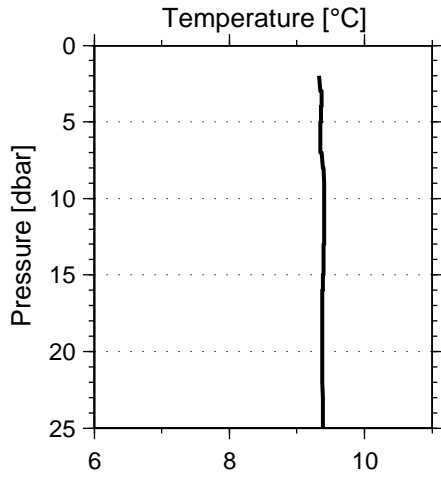
Aysen September 2009
Station C16 Cast 9



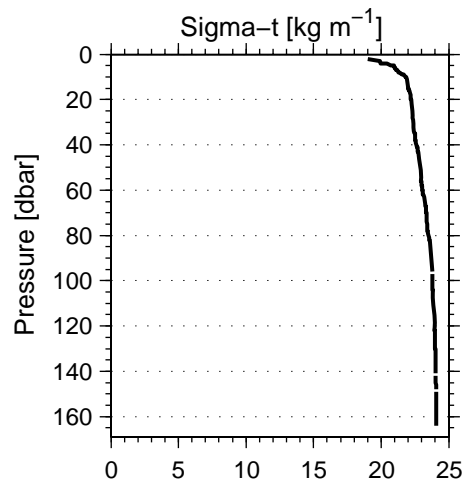
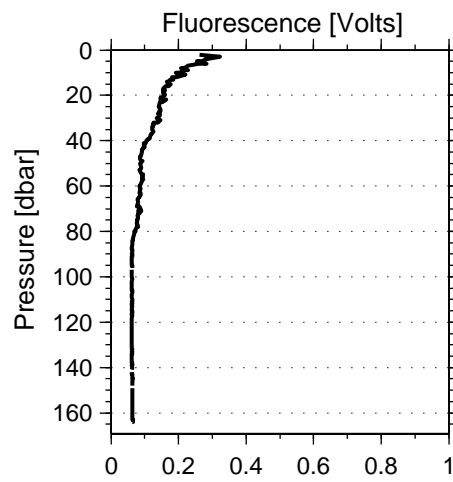
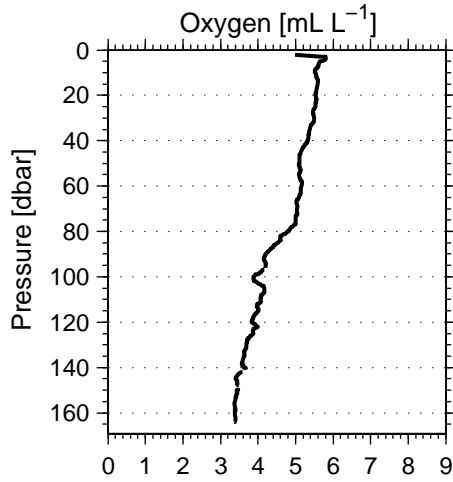
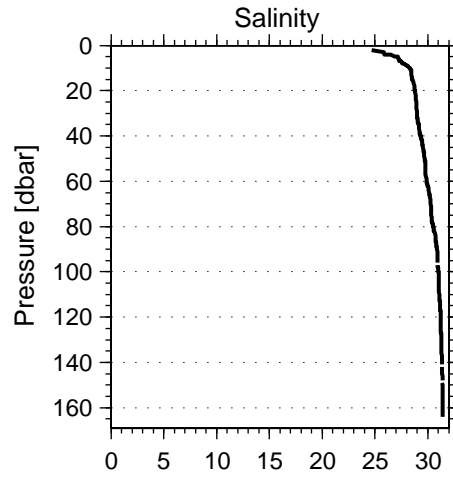
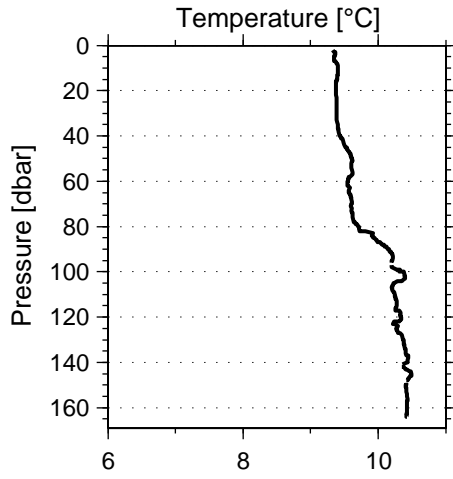
CRUISE	: Aysen September 2009	STATION	: C18	CAST	: 10
DATE	: 2009-09-24	LAT	: 45°18.013	Z-CTD	: 163.5 m
TIME	: 05:45	LON	: 73°17.697	DEPTH	: 222 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	9.332	24.676	19.001	4.986	0.263	-
3.0	9.367	25.864	19.923	5.800	0.322	-
4.0	9.355	26.517	20.433	5.811	0.279	-
6.0	9.347	27.275	21.026	5.615	0.261	-
8.0	9.399	27.765	21.401	5.552	0.208	-
10.0	9.404	28.348	21.855	5.524	0.192	-
12.0	9.402	28.453	21.938	5.566	0.182	-
14.0	9.396	28.521	21.991	5.594	0.165	-
16.0	9.379	28.630	22.079	5.586	0.162	-
18.0	9.378	28.741	22.166	5.553	0.154	-
20.0	9.378	28.808	22.218	5.532	0.159	-
22.0	9.379	28.874	22.269	5.556	0.163	-
24.0	9.385	28.906	22.293	5.529	0.143	-
26.0	9.384	28.932	22.314	5.477	0.146	-
28.0	9.387	28.963	22.337	5.482	0.139	-
30.0	9.387	29.002	22.368	5.503	0.136	-
35.0	9.407	29.189	22.511	5.371	0.121	-
40.0	9.446	29.351	22.631	5.314	0.105	-
45.0	9.535	29.568	22.787	5.132	0.091	-
50.0	9.616	29.740	22.909	5.096	0.086	-
60.0	9.546	29.924	23.063	5.154	0.084	-
70.0	9.603	30.301	23.348	5.034	0.084	-
80.0	9.713	30.552	23.527	4.790	0.069	-
90.0	10.160	30.890	23.718	4.207	0.063	-
100.0	10.377	31.038	23.798	3.880	0.062	-
125.0	10.267	31.256	23.986	3.853	0.062	-
150.0	10.411	31.396	24.071	3.441	0.064	-
163.5	10.422	31.429	24.095	3.383	0.065	-

Aysen September 2009
Station C18 Cast 10



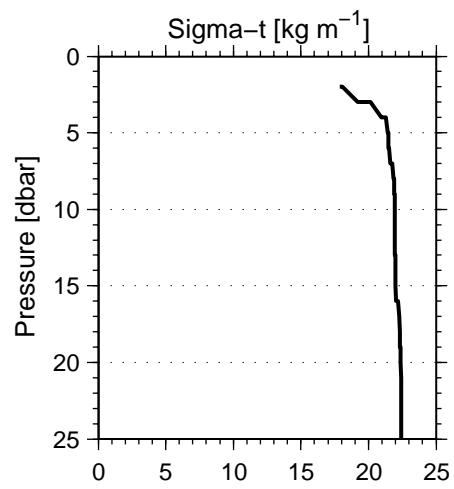
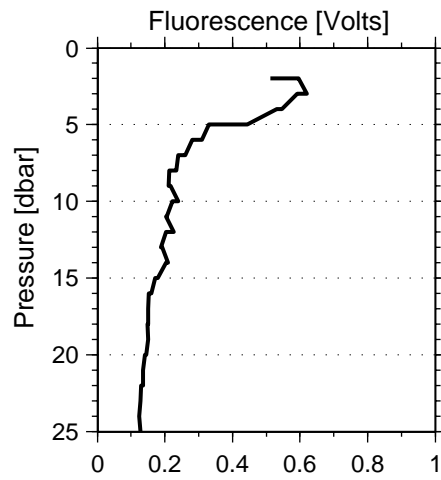
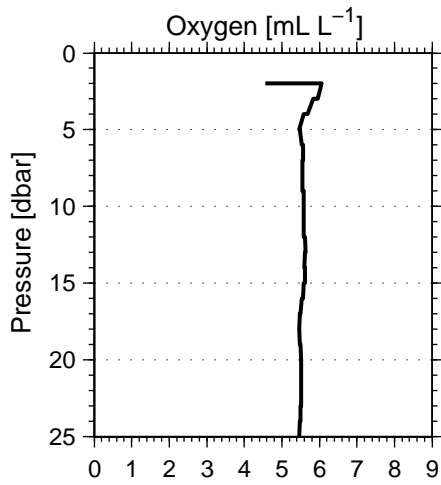
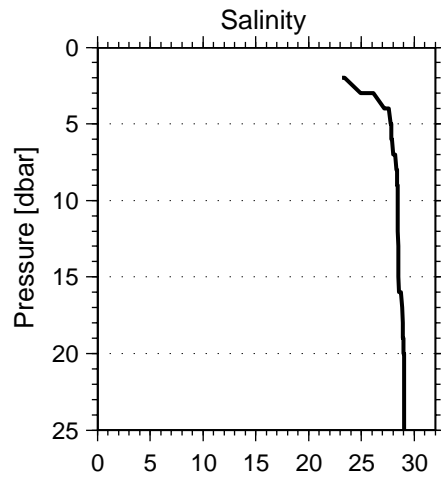
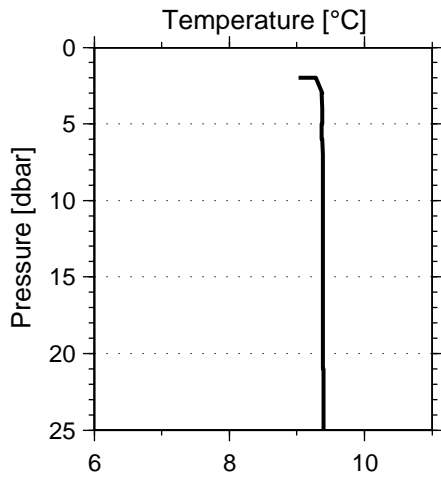
Aysen September 2009
Station C18 Cast 10



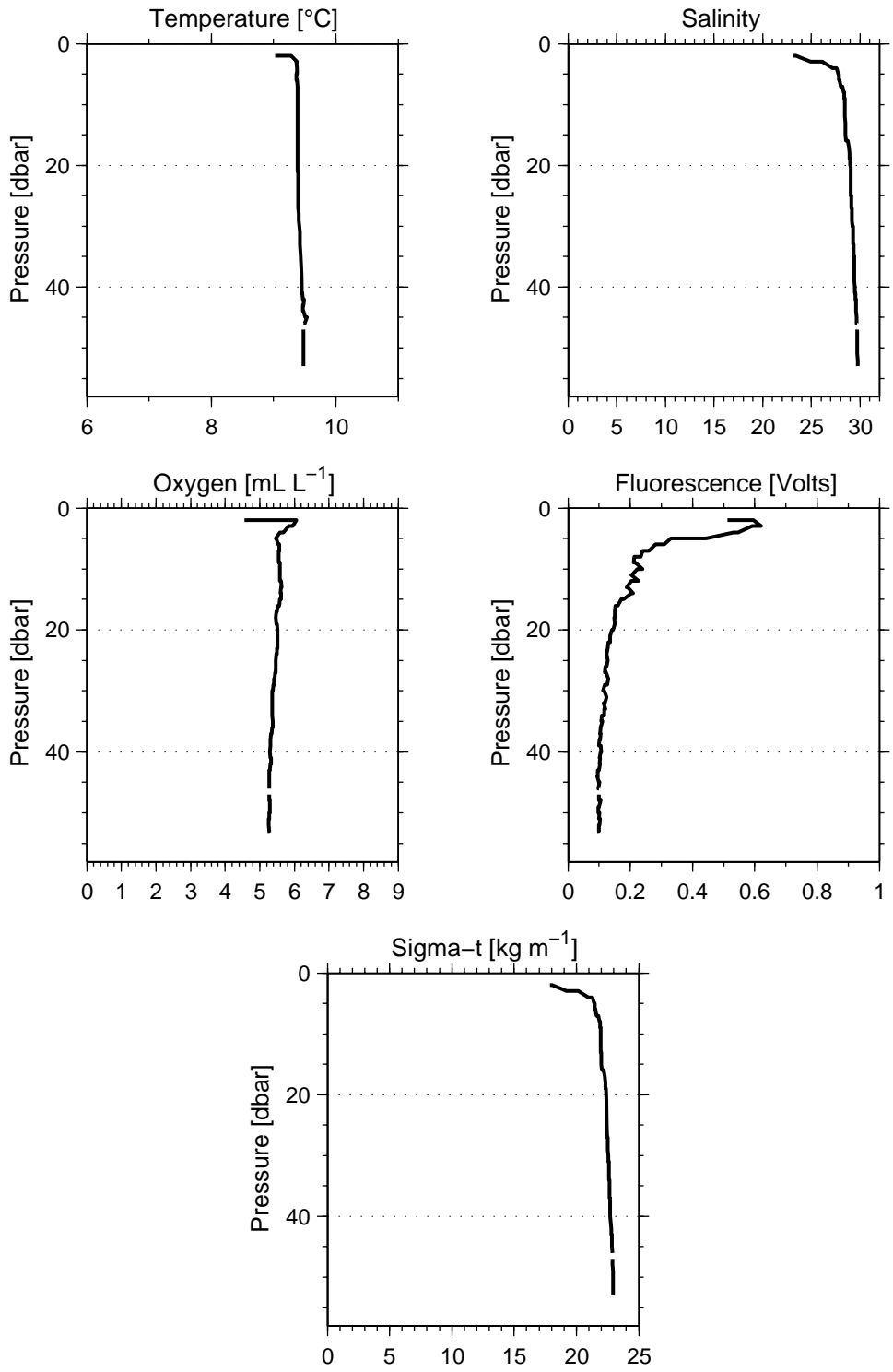
CRUISE : Aysen September 2009	STATION : C20	CAST : 11
DATE : 2009-09-24	LAT : 45°20.062	Z-CTD : 52.5 m
TIME : 06:50	LON : 73°20.831	DEPTH : 74 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	9.279	23.452	18.055	6.058	0.596	-
3.0	9.366	26.173	20.164	5.845	0.592	-
4.0	9.375	27.620	21.291	5.580	0.531	-
6.0	9.372	27.911	21.519	5.559	0.282	-
8.0	9.386	28.385	21.887	5.542	0.212	-
10.0	9.388	28.457	21.942	5.584	0.222	-
12.0	9.388	28.478	21.959	5.620	0.203	-
14.0	9.387	28.512	21.986	5.615	0.203	-
16.0	9.384	28.777	22.192	5.531	0.153	-
18.0	9.386	28.947	22.325	5.466	0.149	-
20.0	9.389	29.032	22.391	5.514	0.142	-
22.0	9.391	29.053	22.407	5.515	0.130	-
24.0	9.391	29.070	22.420	5.484	0.125	-
26.0	9.396	29.132	22.468	5.459	0.120	-
28.0	9.401	29.178	22.503	5.417	0.129	-
30.0	9.417	29.274	22.576	5.365	0.117	-
35.0	9.437	29.397	22.669	5.372	0.111	-
40.0	9.455	29.467	22.721	5.297	0.105	-
45.0	9.532	29.661	22.860	5.276	0.102	-
50.0	9.477	29.746	22.935	5.282	0.101	-
52.5	9.478	29.762	22.947	5.273	0.099	-

Aysen September 2009
Station C20 Cast 11



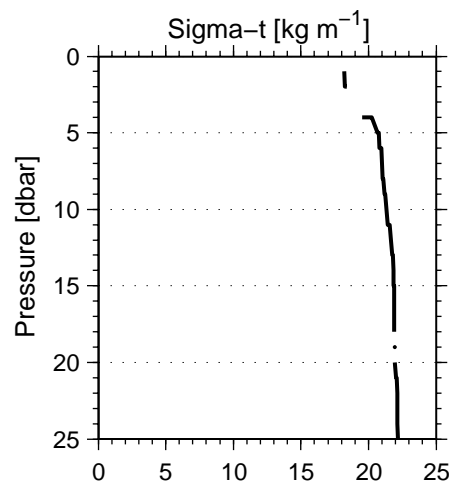
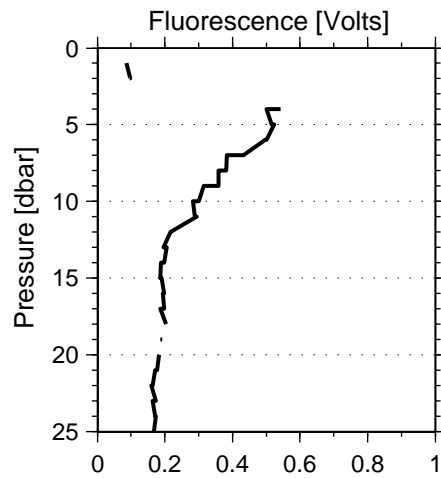
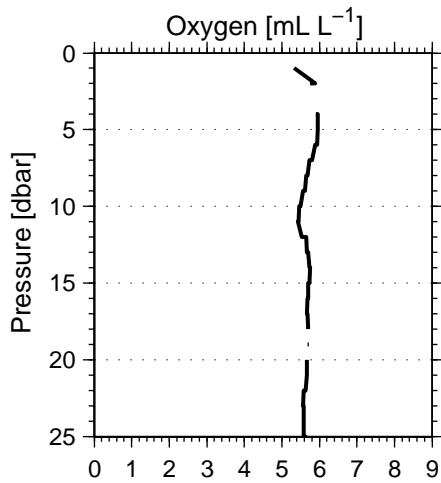
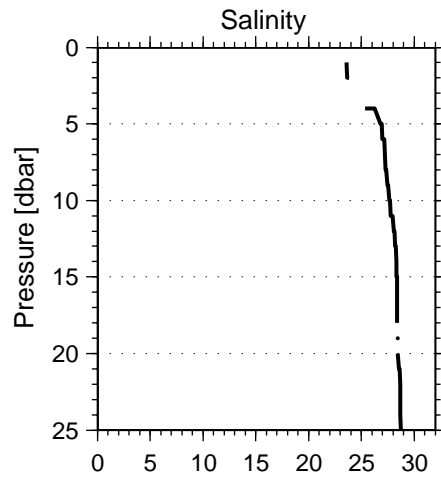
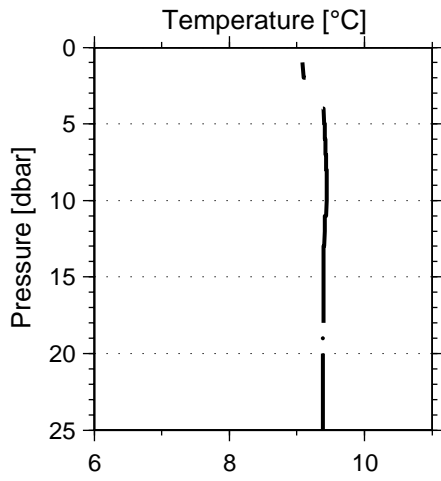
Aysen September 2009
Station C20 Cast 11



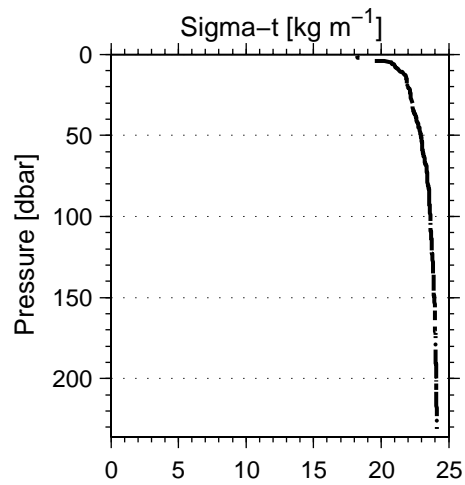
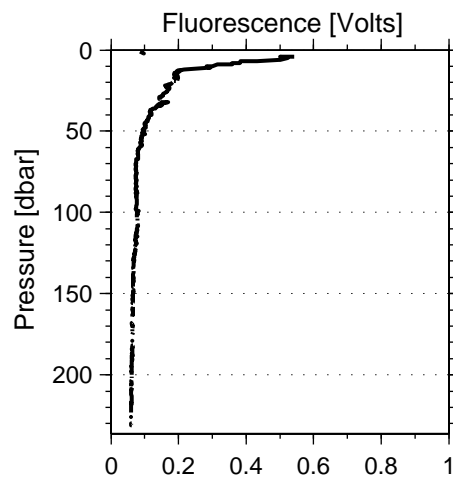
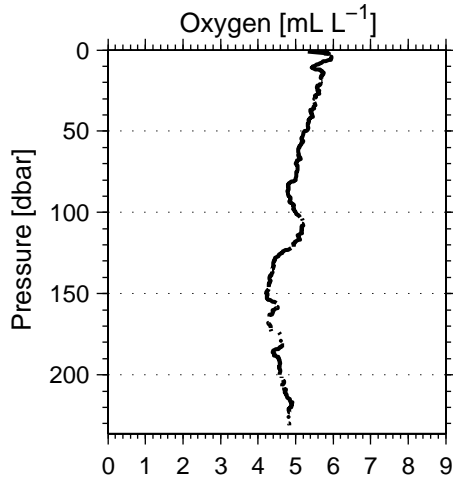
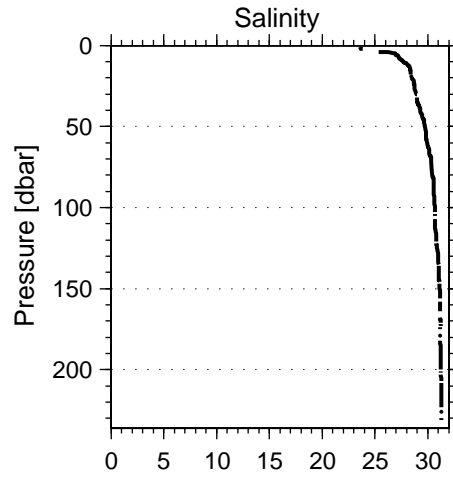
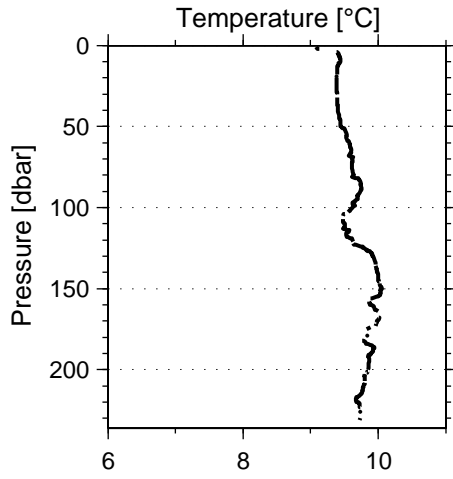
CRUISE	: Aysen September 2009	STATION	: C21	CAST	: 12
DATE	: 2009-09-24	LAT	: 45°21.750	Z-CTD	: 230.5 m
TIME	: 08:36	LON	: 73°23.698	DEPTH	: 275 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	9.078	23.595	18.194	5.322	0.087	-
2.0	9.130	23.875	18.405	5.753	0.095	-
3.0	-	-	-	-	-	-
4.0	9.391	26.299	20.259	5.950	0.501	-
6.0	9.421	27.178	20.940	5.886	0.498	-
8.0	9.440	27.384	21.098	5.648	0.360	-
10.0	9.441	27.700	21.344	5.459	0.283	-
12.0	9.414	28.132	21.685	5.642	0.217	-
14.0	9.393	28.325	21.839	5.746	0.188	-
16.0	9.392	28.395	21.894	5.684	0.194	-
18.0	-	-	-	-	-	-
20.0	9.387	28.479	21.960	5.672	0.184	-
22.0	9.385	28.682	22.119	5.586	0.161	-
24.0	9.386	28.735	22.160	5.585	0.173	-
26.0	9.386	28.753	22.173	5.615	0.165	-
28.0	9.389	28.847	22.247	5.524	0.154	-
30.0	9.392	28.970	22.342	5.522	0.145	-
35.0	9.398	29.042	22.398	5.486	0.134	-
40.0	9.406	29.306	22.602	5.445	0.117	-
45.0	9.435	29.595	22.824	5.334	0.100	-
50.0	9.448	29.750	22.942	5.235	0.100	-
60.0	9.577	29.980	23.102	5.095	0.084	-
70.0	9.615	30.340	23.377	5.010	0.074	-
80.0	9.644	30.459	23.465	4.994	0.076	-
90.0	9.736	30.599	23.560	4.830	0.076	-
100.0	9.621	30.679	23.641	5.007	0.076	-
125.0	9.796	30.907	23.791	4.605	0.069	-
150.0	10.035	31.151	23.943	4.252	0.066	-
175.0	-	-	-	-	-	-
200.0	-	-	-	-	-	-
225.0	-	-	-	-	-	-
230.5	9.730	31.318	24.122	4.839	0.060	-

Aysen September 2009
Station C21 Cast 12



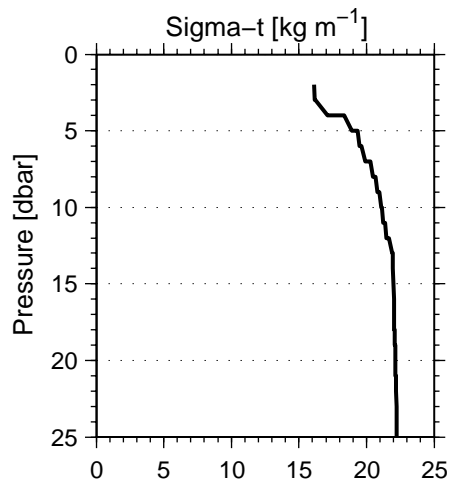
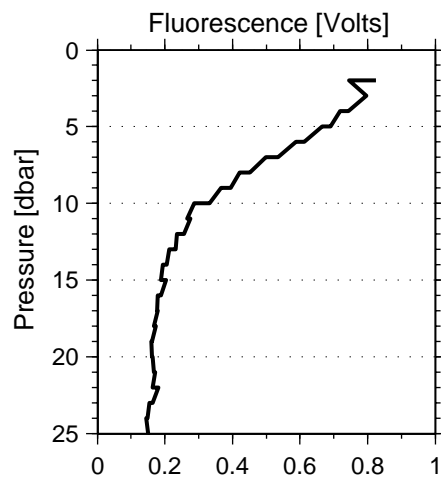
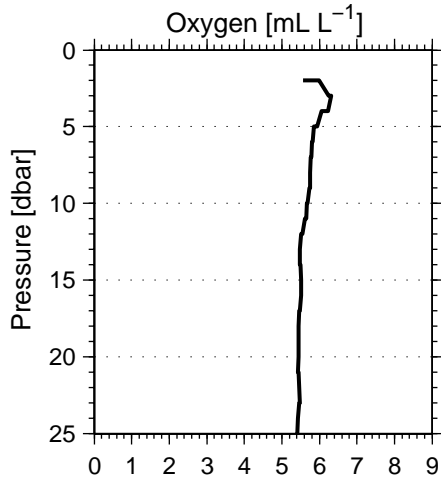
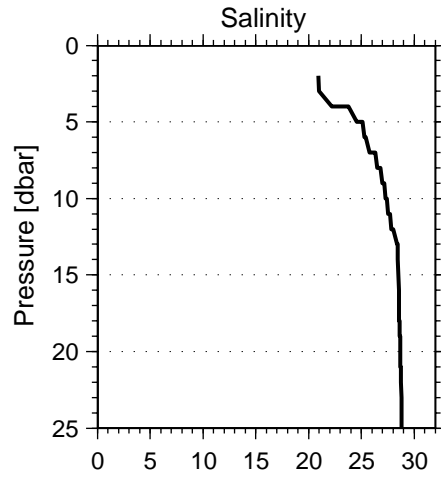
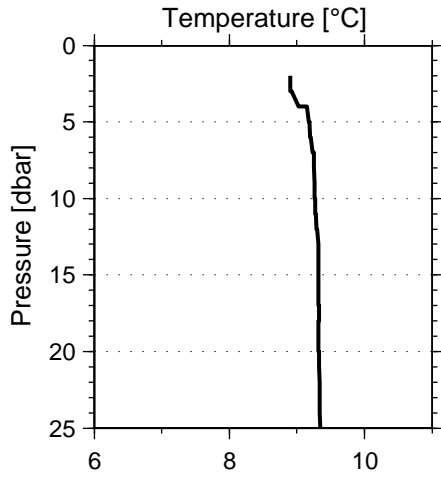
Aysen September 2009
Station C21 Cast 12



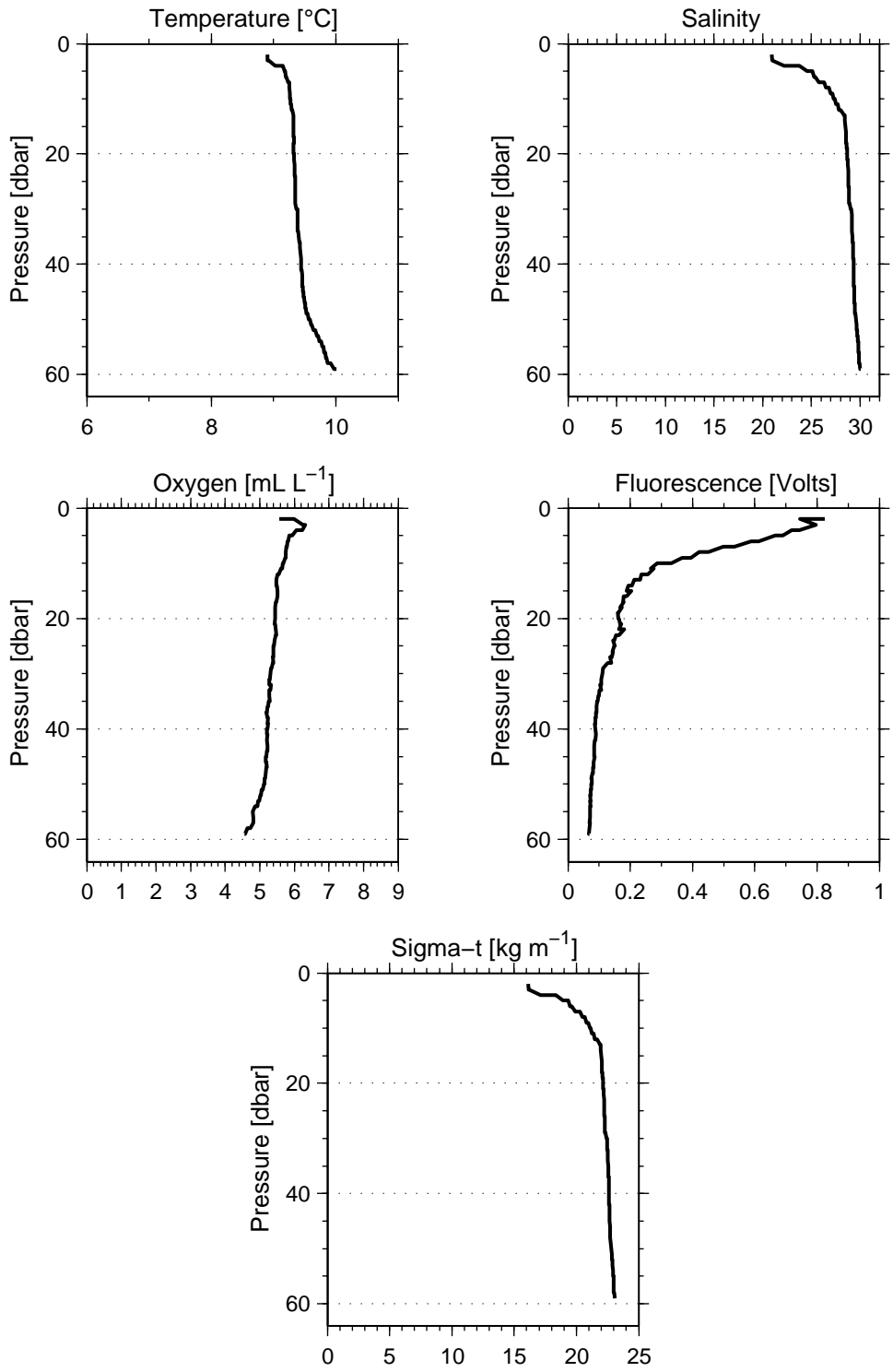
CRUISE : Aysen September 2009	STATION : GS	CAST : 13
DATE : 2009-09-24	LAT : 45°19.073	Z-CTD : 58.5 m
TIME : 14:47	LON : 73°08.765	DEPTH : 122 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	8.901	20.928	16.137	5.984	0.745	-
3.0	8.921	21.004	16.194	6.317	0.796	-
4.0	9.144	23.774	18.325	6.055	0.720	-
6.0	9.207	25.442	19.616	5.801	0.588	-
8.0	9.257	26.808	20.675	5.753	0.420	-
10.0	9.268	27.437	21.164	5.667	0.287	-
12.0	9.299	28.054	21.641	5.508	0.235	-
14.0	9.319	28.460	21.955	5.493	0.194	-
16.0	9.323	28.564	22.035	5.510	0.179	-
18.0	9.323	28.613	22.074	5.442	0.174	-
20.0	9.325	28.706	22.146	5.439	0.164	-
22.0	9.337	28.769	22.194	5.471	0.182	-
24.0	9.343	28.814	22.228	5.427	0.145	-
26.0	9.347	28.854	22.258	5.393	0.146	-
28.0	9.346	28.899	22.293	5.384	0.129	-
30.0	9.383	29.142	22.477	5.305	0.110	-
35.0	9.408	29.234	22.546	5.265	0.093	-
40.0	9.445	29.342	22.625	5.212	0.088	-
45.0	9.479	29.418	22.679	5.176	0.086	-
50.0	9.585	29.616	22.817	5.115	0.074	-
58.5	9.972	30.031	23.079	4.579	0.068	-

Aysen September 2009
Station GS Cast 13



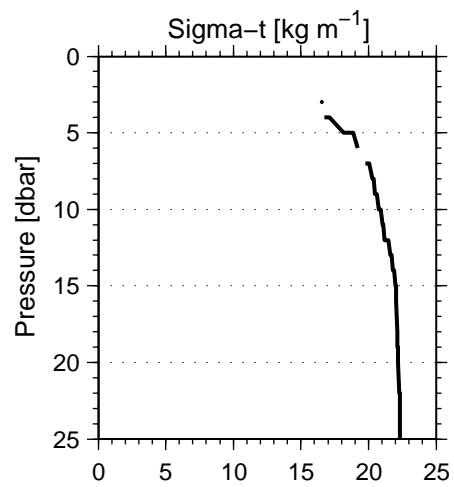
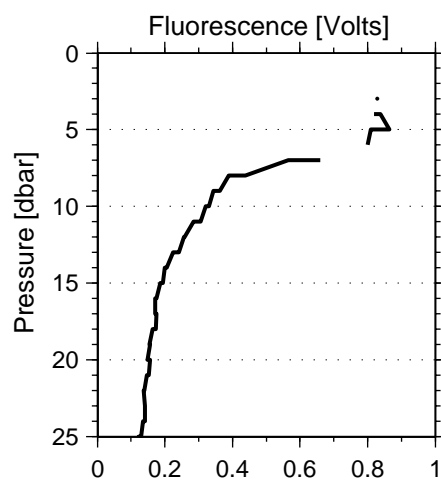
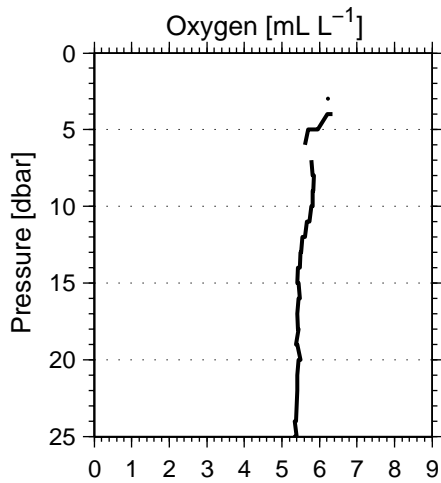
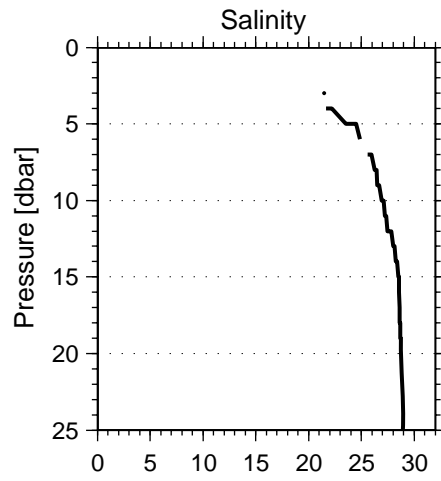
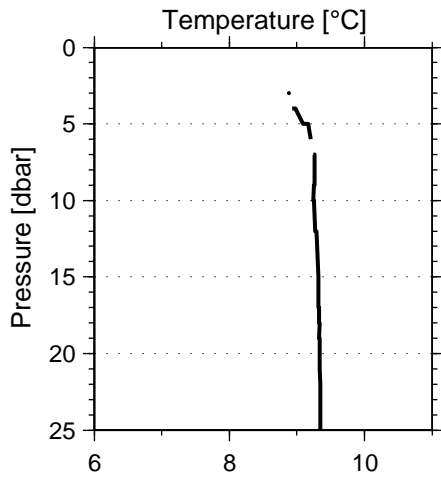
Aysen September 2009
Station GS Cast 13



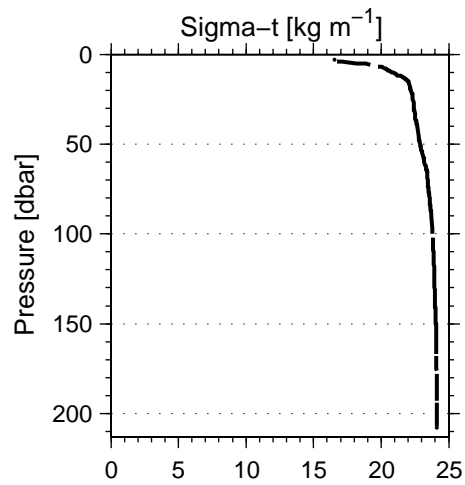
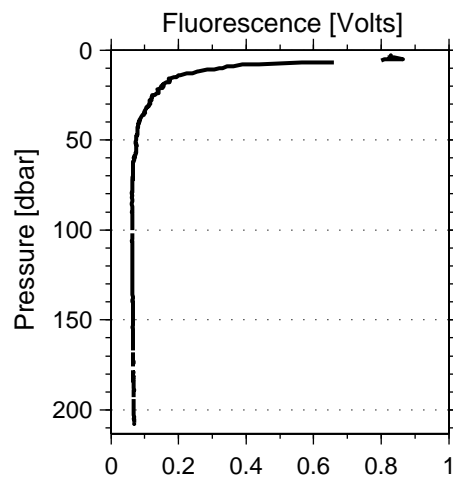
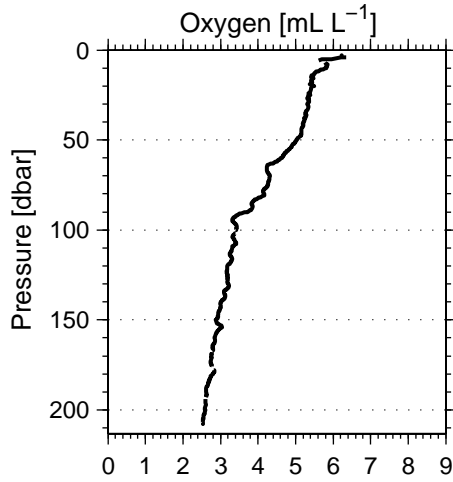
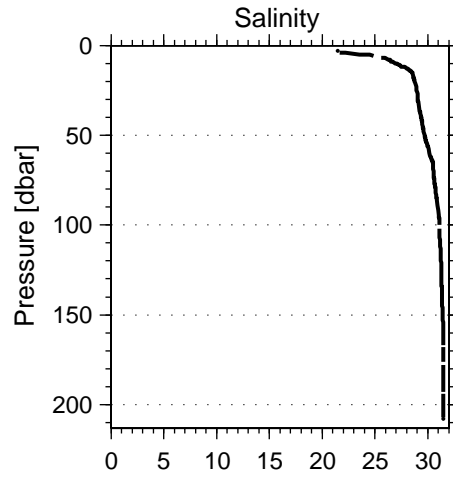
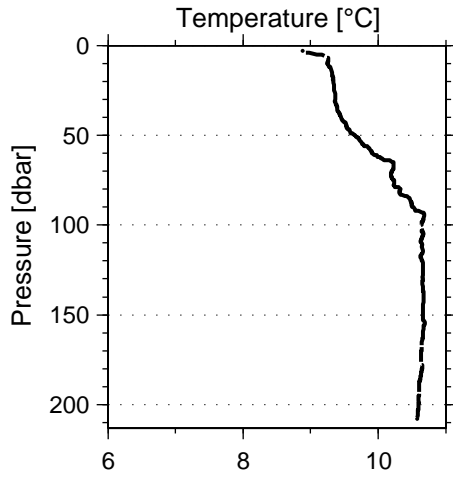
CRUISE	: Aysen September 2009	STATION	: G1	CAST	: 14
DATE	: 2009-09-24	LAT	: 45°18.870	Z-CTD	: 207.0 m
TIME	: 15:34	LON	: 73°08.396	DEPTH	: 342 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	-	-	-	-	-	-
4.0	8.980	22.212	17.128	6.206	0.839	-
6.0	-	-	-	-	-	-
8.0	9.262	26.428	20.378	5.852	0.389	-
10.0	9.251	27.130	20.927	5.784	0.321	-
12.0	9.287	27.831	21.469	5.547	0.256	-
14.0	9.313	28.400	21.909	5.430	0.200	-
16.0	9.321	28.596	22.061	5.447	0.172	-
18.0	9.333	28.696	22.137	5.438	0.164	-
20.0	9.339	28.784	22.205	5.438	0.157	-
22.0	9.346	28.909	22.302	5.405	0.138	-
24.0	9.346	28.934	22.321	5.346	0.136	-
26.0	9.361	29.014	22.381	5.333	0.121	-
28.0	9.367	29.066	22.421	5.368	0.114	-
30.0	9.363	29.077	22.430	5.308	0.113	-
35.0	9.393	29.212	22.531	5.257	0.098	-
40.0	9.450	29.400	22.669	5.215	0.083	-
45.0	9.530	29.540	22.766	5.153	0.079	-
50.0	9.660	29.730	22.894	5.019	0.074	-
60.0	9.918	30.172	23.198	4.613	0.068	-
70.0	10.202	30.561	23.455	4.316	0.065	-
80.0	10.334	30.756	23.586	4.171	0.062	-
90.0	10.521	30.967	23.718	3.636	0.062	-
100.0	10.639	31.118	23.816	3.406	0.063	-
125.0	10.664	31.286	23.943	3.189	0.064	-
150.0	10.665	31.430	24.055	2.879	0.065	-
175.0	10.637	31.482	24.100	2.771	0.066	-
200.0	10.596	31.508	24.127	2.599	0.067	-
207.0	10.583	31.512	24.133	2.523	0.068	-

Aysen September 2009
Station G1 Cast 14



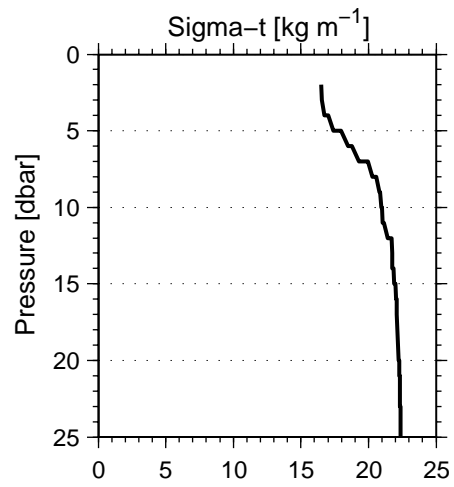
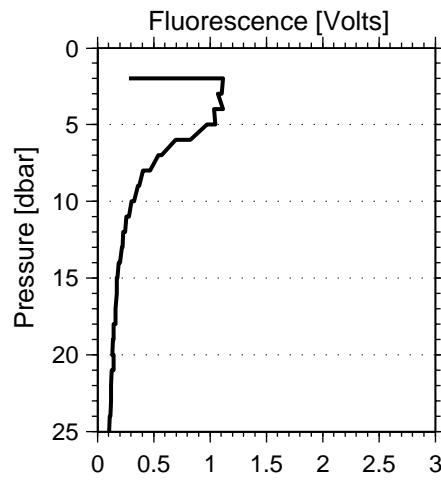
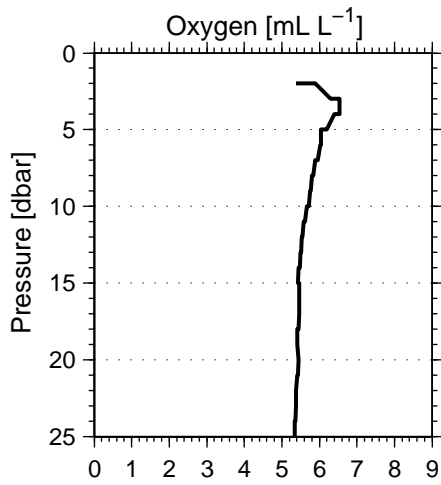
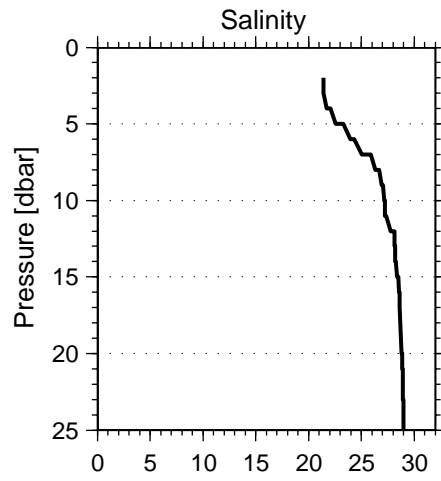
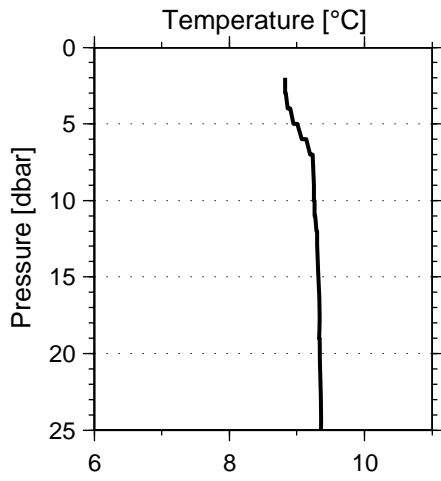
Aysen September 2009
Station G1 Cast 14



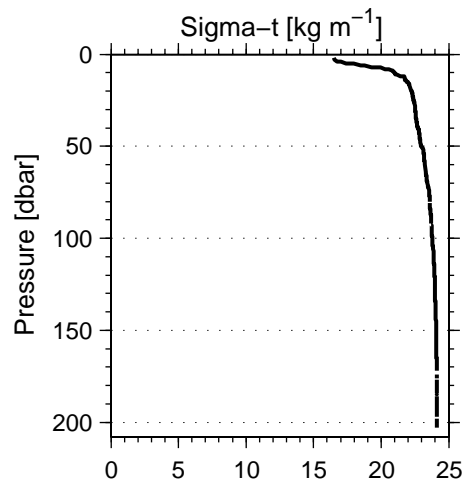
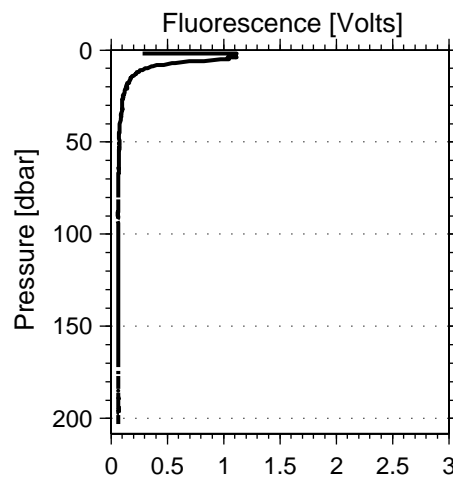
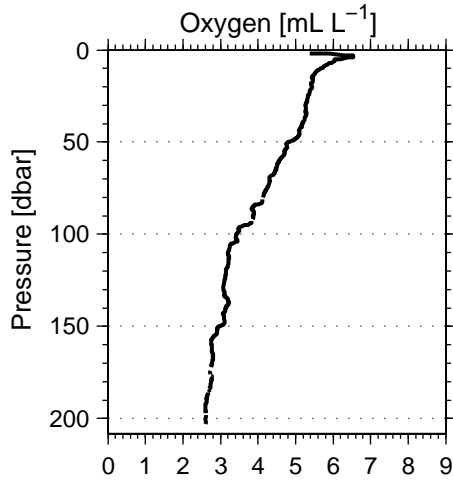
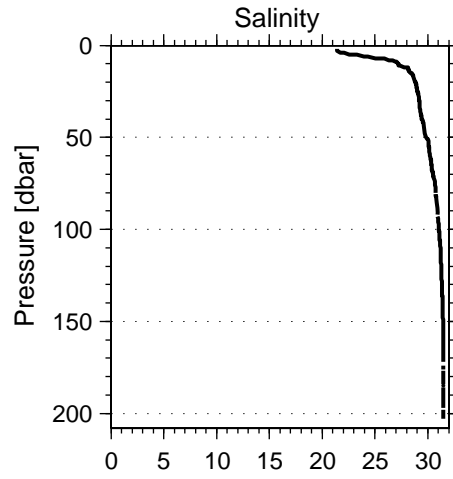
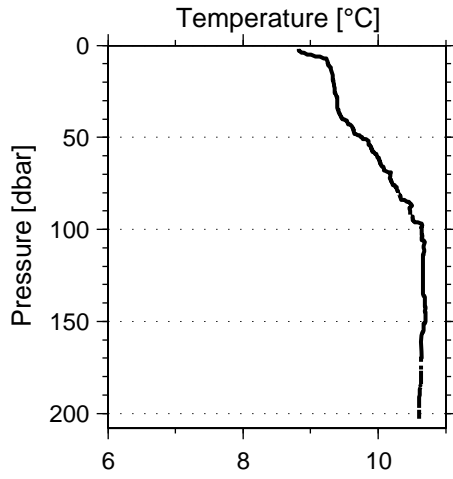
CRUISE	: Aysen September 2009	STATION	: GC	CAST	: 15
DATE	: 2009-09-24	LAT	: 45°18.584	Z-CTD	: 202.5 m
TIME	: 16:47	LON	: 73°08.047	DEPTH	: 340 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	8.828	21.405	16.519	5.884	1.114	-
3.0	8.834	21.450	16.552	6.539	1.071	-
4.0	8.898	22.067	17.025	6.406	1.036	-
6.0	9.136	24.331	18.759	6.021	0.697	-
8.0	9.247	26.694	20.588	5.799	0.404	-
10.0	9.259	27.223	20.999	5.665	0.305	-
12.0	9.303	28.122	21.694	5.532	0.230	-
14.0	9.309	28.299	21.831	5.450	0.191	-
16.0	9.327	28.608	22.069	5.464	0.171	-
18.0	9.332	28.706	22.145	5.413	0.146	-
20.0	9.338	28.859	22.264	5.447	0.142	-
22.0	9.351	28.946	22.329	5.381	0.122	-
24.0	9.356	28.992	22.365	5.352	0.114	-
26.0	9.367	29.108	22.454	5.319	0.107	-
28.0	9.390	29.181	22.507	5.297	0.098	-
30.0	9.397	29.213	22.531	5.261	0.100	-
35.0	9.414	29.288	22.587	5.291	0.090	-
40.0	9.498	29.498	22.738	5.172	0.079	-
45.0	9.627	29.682	22.862	5.097	0.074	-
50.0	9.760	29.867	22.985	4.794	0.074	-
60.0	9.980	30.237	23.238	4.563	0.072	-
70.0	10.179	30.532	23.436	4.307	0.065	-
80.0	-	-	-	-	-	-
90.0	10.471	30.926	23.695	3.866	0.063	-
100.0	10.648	31.084	23.788	3.424	0.064	-
125.0	10.665	31.327	23.974	3.111	0.064	-
150.0	10.697	31.459	24.072	2.961	0.065	-
175.0	10.632	31.489	24.106	2.717	0.066	-
200.0	10.607	31.502	24.121	2.597	0.068	-
202.5	10.607	31.505	24.122	2.604	0.067	-

Aysen September 2009
Station GC Cast 15



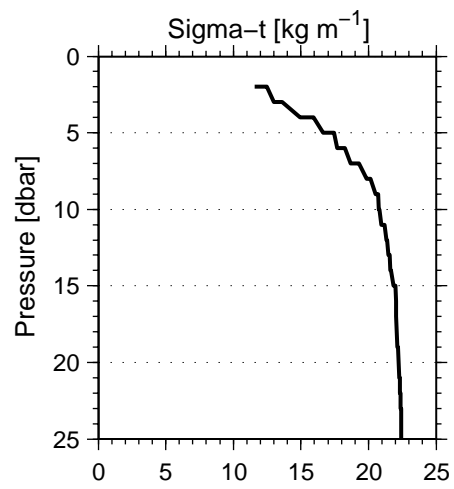
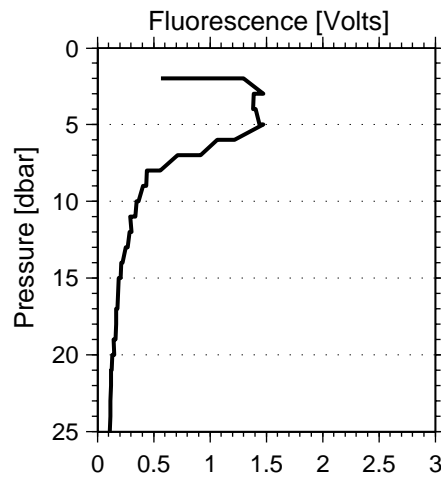
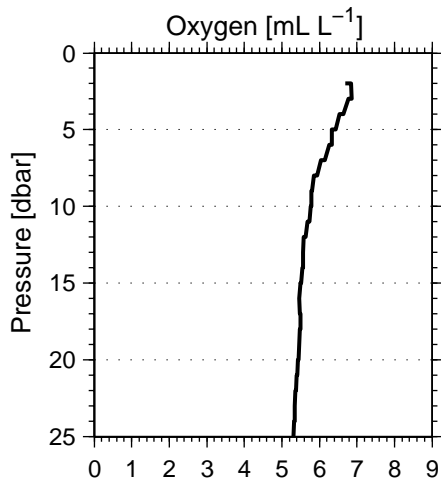
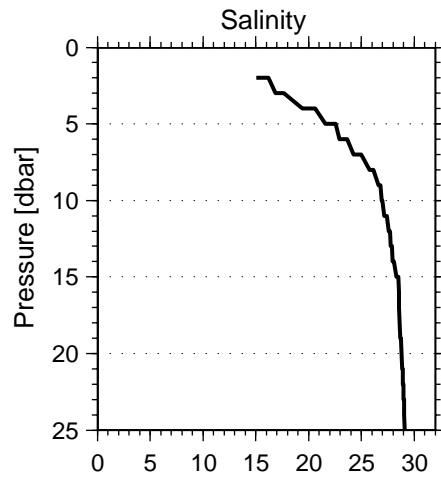
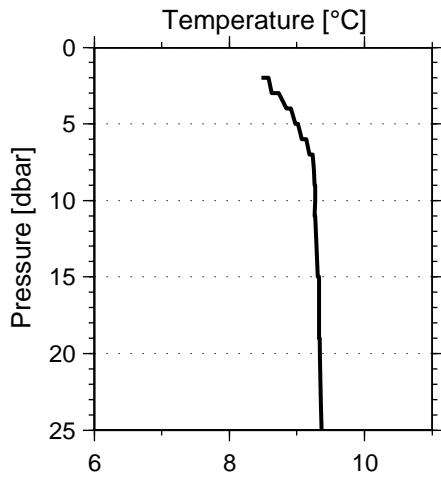
Aysen September 2009
Station GC Cast 15



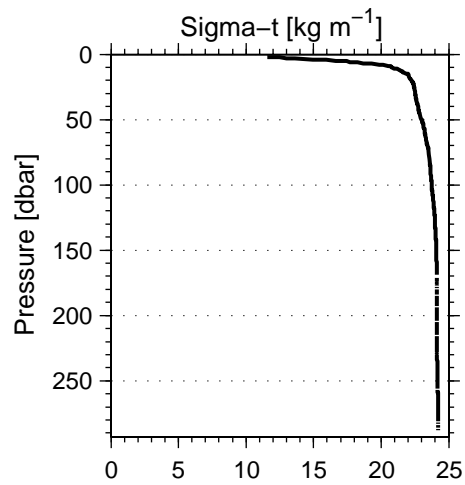
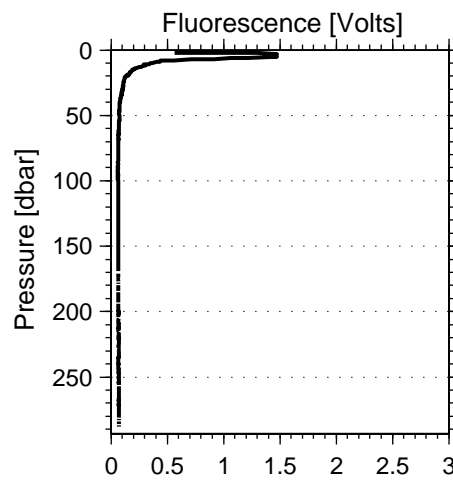
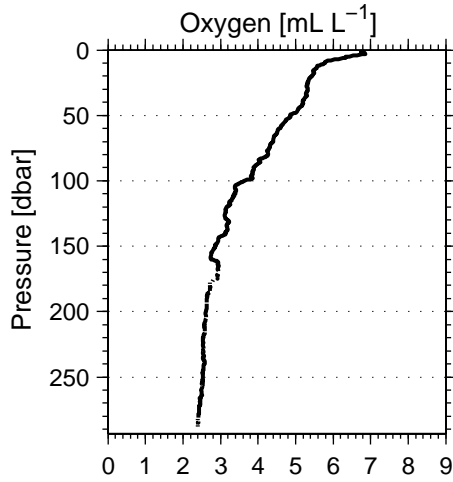
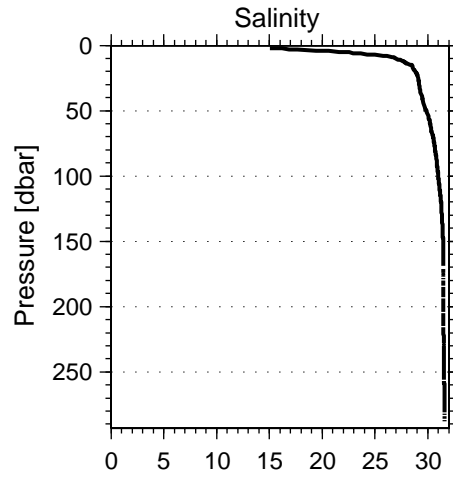
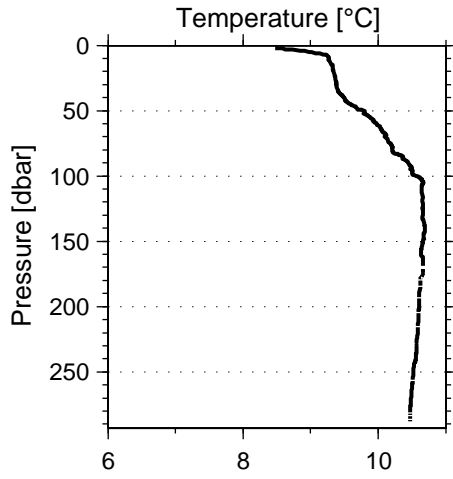
CRUISE	: Aysen September 2009	STATION	: G2	CAST	: 16
DATE	: 2009-09-24	LAT	: 45°18.295	Z-CTD	: 287.5 m
TIME	: 18:25	LON	: 73°07.682	DEPTH	: -- m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	8.576	16.208	12.494	6.851	1.296	-
3.0	8.733	17.660	13.608	6.771	1.387	-
4.0	8.911	20.654	15.922	6.537	1.404	-
6.0	9.139	23.685	18.255	6.260	1.063	-
8.0	9.249	26.148	20.161	5.855	0.441	-
10.0	9.273	26.995	20.818	5.776	0.349	-
12.0	9.284	27.731	21.391	5.586	0.289	-
14.0	9.301	28.100	21.677	5.548	0.215	-
16.0	9.330	28.579	22.047	5.456	0.186	-
18.0	9.329	28.638	22.093	5.473	0.169	-
20.0	9.342	28.837	22.246	5.430	0.136	-
22.0	9.349	28.991	22.365	5.356	0.120	-
24.0	9.364	29.084	22.436	5.331	0.110	-
26.0	9.369	29.110	22.455	5.320	0.112	-
28.0	9.381	29.172	22.502	5.303	0.107	-
30.0	9.380	29.204	22.527	5.325	0.101	-
35.0	9.410	29.307	22.602	5.298	0.092	-
40.0	9.502	29.509	22.746	5.196	0.079	-
45.0	9.595	29.635	22.830	5.072	0.074	-
50.0	9.798	29.911	23.013	4.862	0.075	-
60.0	9.983	30.244	23.244	4.568	0.069	-
70.0	10.097	30.516	23.437	4.388	0.065	-
80.0	10.213	30.714	23.573	4.271	0.065	-
90.0	10.449	30.881	23.663	3.885	0.063	-
100.0	10.588	31.009	23.740	3.618	0.064	-
125.0	10.661	31.313	23.964	3.121	0.064	-
150.0	10.662	31.468	24.085	2.863	0.066	-
175.0	10.659	31.500	24.110	2.918	0.065	-
200.0	10.605	31.506	24.124	2.609	0.067	-
225.0	10.572	31.523	24.143	2.533	0.068	-
250.0	10.520	31.567	24.186	2.528	0.068	-
275.0	10.480	31.594	24.214	2.425	0.070	-
287.5	10.473	31.599	24.218	2.401	0.070	-

Aysen September 2009
Station G2 Cast 16



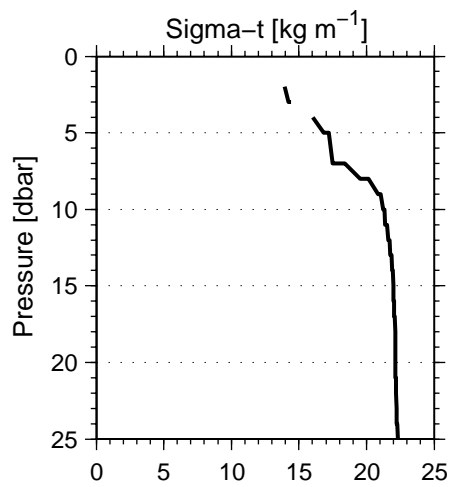
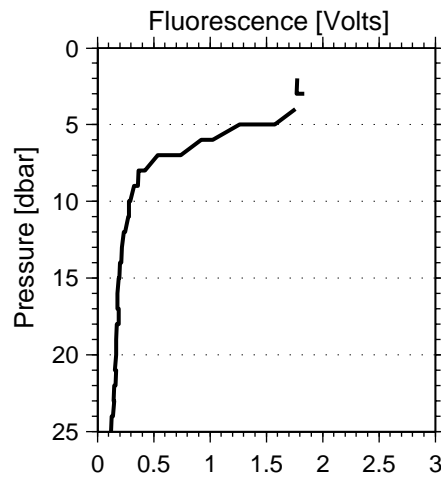
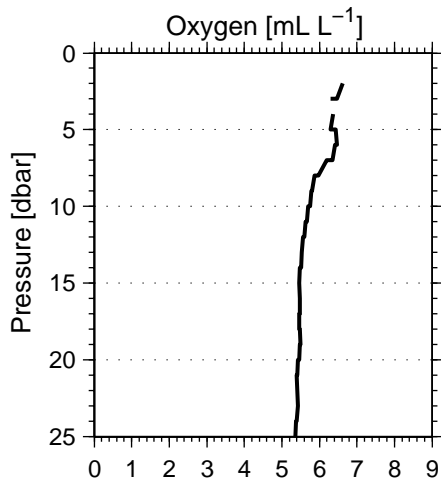
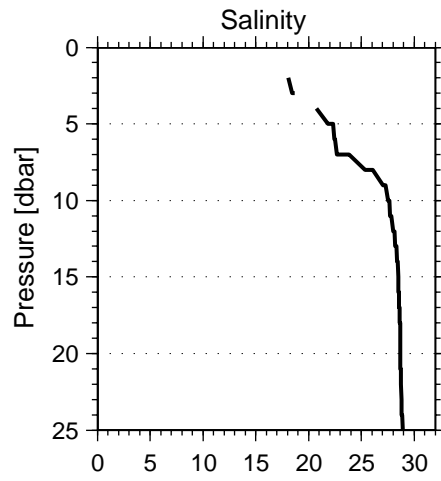
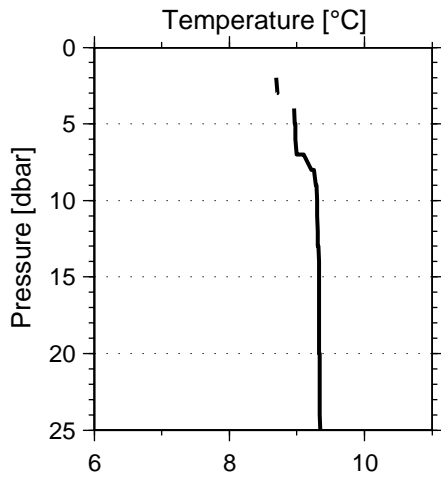
Aysen September 2009
Station G2 Cast 16



CRUISE	: Aysen September 2009	STATION	: GN	CAST	: 17
DATE	: 2009-09-24	LAT	: 45°18.101	Z-CTD	: 251.0 m
TIME	: 19:46	LON	: 73°07.196	DEPTH	: 330 m

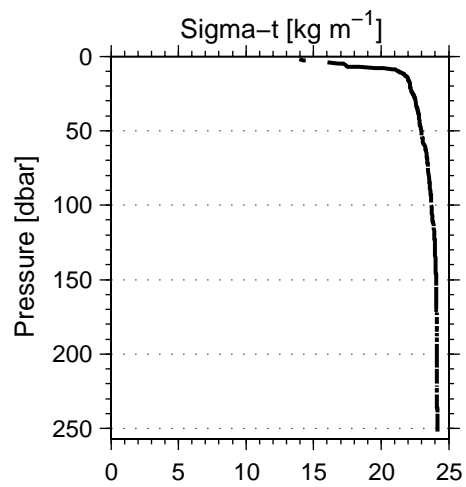
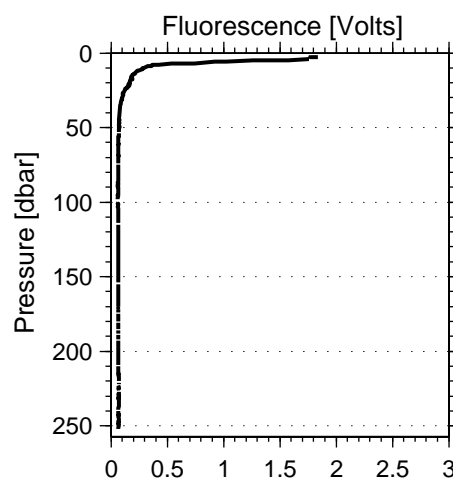
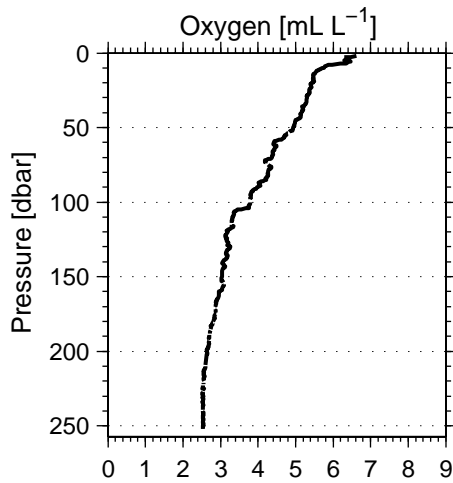
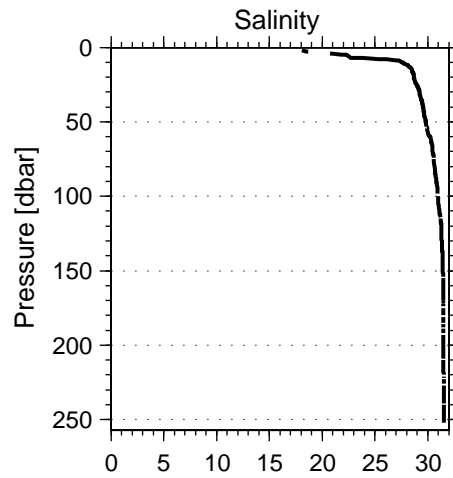
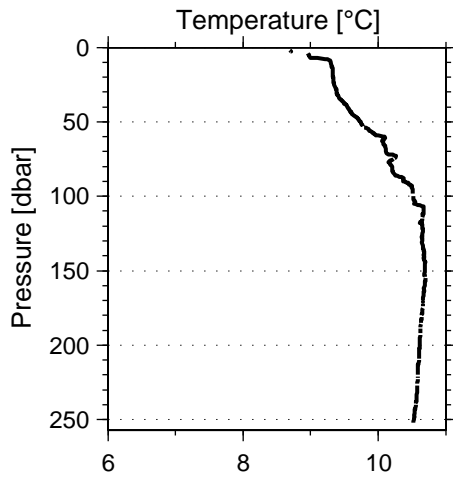
Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	8.691	18.110	13.964	6.617	1.777	-
3.0	8.704	18.671	14.400	6.298	1.839	-
4.0	8.962	20.787	16.019	6.363	1.761	-
6.0	8.979	22.526	17.373	6.411	0.921	-
8.0	9.254	26.112	20.132	5.870	0.368	-
10.0	9.303	27.656	21.330	5.706	0.282	-
12.0	9.308	28.133	21.701	5.570	0.237	-
14.0	9.327	28.474	21.965	5.479	0.199	-
16.0	9.326	28.547	22.022	5.480	0.178	-
18.0	9.332	28.669	22.116	5.482	0.172	-
20.0	9.333	28.684	22.128	5.435	0.166	-
22.0	9.341	28.782	22.203	5.420	0.153	-
24.0	9.343	28.873	22.274	5.374	0.128	-
26.0	9.358	29.041	22.402	5.377	0.116	-
28.0	9.382	29.176	22.504	5.317	0.109	-
30.0	9.387	29.236	22.550	5.306	0.098	-
35.0	9.452	29.421	22.685	5.240	0.085	-
40.0	9.546	29.578	22.793	5.148	0.075	-
45.0	9.626	29.670	22.853	4.999	0.074	-
50.0	9.745	29.850	22.974	4.939	0.072	-
60.0	10.092	30.256	23.235	4.420	0.067	-
70.0	10.115	30.481	23.407	4.375	0.065	-
80.0	10.212	30.662	23.532	4.267	0.064	-
90.0	10.394	30.835	23.637	3.972	0.063	-
100.0	10.519	30.970	23.721	3.799	0.063	-
125.0	10.654	31.315	23.967	3.165	0.064	-
150.0	10.688	31.450	24.066	3.037	0.064	-
175.0	10.661	31.493	24.105	2.872	0.066	-
200.0	10.612	31.504	24.121	2.636	0.067	-
225.0	10.580	31.518	24.137	2.572	0.067	-
250.0	10.532	31.559	24.178	2.535	0.068	-
251.0	10.520	31.565	24.184	2.527	0.068	-

Aysen September 2009
Station GN Cast 17



Aysen September 2009

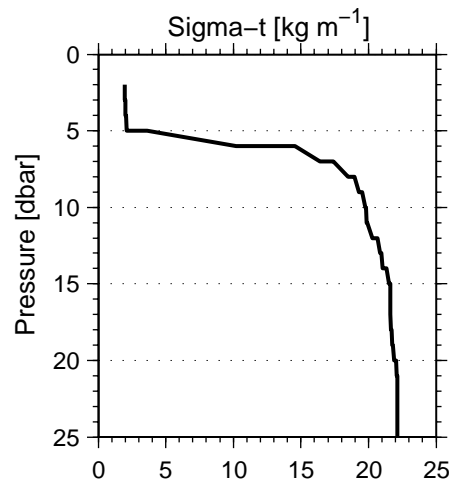
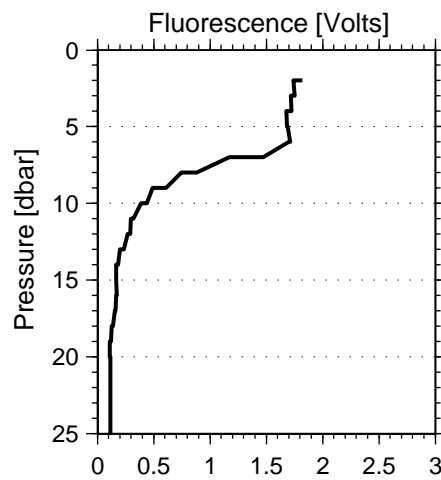
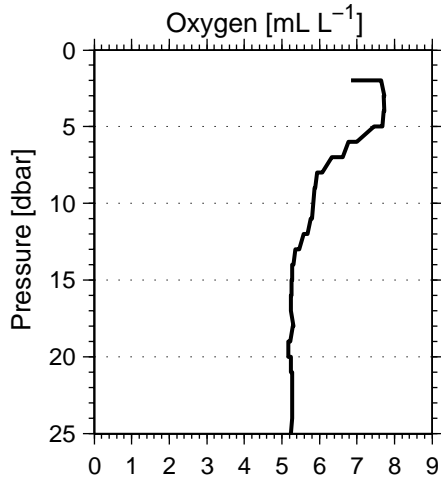
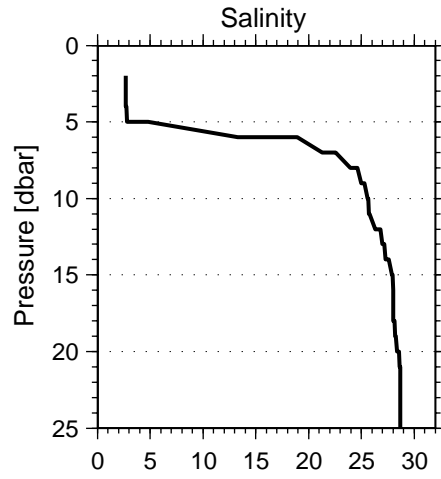
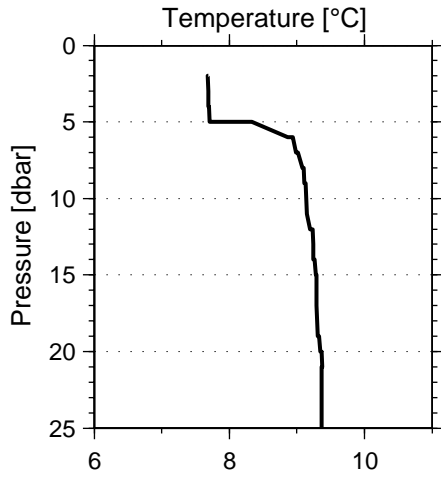
Station GN Cast 17



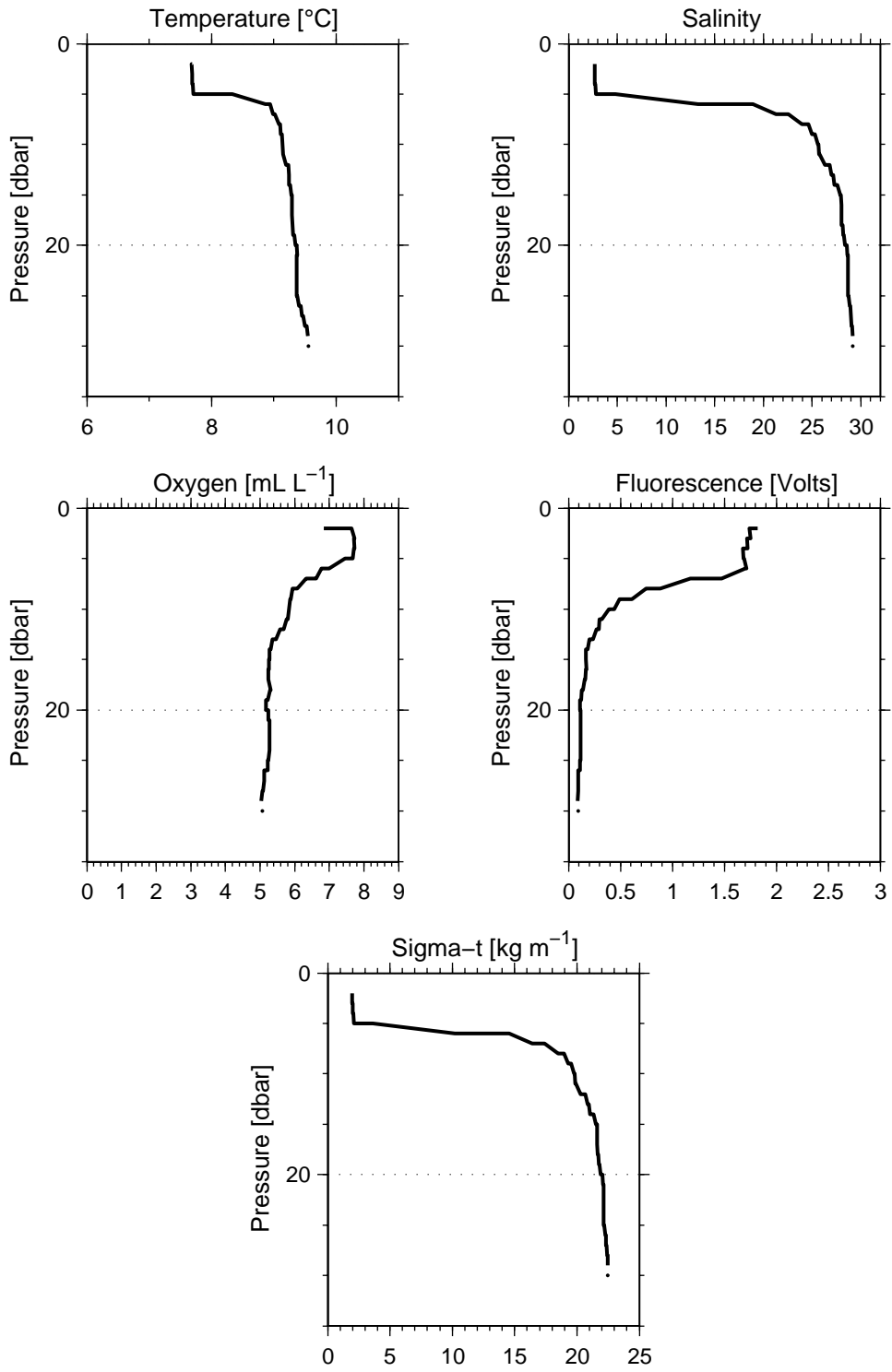
CRUISE : Aysen September 2009	STATION : CN	CAST : 18
DATE : 2009-09-25	LAT : 45°25.692	Z-CTD : 28.5 m
TIME : 21:40	LON : 72°54.675	DEPTH : 50 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.686	2.673	1.981	7.643	1.741	-
3.0	7.687	2.685	1.991	7.708	1.718	-
4.0	7.699	2.769	2.057	7.715	1.677	-
6.0	8.936	18.929	14.574	6.779	1.700	-
8.0	9.105	24.610	18.981	5.943	0.746	-
10.0	9.144	25.694	19.822	5.844	0.387	-
12.0	9.233	26.818	20.686	5.589	0.269	-
14.0	9.261	27.631	21.317	5.280	0.168	-
16.0	9.294	28.022	21.617	5.234	0.165	-
18.0	9.305	28.143	21.710	5.286	0.129	-
20.0	9.368	28.558	22.025	5.245	0.116	-
22.0	9.366	28.702	22.137	5.281	0.116	-
24.0	9.368	28.717	22.149	5.269	0.116	-
26.0	9.431	28.932	22.307	5.123	0.096	-
28.0	9.523	29.135	22.451	5.068	0.092	-
28.5	9.544	29.168	22.473	5.042	0.090	-

Aysen September 2009
Station CN Cast 18



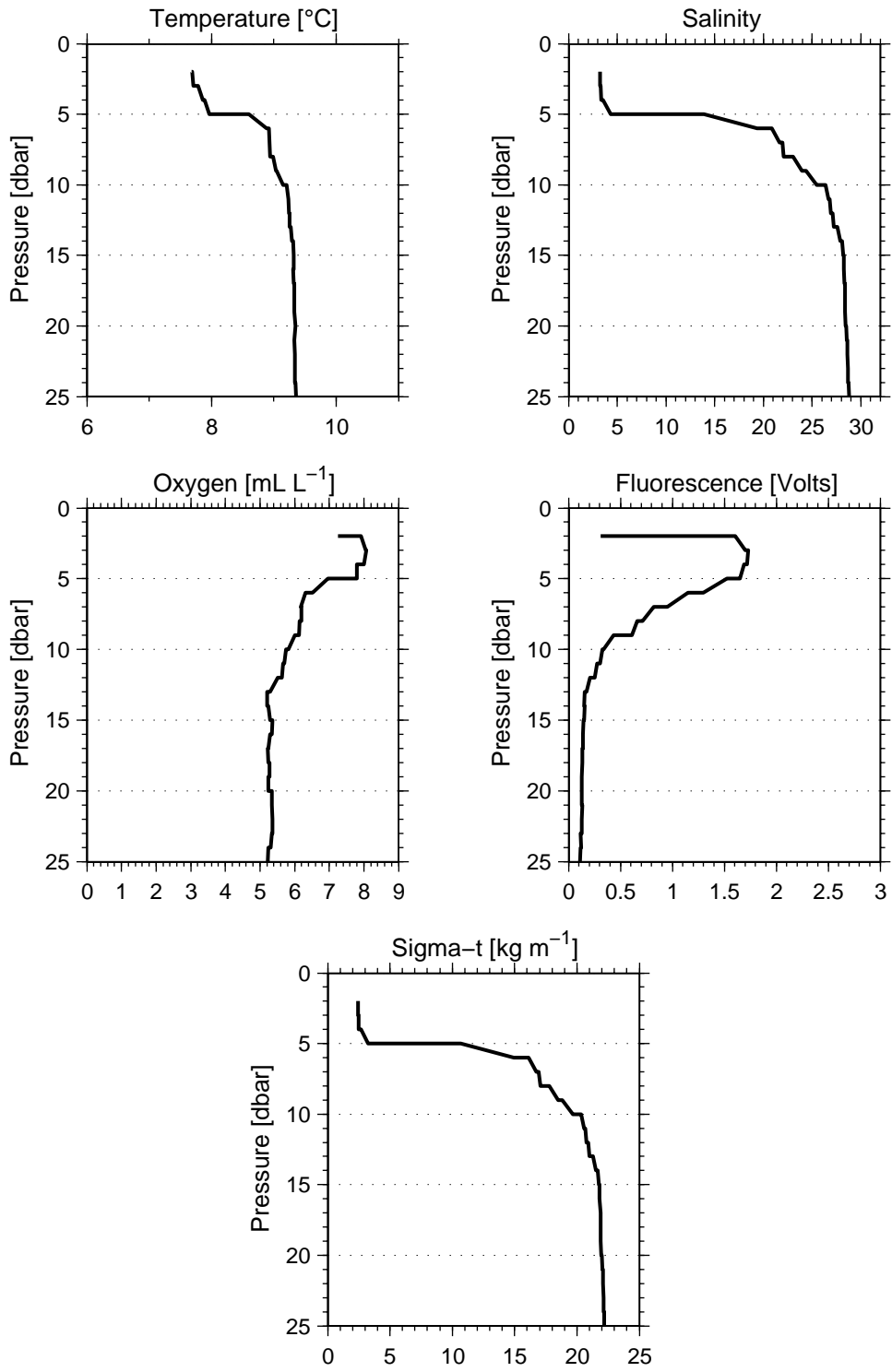
Aysen September 2009
Station CN Cast 18



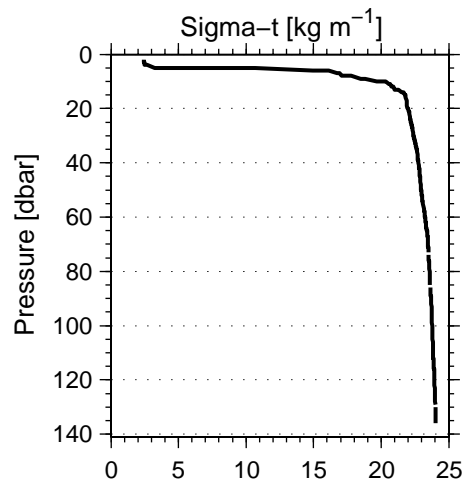
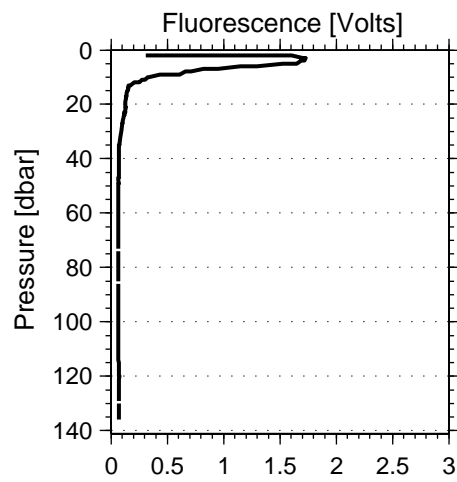
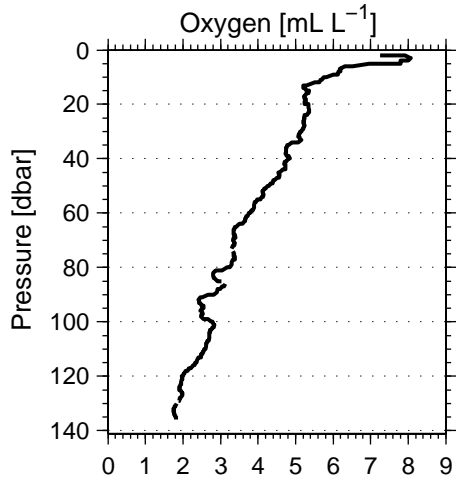
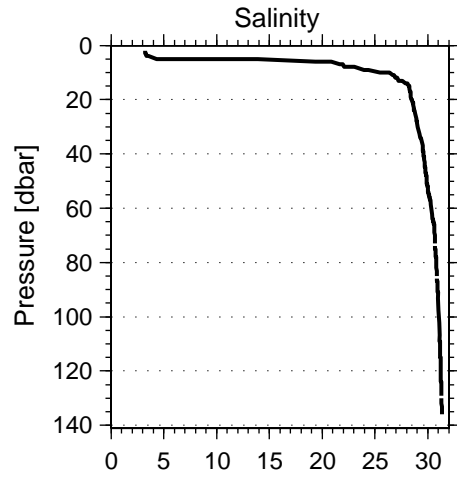
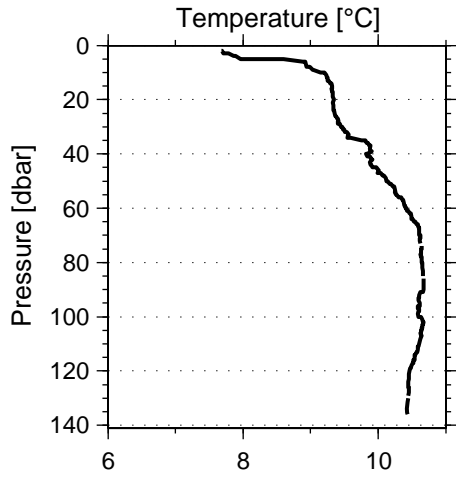
CRUISE	: Aysen September 2009	STATION	: CC	CAST	: 19
DATE	: 2009-09-25	LAT	: 45°26.569	Z-CTD	: 135.0 m
TIME	: 23:55	LON	: 72°54.640	DEPTH	: 182 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.693	3.234	2.423	7.917	1.608	-
3.0	7.788	3.301	2.469	8.072	1.728	-
4.0	7.885	3.542	2.652	7.792	1.688	-
6.0	8.919	20.904	16.116	6.313	1.148	-
8.0	8.987	23.061	17.789	6.145	0.664	-
10.0	9.208	26.392	20.357	5.750	0.326	-
12.0	9.255	27.116	20.916	5.506	0.206	-
14.0	9.306	28.103	21.678	5.242	0.157	-
16.0	9.313	28.293	21.826	5.290	0.140	-
18.0	9.328	28.384	21.894	5.276	0.131	-
20.0	9.348	28.508	21.988	5.337	0.130	-
22.0	9.335	28.650	22.101	5.363	0.129	-
24.0	9.345	28.750	22.177	5.250	0.115	-
26.0	9.378	28.880	22.274	5.206	0.103	-
28.0	9.405	28.980	22.348	5.223	0.097	-
30.0	9.475	29.077	22.413	5.122	0.093	-
35.0	9.816	29.437	22.641	4.786	0.073	-
40.0	9.818	29.594	22.763	4.812	0.072	-
45.0	9.976	29.772	22.877	4.539	0.070	-
50.0	10.145	29.921	22.966	4.250	0.067	-
60.0	10.416	30.341	23.249	3.759	0.066	-
70.0	10.625	30.688	23.484	3.346	0.065	-
80.0	10.651	30.829	23.589	3.172	0.065	-
90.0	10.675	30.959	23.686	2.659	0.067	-
100.0	10.637	31.074	23.782	2.785	0.066	-
125.0	10.445	31.283	23.977	1.936	0.071	-
135.0	10.429	31.341	24.025	1.812	0.072	-

Aysen September 2009
Station CC Cast 19



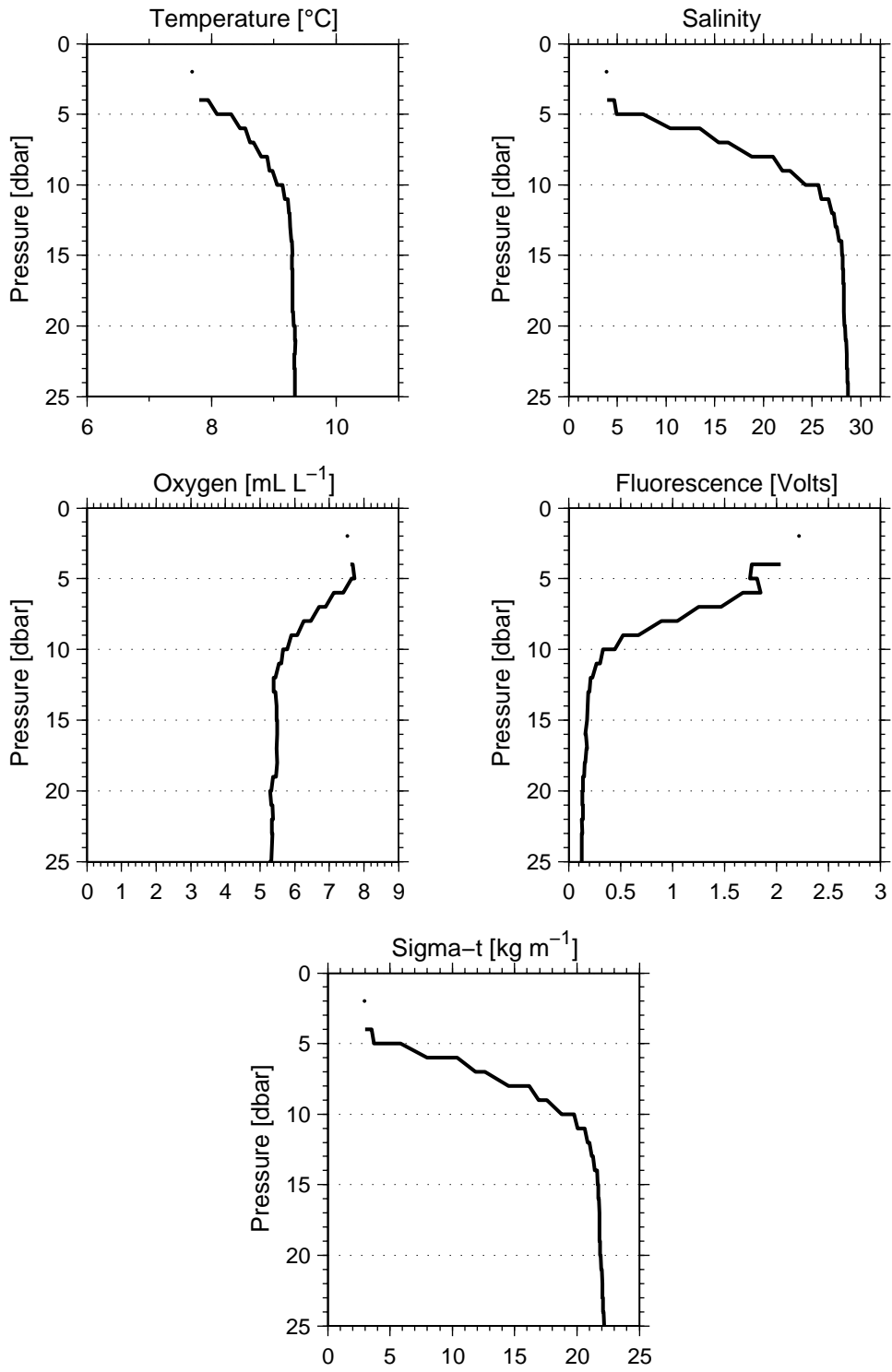
Aysen September 2009
Station CC Cast 19



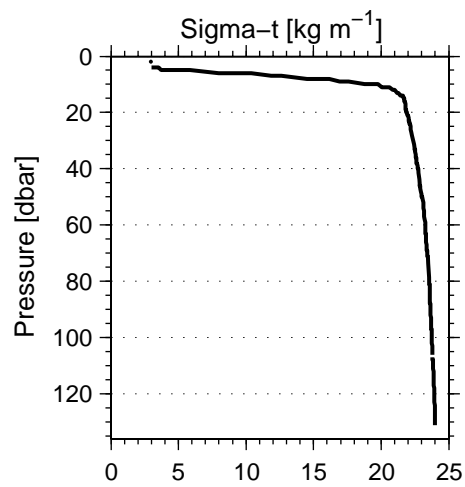
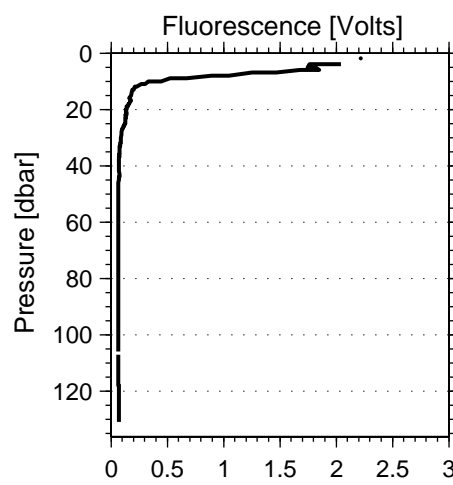
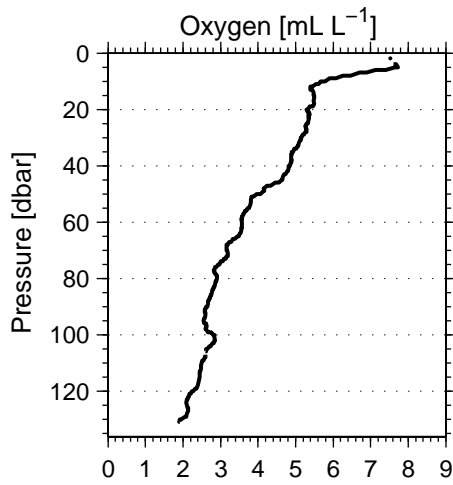
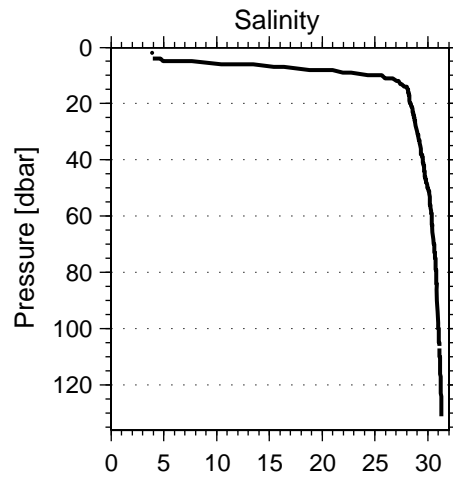
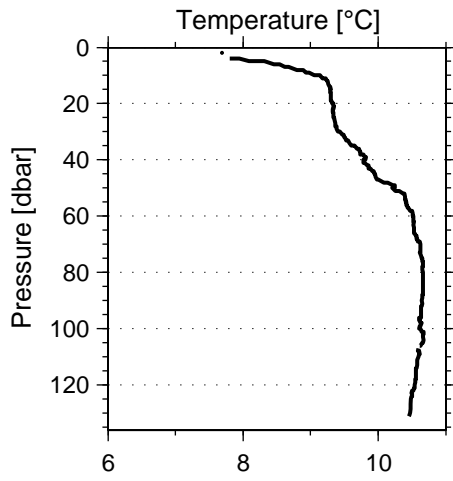
CRUISE	: Aysen September 2009	STATION	: CS	CAST	: 20
DATE	: 2009-09-26	LAT	: 45°27.390	Z-CTD	: 130.5 m
TIME	: 00:35	LON	: 72°54.845	DEPTH	: 165 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	-	-	-	-	-	-
4.0	7.944	4.689	3.549	7.681	1.765	-
6.0	8.547	13.497	10.382	7.126	1.680	-
8.0	8.895	20.970	16.170	6.259	0.895	-
10.0	9.138	25.639	19.779	5.675	0.334	-
12.0	9.249	27.248	21.020	5.389	0.216	-
14.0	9.293	28.000	21.600	5.487	0.186	-
16.0	9.296	28.196	21.752	5.493	0.168	-
18.0	9.300	28.278	21.816	5.494	0.157	-
20.0	9.335	28.415	21.918	5.298	0.135	-
22.0	9.332	28.569	22.038	5.351	0.130	-
24.0	9.337	28.685	22.128	5.340	0.125	-
26.0	9.361	28.788	22.205	5.271	0.109	-
28.0	9.381	28.897	22.287	5.266	0.095	-
30.0	9.433	29.028	22.381	5.147	0.087	-
35.0	9.646	29.313	22.571	4.908	0.077	-
40.0	9.780	29.551	22.736	4.817	0.071	-
45.0	9.958	29.739	22.854	4.626	0.069	-
50.0	10.213	30.032	23.041	3.965	0.066	-
60.0	10.517	30.374	23.258	3.570	0.066	-
70.0	10.624	30.608	23.422	3.186	0.066	-
80.0	10.661	30.813	23.575	2.899	0.066	-
90.0	10.644	30.898	23.644	2.623	0.067	-
100.0	10.622	31.037	23.756	2.831	0.066	-
125.0	10.484	31.280	23.968	2.112	0.070	-
130.5	10.460	31.296	23.985	1.906	0.071	-

Aysen September 2009
Station CS Cast 20



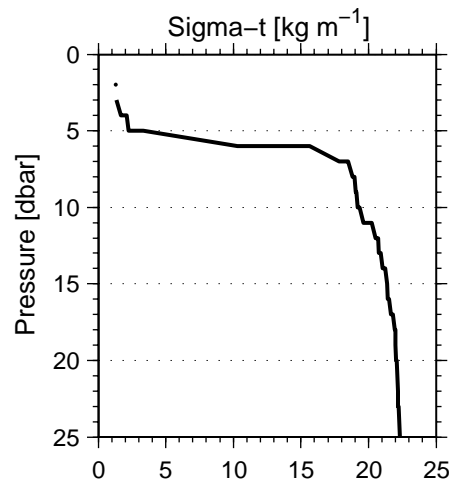
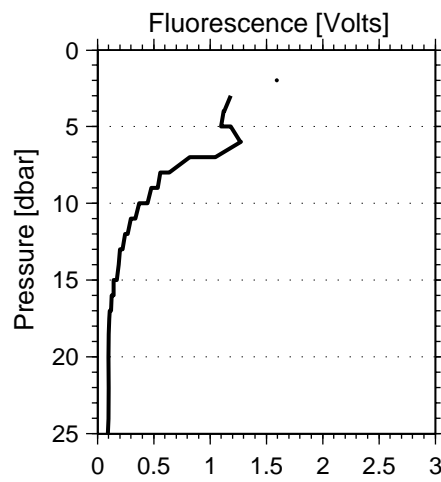
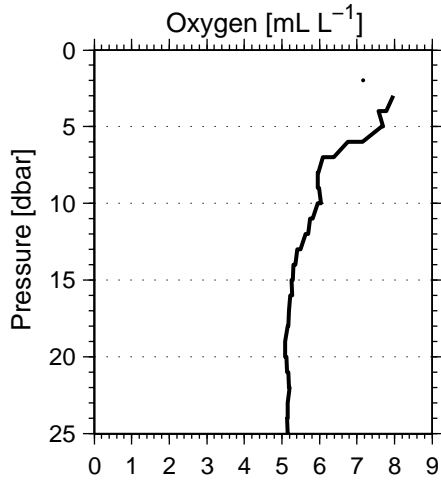
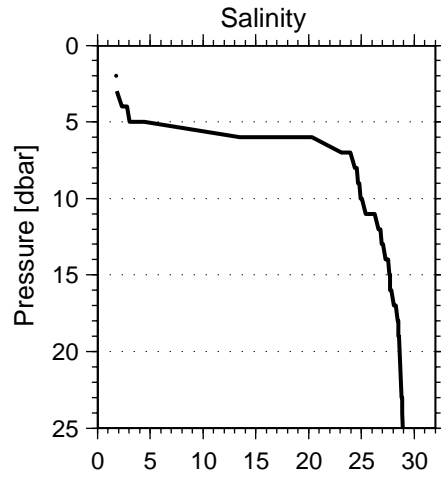
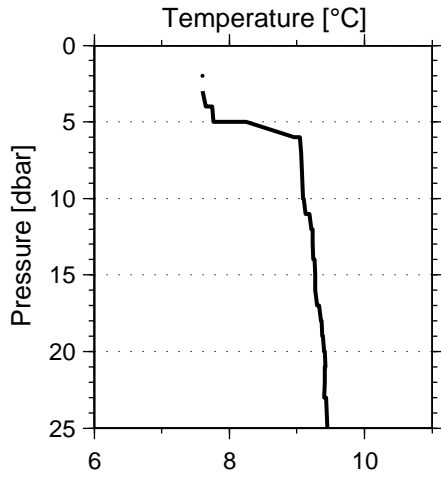
Aysen September 2009
Station CS Cast 20



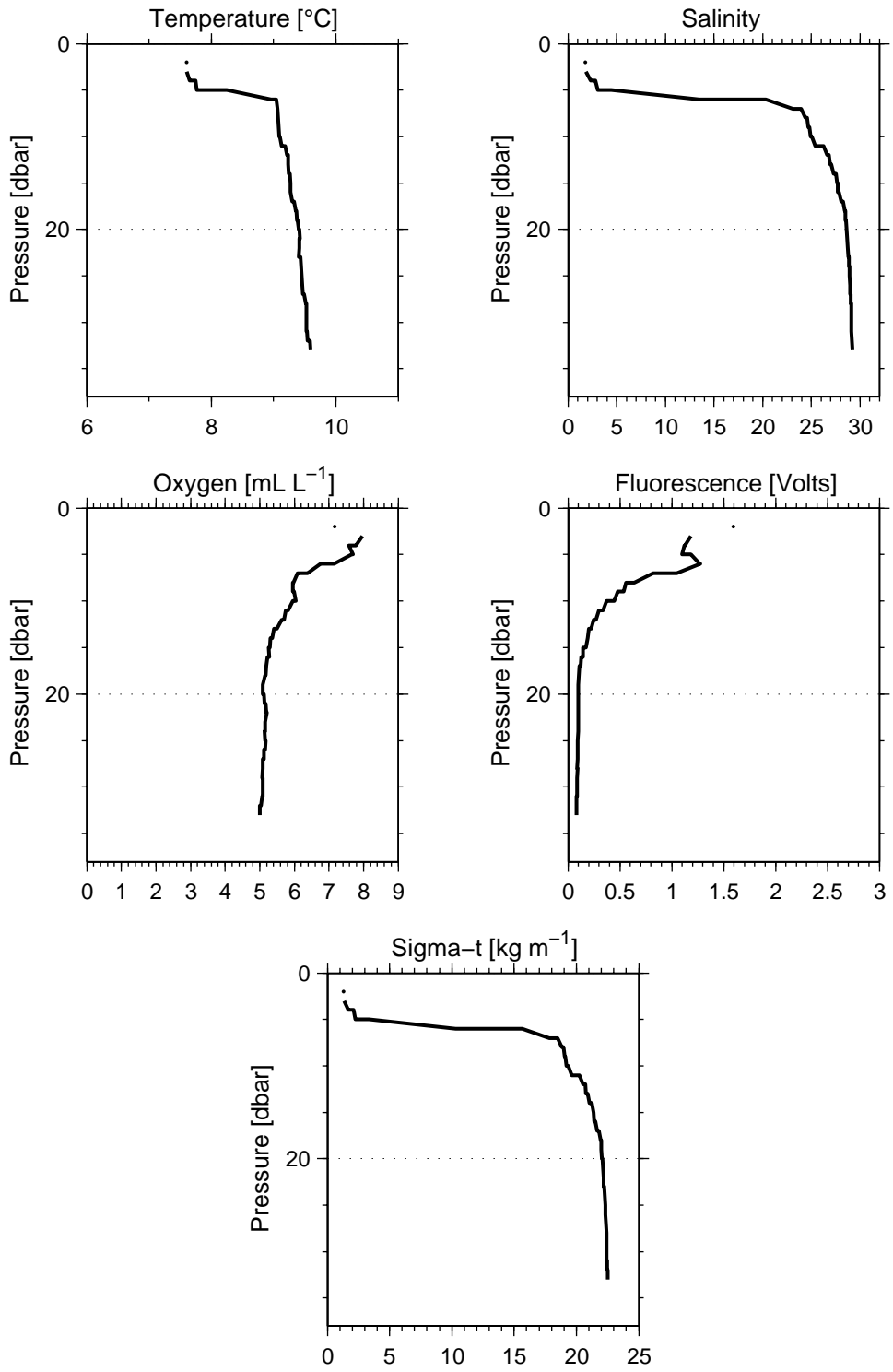
CRUISE	: Aysen September 2009	STATION	: CN	CAST	: 21
DATE	: 2009-09-26	LAT	: 45°25.692	Z-CTD	: 32.0 m
TIME	: 02:30	LON	: 72°54.675	DEPTH	: 50 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	7.604	1.875	1.357	7.962	1.186	-
4.0	7.743	2.813	2.088	7.580	1.123	-
6.0	9.042	20.320	15.645	6.763	1.274	-
8.0	9.072	24.577	18.961	5.966	0.558	-
10.0	9.099	25.044	19.321	5.953	0.370	-
12.0	9.230	26.833	20.698	5.634	0.246	-
14.0	9.260	27.542	21.247	5.304	0.189	-
16.0	9.276	27.864	21.497	5.224	0.126	-
18.0	9.365	28.493	21.974	5.152	0.103	-
20.0	9.414	28.655	22.093	5.115	0.099	-
22.0	9.412	28.770	22.183	5.201	0.098	-
24.0	9.444	28.915	22.292	5.148	0.097	-
26.0	9.465	28.988	22.345	5.131	0.095	-
28.0	9.523	29.103	22.426	5.081	0.091	-
30.0	9.530	29.117	22.436	5.093	0.089	-
32.0	9.583	29.205	22.496	5.011	0.083	-

Aysen September 2009
Station CN Cast 21



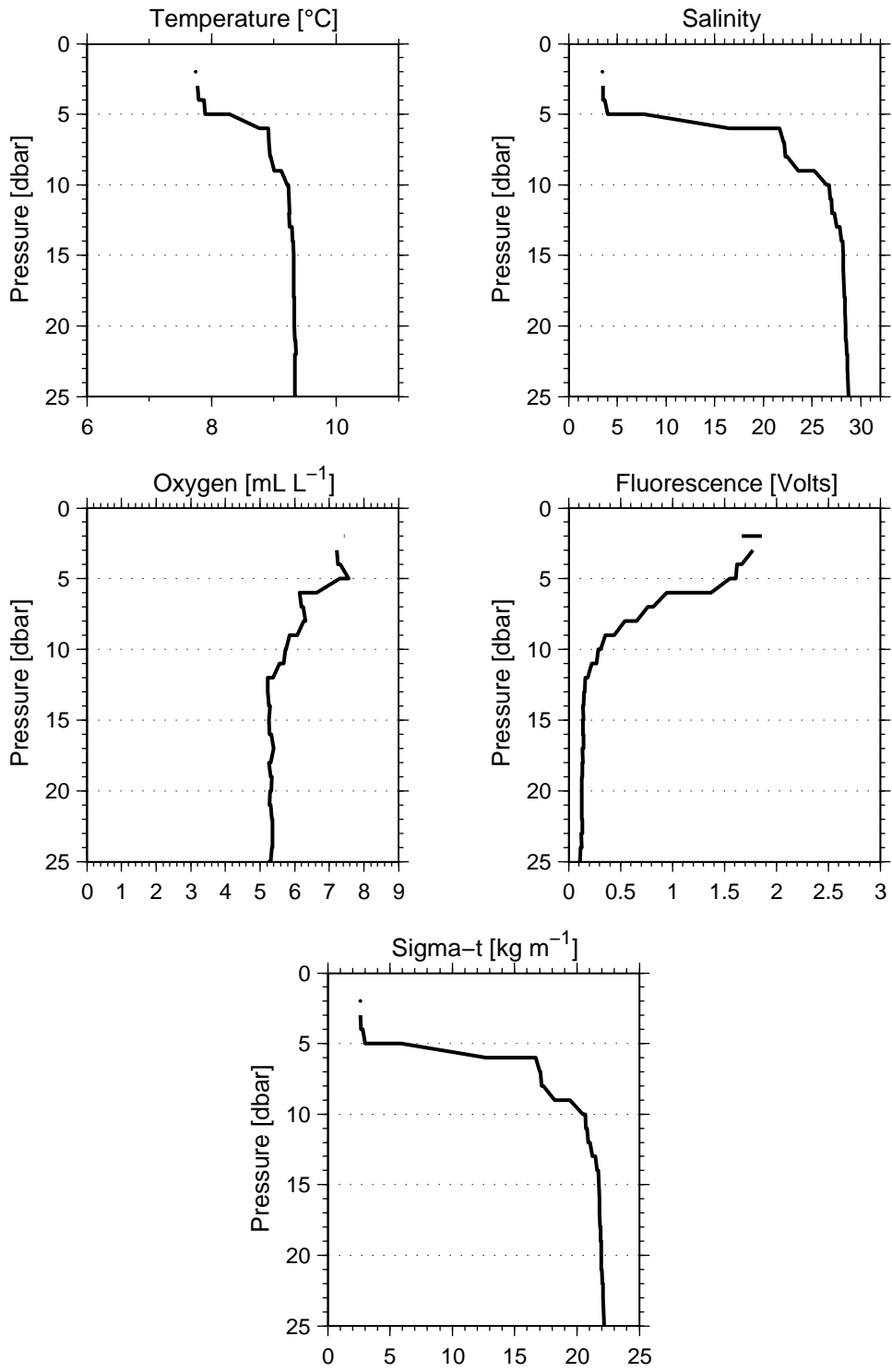
Aysen September 2009
Station CN Cast 21



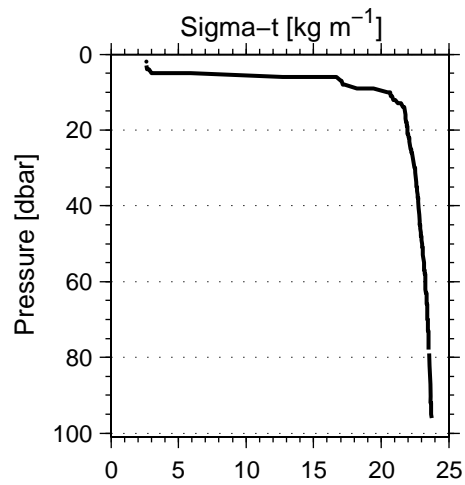
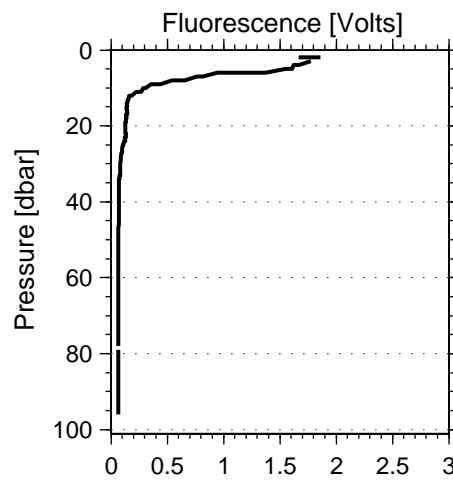
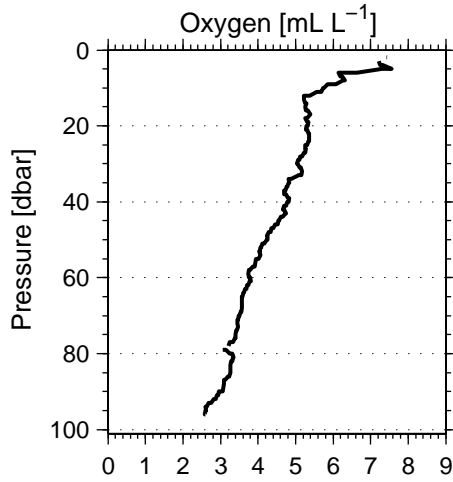
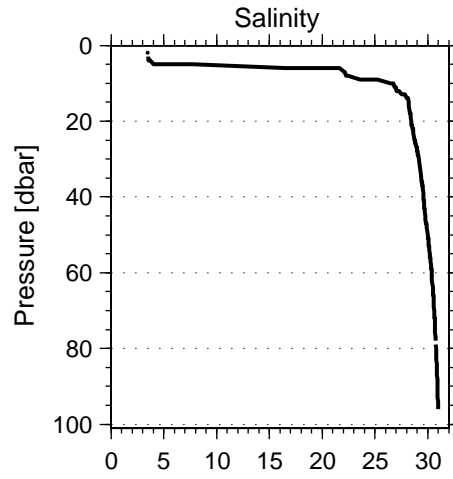
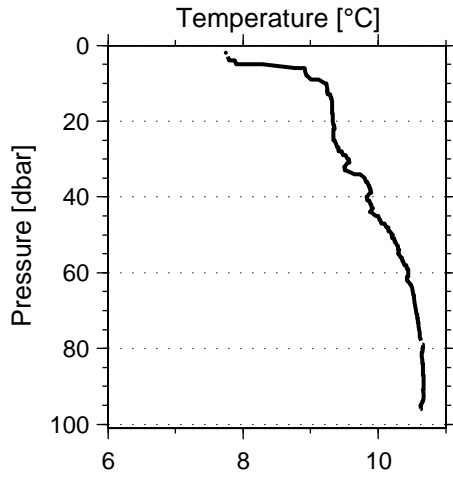
CRUISE	: Aysen September 2009	STATION	: CC	CAST	: 22
DATE	: 2009-09-26	LAT	: 45°26.569	Z-CTD	: 95.5 m
TIME	: 03:10	LON	: 72°54.640	DEPTH	: 182 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.750	3.504	2.631	7.429	1.859	-
3.0	7.772	3.517	2.640	7.220	1.777	-
4.0	7.883	3.747	2.813	7.320	1.619	-
6.0	8.916	21.667	16.711	6.153	0.945	-
8.0	8.954	22.438	17.308	6.271	0.545	-
10.0	9.234	26.772	20.650	5.742	0.289	-
12.0	9.244	27.277	21.043	5.231	0.160	-
14.0	9.312	28.164	21.725	5.292	0.140	-
16.0	9.316	28.242	21.785	5.327	0.146	-
18.0	9.328	28.400	21.907	5.261	0.136	-
20.0	9.333	28.449	21.944	5.286	0.130	-
22.0	9.339	28.612	22.071	5.354	0.131	-
24.0	9.341	28.696	22.136	5.341	0.117	-
26.0	9.372	28.876	22.272	5.269	0.100	-
28.0	9.459	29.036	22.384	5.127	0.088	-
30.0	9.562	29.202	22.497	5.062	0.084	-
35.0	9.802	29.433	22.640	4.819	0.072	-
40.0	9.827	29.602	22.768	4.781	0.071	-
45.0	10.005	29.782	22.880	4.541	0.068	-
50.0	10.200	30.025	23.038	4.228	0.066	-
60.0	10.449	30.373	23.268	3.797	0.065	-
70.0	10.562	30.619	23.441	3.492	0.065	-
80.0	10.666	30.803	23.566	3.318	0.065	-
90.0	10.675	30.919	23.655	2.957	0.065	-
95.5	10.632	30.997	23.723	2.584	0.067	-

Aysen September 2009
Station CC Cast 22



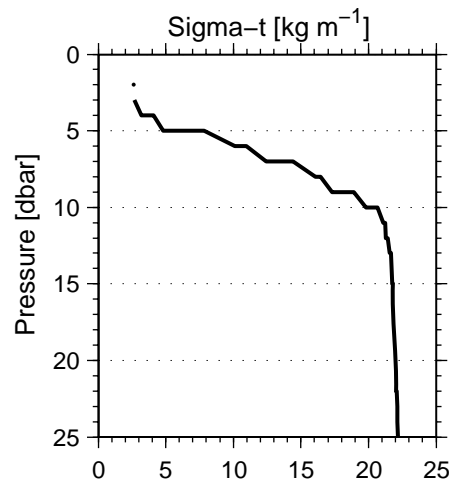
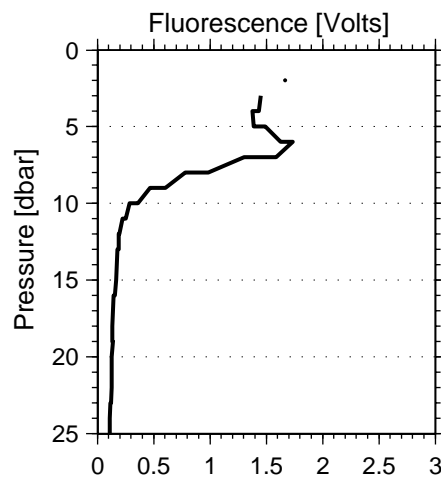
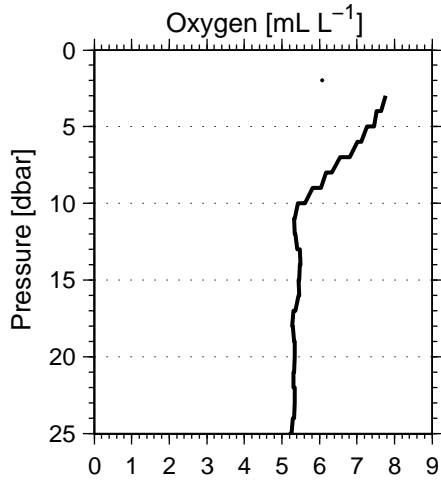
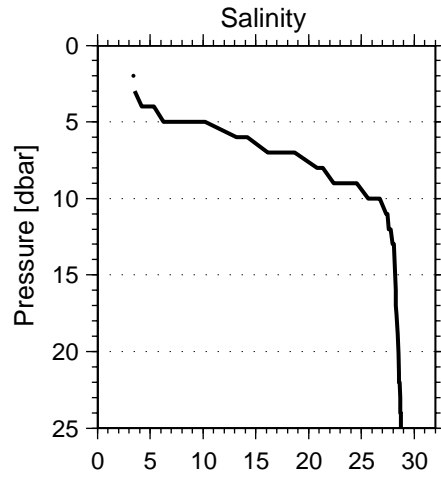
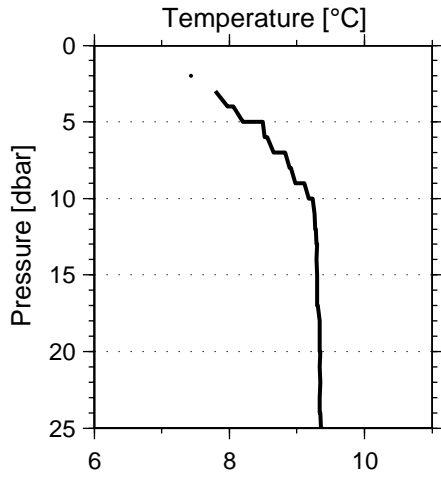
Aysen September 2009
Station CC Cast 22



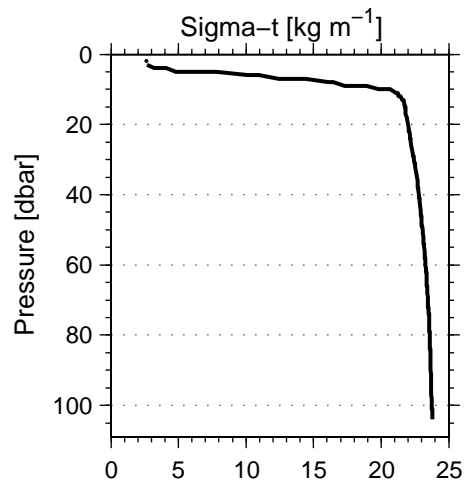
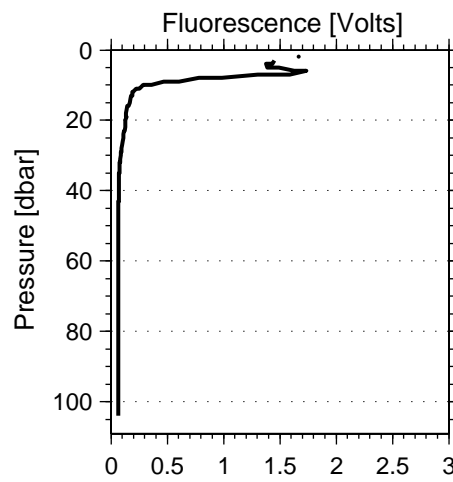
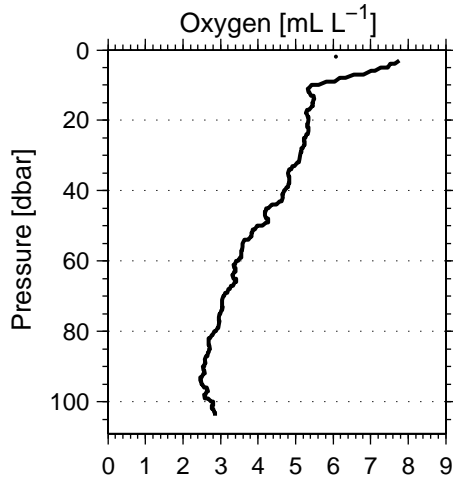
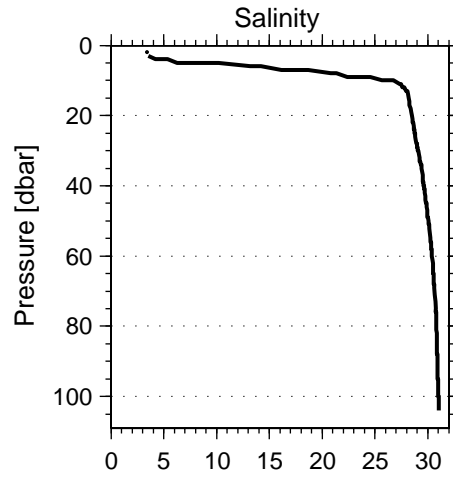
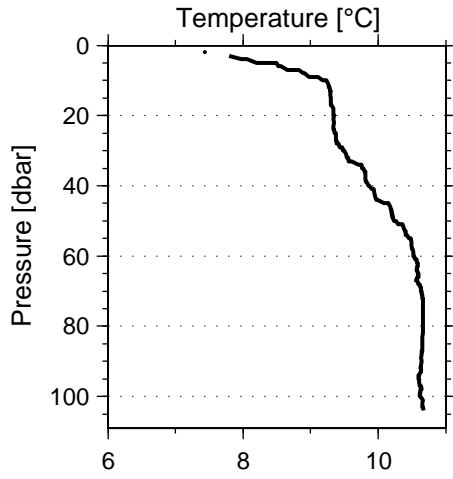
CRUISE	: Aysen September 2009	STATION	: CS	CAST	: 23
DATE	: 2009-09-26	LAT	: 45°27.390	Z-CTD	: 103.0 m
TIME	: 03:47	LON	: 72°54.845	DEPTH	: 165 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	7.799	3.547	2.662	7.768	1.454	-
4.0	8.062	5.374	4.077	7.526	1.379	-
6.0	8.562	14.214	10.940	7.011	1.736	-
8.0	8.911	21.355	16.468	6.180	0.781	-
10.0	9.238	26.772	20.650	5.422	0.289	-
12.0	9.281	27.774	21.425	5.358	0.189	-
14.0	9.295	28.171	21.733	5.478	0.173	-
16.0	9.301	28.255	21.798	5.445	0.145	-
18.0	9.337	28.416	21.918	5.293	0.134	-
20.0	9.350	28.516	21.994	5.347	0.127	-
22.0	9.345	28.635	22.088	5.337	0.125	-
24.0	9.350	28.736	22.166	5.291	0.111	-
26.0	9.378	28.841	22.244	5.244	0.103	-
28.0	9.417	28.980	22.346	5.156	0.096	-
30.0	9.497	29.112	22.437	5.117	0.085	-
35.0	9.782	29.451	22.657	4.804	0.073	-
40.0	9.864	29.637	22.789	4.688	0.070	-
45.0	10.154	29.898	22.946	4.222	0.067	-
50.0	10.263	30.082	23.072	3.984	0.066	-
60.0	10.530	30.413	23.286	3.423	0.066	-
70.0	10.644	30.666	23.463	3.071	0.066	-
80.0	10.668	30.832	23.589	2.834	0.066	-
90.0	10.641	30.935	23.673	2.537	0.067	-
100.0	10.630	31.043	23.759	2.797	0.066	-
103.0	10.665	31.079	23.781	2.856	0.065	-

Aysen September 2009
Station CS Cast 23



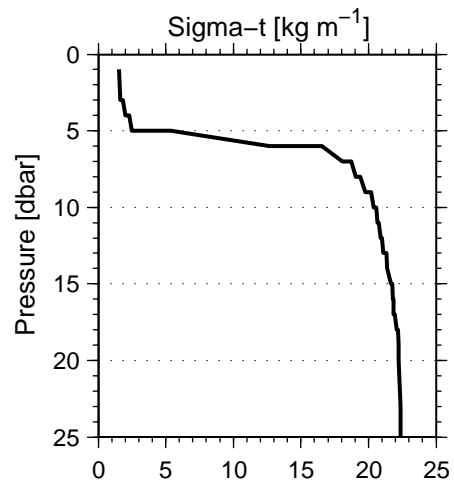
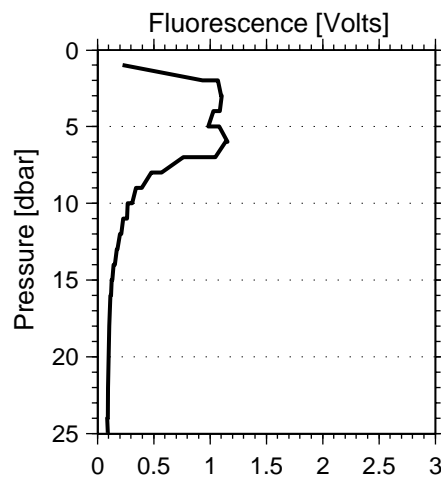
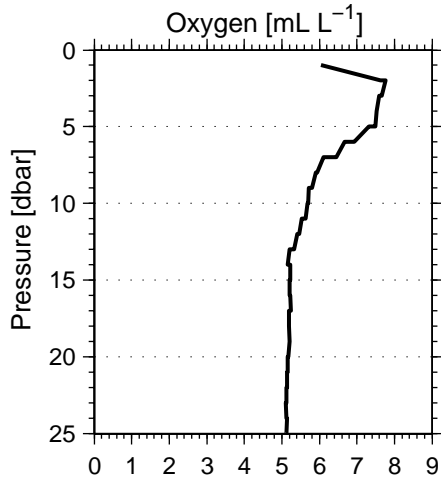
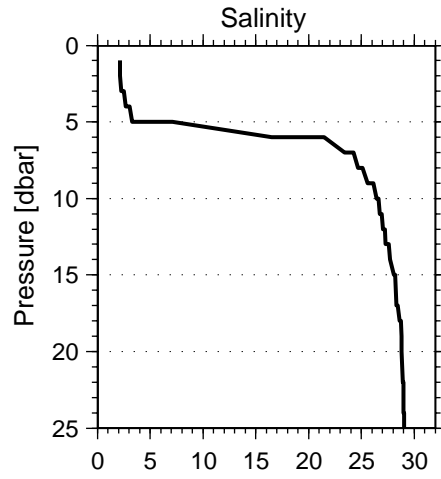
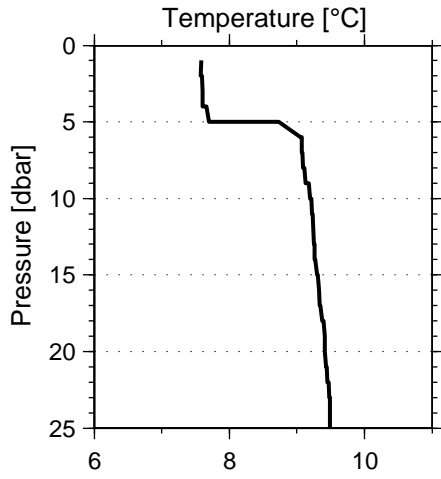
Aysen September 2009
Station CS Cast 23



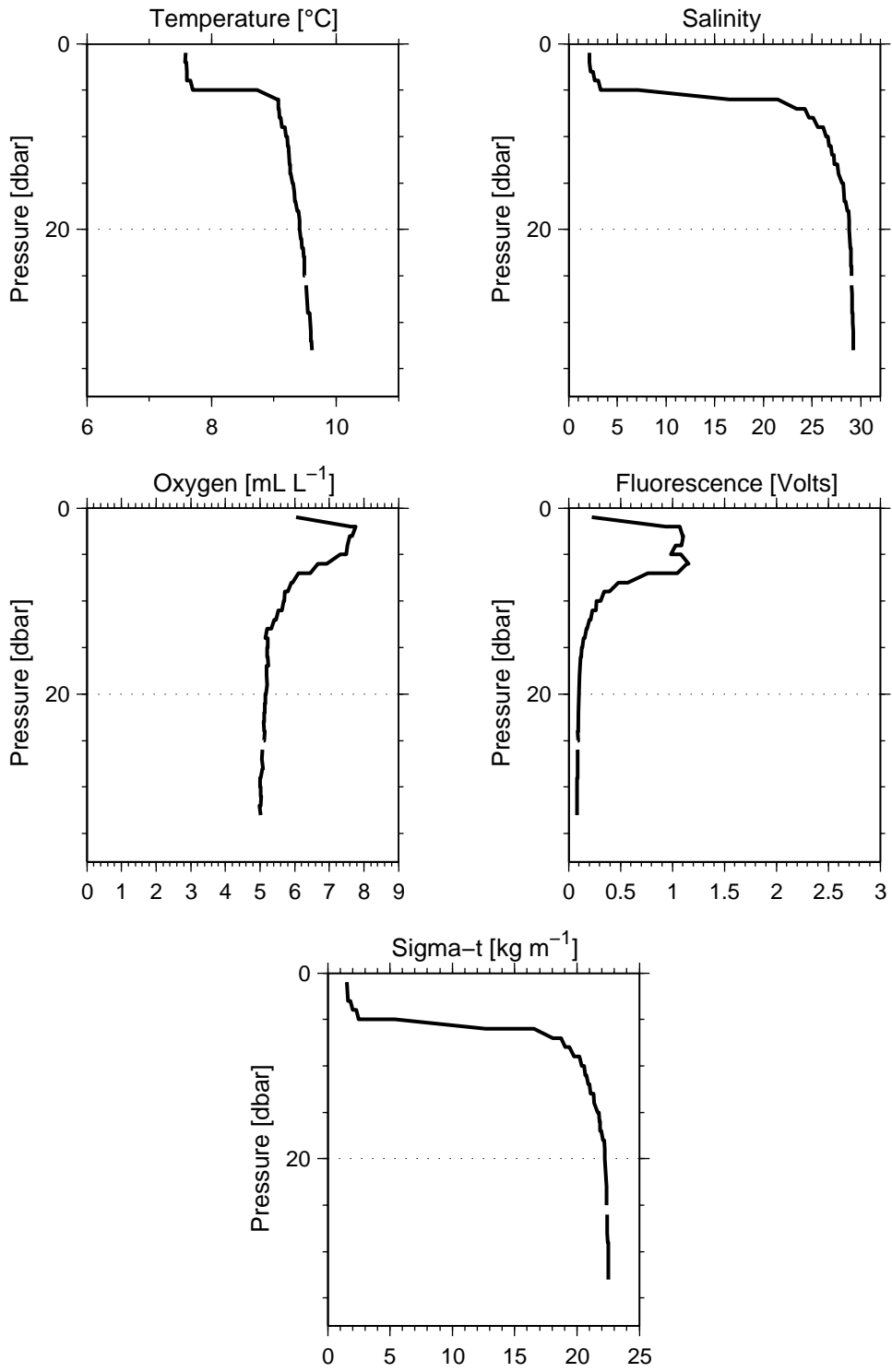
CRUISE	: Aysen September 2009	STATION	: CN	CAST	: 24
DATE	: 2009-09-26	LAT	: 45°25.718	Z-CTD	: 32.0 m
TIME	: 05:30	LON	: 72°54.656	DEPTH	: 50 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	7.584	2.123	1.554	6.047	0.223	-
2.0	7.597	2.149	1.574	7.766	1.071	-
3.0	7.603	2.488	1.841	7.593	1.104	-
4.0	7.659	3.045	2.276	7.531	1.029	-
6.0	9.076	21.489	16.552	6.679	1.141	-
8.0	9.108	25.133	19.390	5.899	0.483	-
10.0	9.217	26.646	20.554	5.687	0.271	-
12.0	9.244	27.237	21.012	5.411	0.202	-
14.0	9.268	27.730	21.393	5.218	0.144	-
16.0	9.328	28.300	21.829	5.233	0.117	-
18.0	9.398	28.758	22.176	5.199	0.106	-
20.0	9.416	28.840	22.237	5.161	0.100	-
22.0	9.474	28.972	22.331	5.123	0.092	-
24.0	9.490	29.039	22.381	5.132	0.090	-
26.0	9.516	29.081	22.410	5.067	0.089	-
28.0	9.536	29.123	22.440	5.071	0.086	-
30.0	9.580	29.210	22.501	5.015	0.084	-
32.0	9.599	29.246	22.526	4.979	0.082	-

Aysen September 2009
Station CN Cast 24



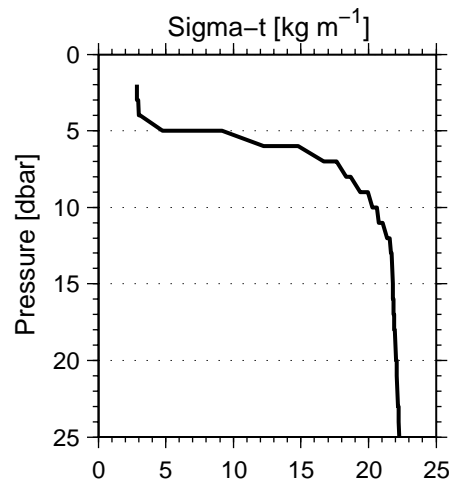
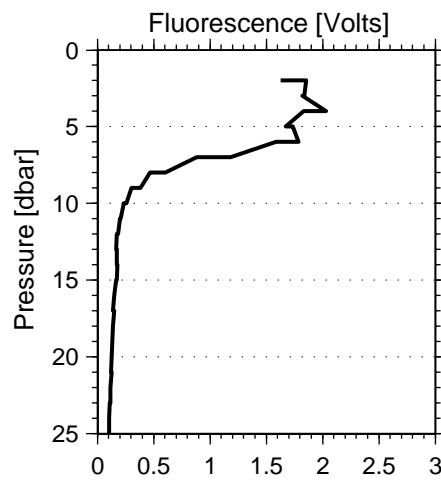
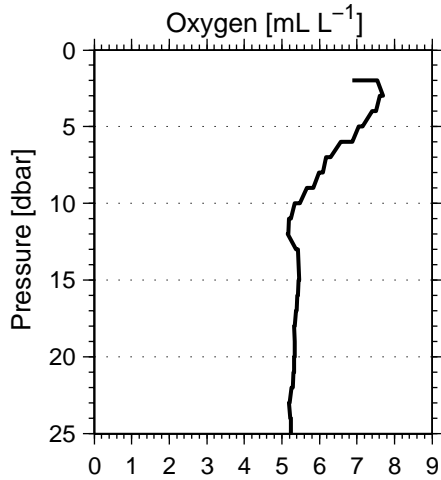
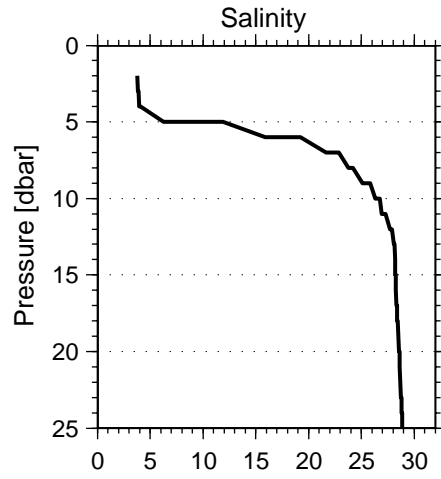
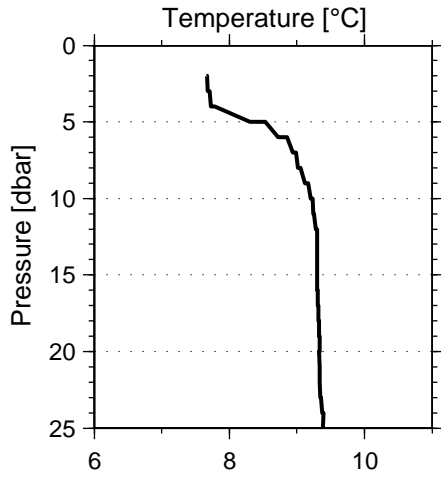
Aysen September 2009
Station CN Cast 24



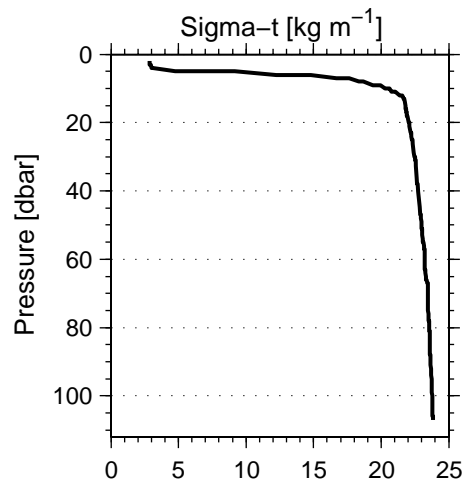
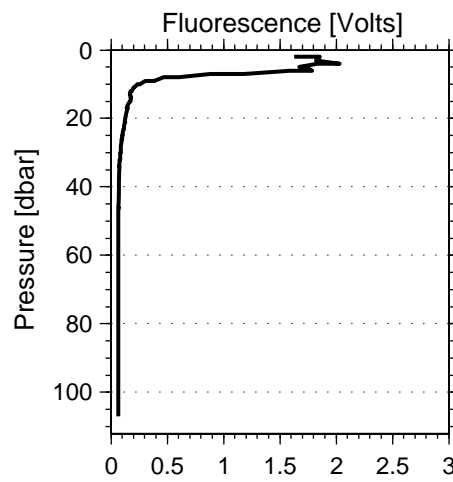
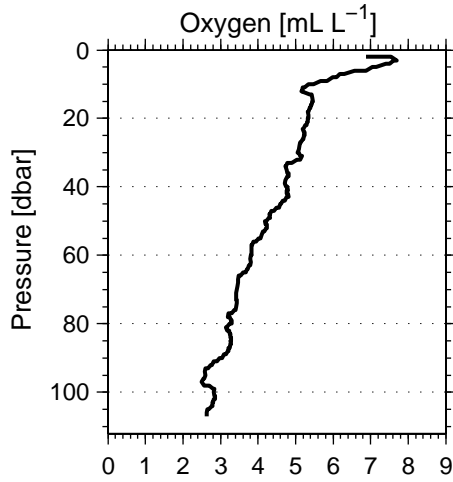
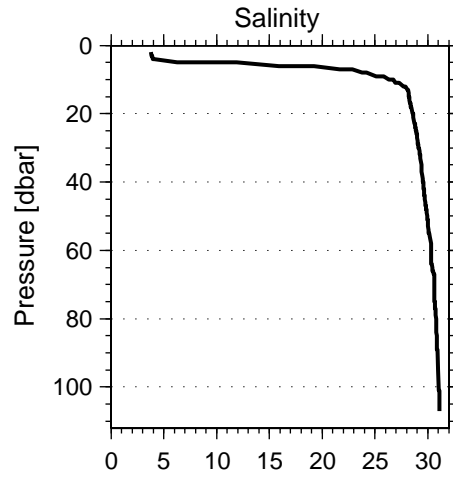
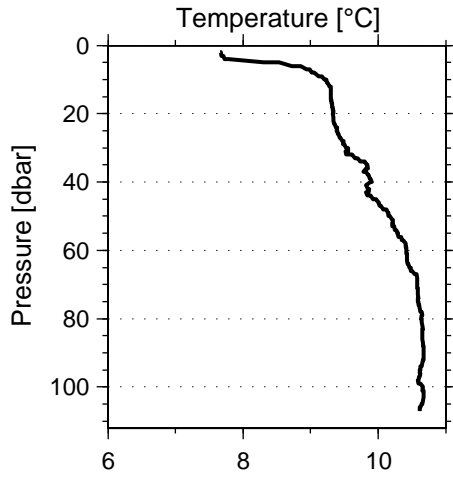
CRUISE : Aysen September 2009	STATION : CC	CAST : 25
DATE : 2009-09-26	LAT : 45°26.593	Z-CTD : 106.0 m
TIME : 06:23	LON : 72°54.747	DEPTH : 182 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.667	3.783	2.856	7.537	1.856	-
3.0	7.706	3.899	2.944	7.612	1.820	-
4.0	7.784	4.106	3.102	7.409	1.831	-
6.0	8.856	19.213	14.805	6.563	1.590	-
8.0	9.056	24.193	18.663	5.994	0.471	-
10.0	9.237	26.760	20.641	5.336	0.236	-
12.0	9.298	27.931	21.545	5.156	0.176	-
14.0	9.302	28.213	21.765	5.442	0.181	-
16.0	9.305	28.294	21.828	5.417	0.152	-
18.0	9.325	28.459	21.953	5.329	0.139	-
20.0	9.332	28.635	22.090	5.330	0.127	-
22.0	9.339	28.715	22.151	5.260	0.115	-
24.0	9.391	28.855	22.253	5.249	0.107	-
26.0	9.418	28.975	22.342	5.186	0.095	-
28.0	9.487	29.050	22.390	5.105	0.089	-
30.0	9.557	29.206	22.501	5.094	0.084	-
35.0	9.838	29.413	22.619	4.772	0.074	-
40.0	9.887	29.584	22.744	4.786	0.071	-
45.0	9.973	29.747	22.858	4.593	0.067	-
50.0	10.171	29.965	22.996	4.190	0.066	-
60.0	10.416	30.331	23.241	3.816	0.065	-
70.0	10.582	30.643	23.456	3.433	0.066	-
80.0	10.645	30.800	23.568	3.240	0.065	-
90.0	10.675	30.918	23.654	2.971	0.065	-
100.0	10.665	31.074	23.777	2.821	0.065	-
106.0	10.620	31.124	23.824	2.632	0.066	-

Aysen September 2009
Station CC Cast 25



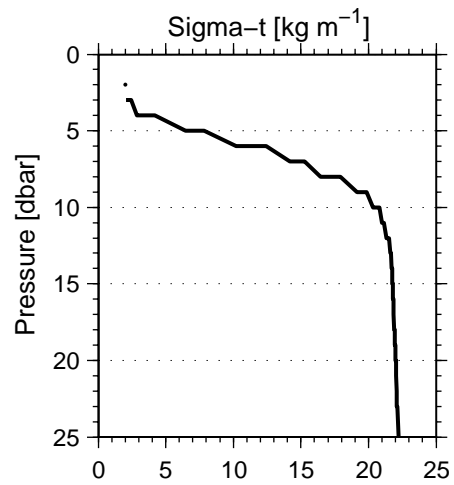
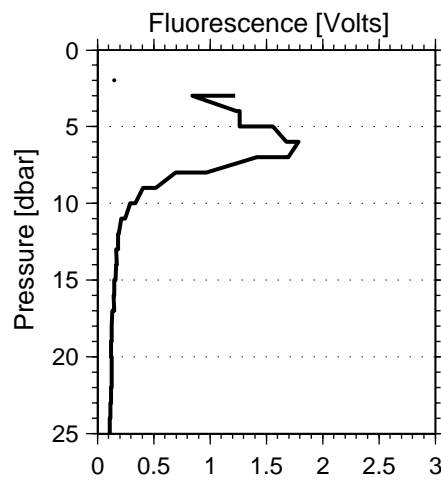
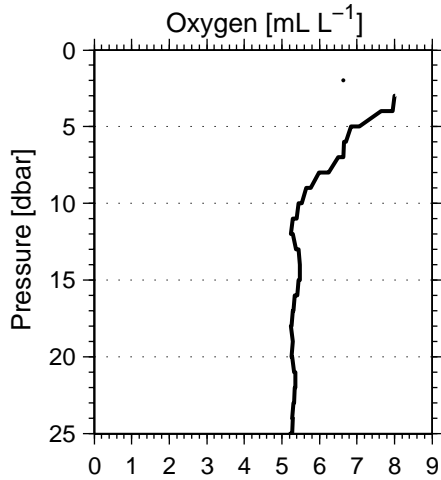
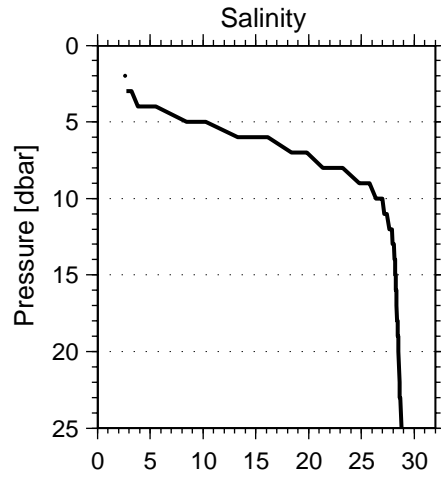
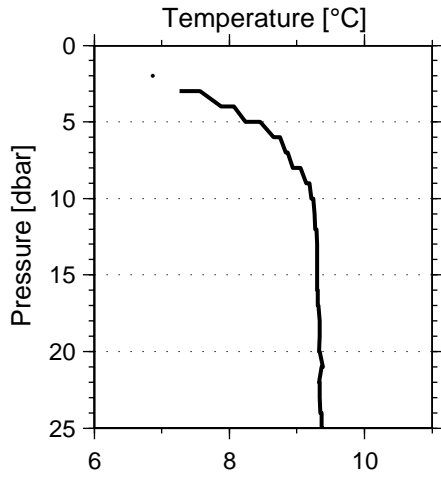
Aysen September 2009
Station CC Cast 25



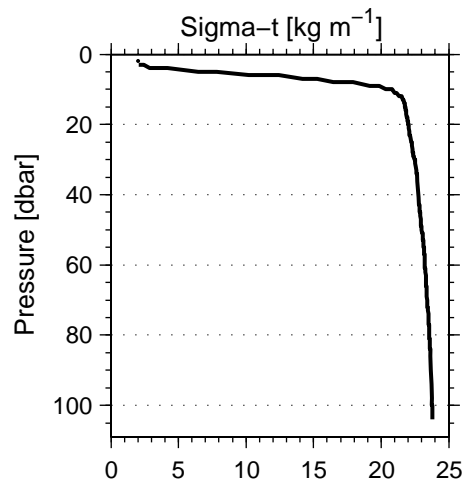
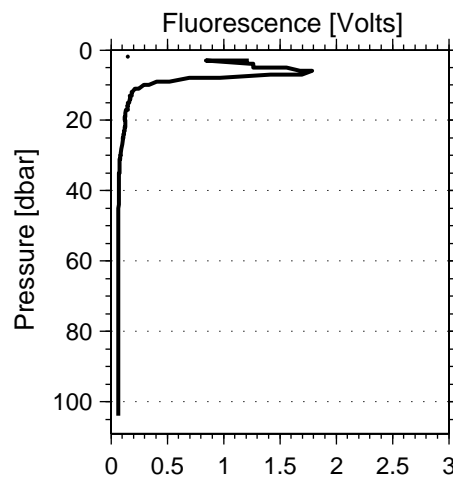
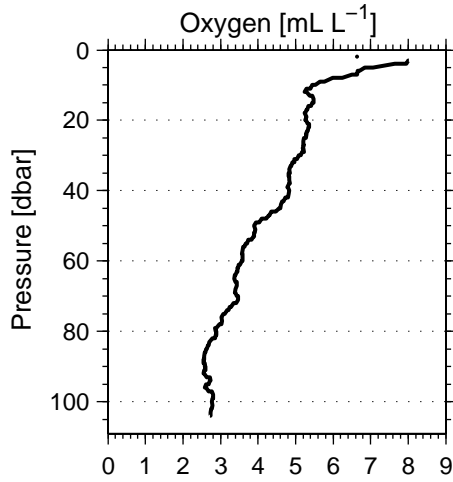
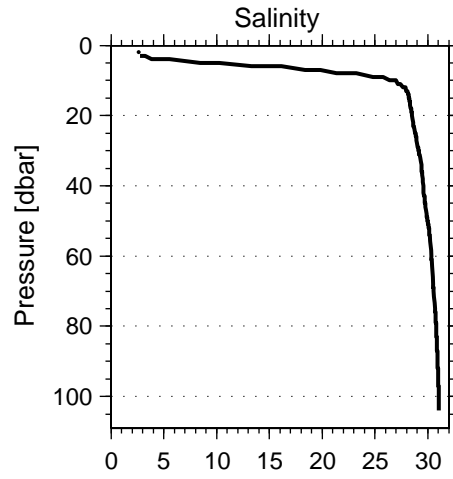
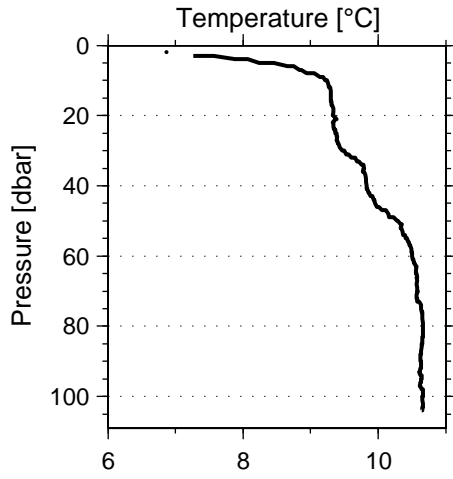
CRUISE	: Aysen September 2009	STATION	: CS	CAST	: 26
DATE	: 2009-09-26	LAT	: 45°27.436	Z-CTD	: 103.5 m
TIME	: 07:07	LON	: 72°54.852	DEPTH	: 165 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	7.568	3.251	2.444	8.008	0.845	-
4.0	8.073	5.541	4.207	7.639	1.265	-
6.0	8.754	16.154	12.432	6.656	1.789	-
8.0	9.055	23.267	17.941	5.983	0.699	-
10.0	9.243	26.978	20.810	5.451	0.292	-
12.0	9.290	27.890	21.514	5.297	0.186	-
14.0	9.296	28.194	21.751	5.487	0.170	-
16.0	9.307	28.305	21.836	5.347	0.143	-
18.0	9.338	28.448	21.943	5.244	0.129	-
20.0	9.336	28.544	22.018	5.283	0.129	-
22.0	9.335	28.635	22.089	5.342	0.124	-
24.0	9.363	28.773	22.193	5.288	0.110	-
26.0	9.391	28.915	22.299	5.213	0.103	-
28.0	9.413	29.004	22.366	5.200	0.092	-
30.0	9.501	29.183	22.492	5.087	0.084	-
35.0	9.783	29.439	22.647	4.820	0.073	-
40.0	9.827	29.584	22.754	4.835	0.071	-
45.0	9.957	29.764	22.874	4.556	0.067	-
50.0	10.299	30.002	23.004	3.897	0.066	-
60.0	10.504	30.354	23.244	3.569	0.065	-
70.0	10.591	30.596	23.418	3.464	0.064	-
80.0	10.664	30.817	23.578	2.885	0.066	-
90.0	10.638	30.943	23.680	2.591	0.067	-
100.0	10.657	31.065	23.772	2.770	0.065	-
103.5	10.651	31.082	23.786	2.734	0.066	-

Aysen September 2009
Station CS Cast 26



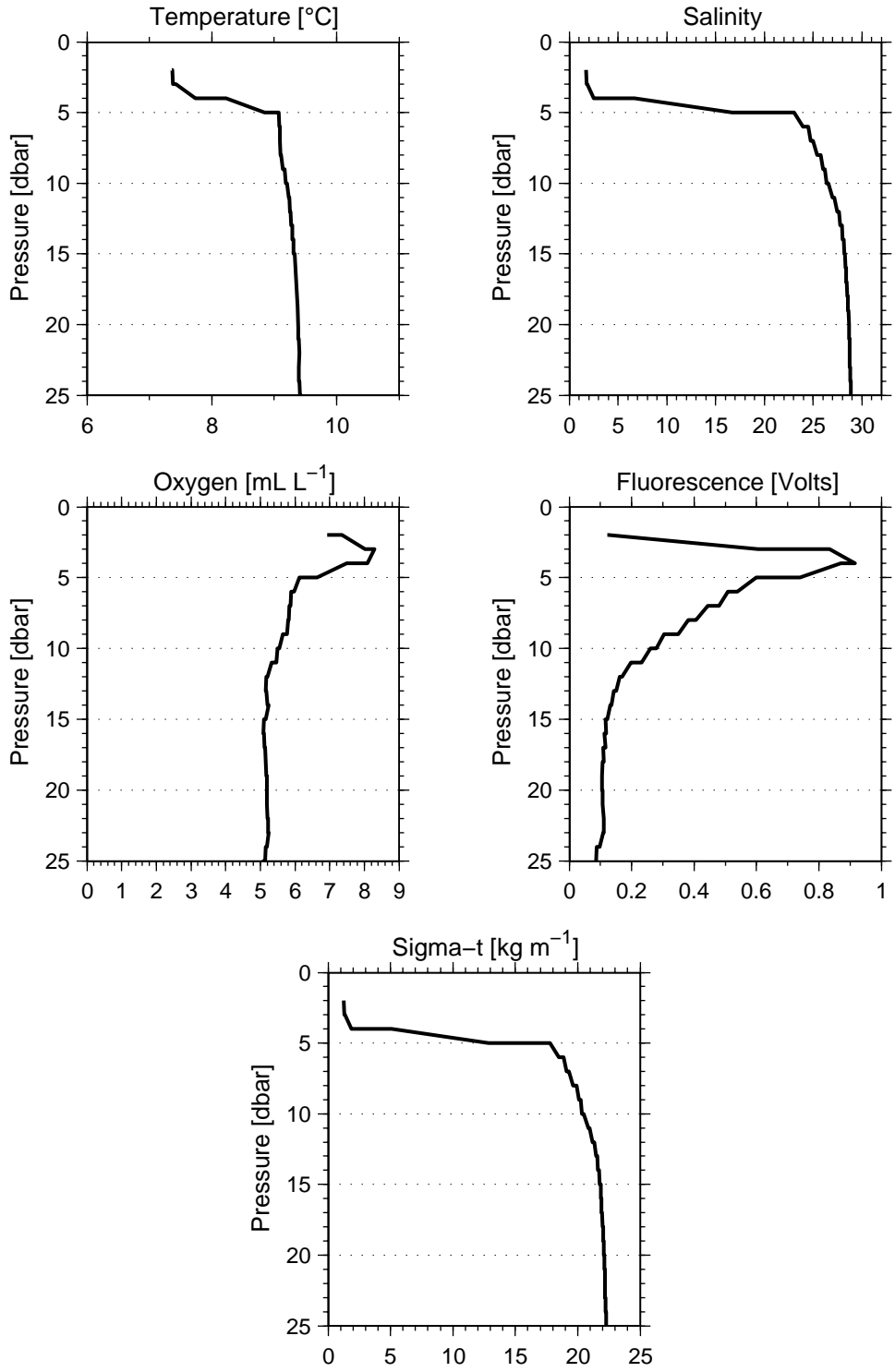
Aysen September 2009
Station CS Cast 26



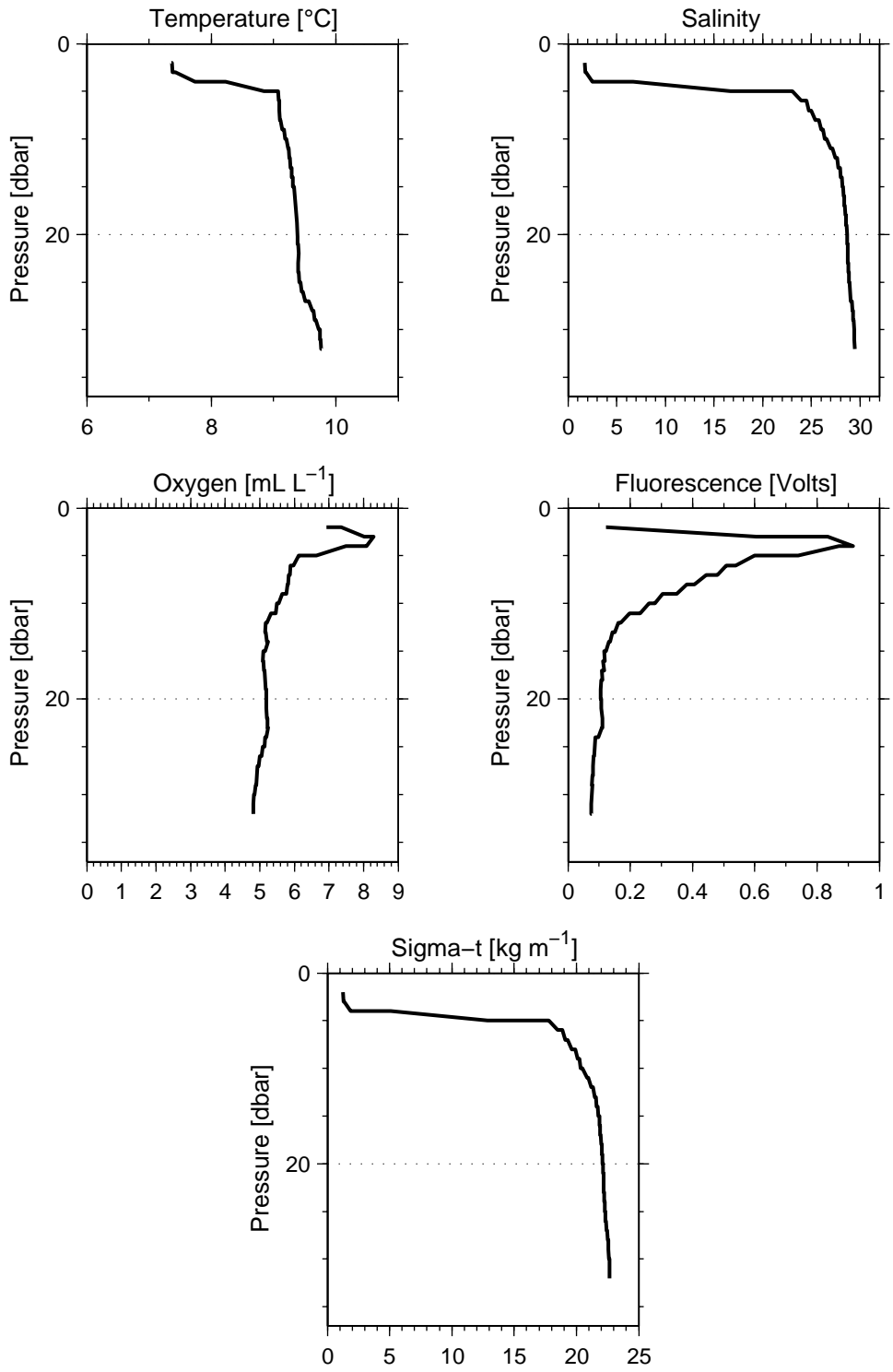
CRUISE	: Aysen September 2009	STATION	: CN	CAST	: 27
DATE	: 2009-09-26	LAT	: 45°25.725	Z-CTD	: 31.5 m
TIME	: 08:55	LON	: 72°54.684	DEPTH	: 50 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.371	1.747	1.270	7.350	0.124	-
3.0	7.422	1.838	1.339	8.290	0.835	-
4.0	8.231	6.693	5.093	7.498	0.871	-
6.0	9.090	24.488	18.888	5.892	0.508	-
8.0	9.111	25.789	19.901	5.799	0.381	-
10.0	9.205	26.555	20.485	5.500	0.261	-
12.0	9.264	27.648	21.330	5.173	0.162	-
14.0	9.306	28.131	21.700	5.240	0.132	-
16.0	9.342	28.365	21.877	5.104	0.113	-
18.0	9.370	28.566	22.031	5.164	0.108	-
20.0	9.383	28.689	22.124	5.190	0.108	-
22.0	9.400	28.784	22.196	5.228	0.110	-
24.0	9.402	28.868	22.261	5.151	0.089	-
26.0	9.470	29.008	22.360	5.008	0.082	-
28.0	9.643	29.276	22.543	4.912	0.079	-
30.0	9.742	29.425	22.644	4.828	0.076	-
31.5	9.761	29.461	22.668	4.811	0.075	-

Aysen September 2009
Station CN Cast 27



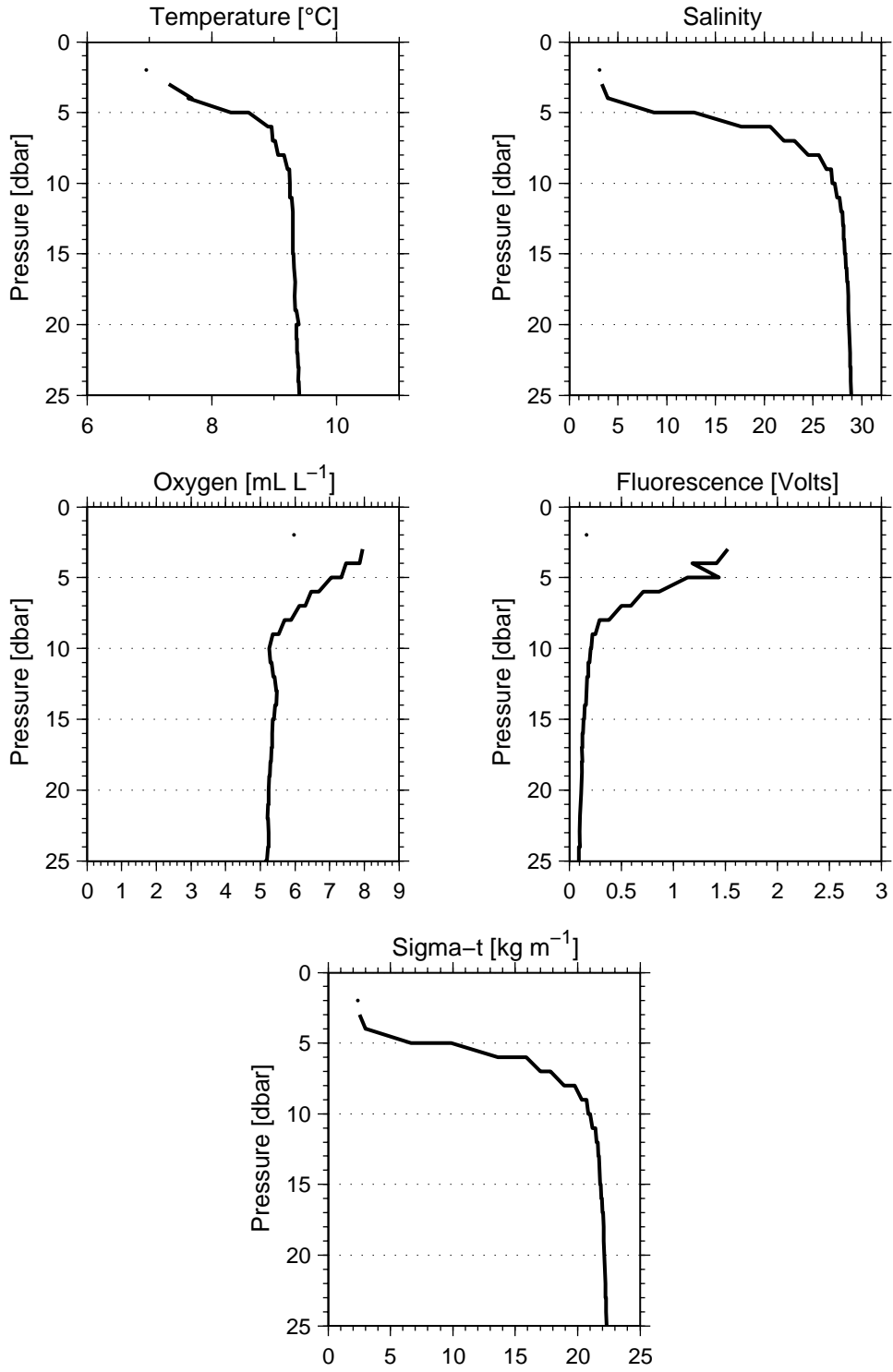
Aysen September 2009
Station CN Cast 27



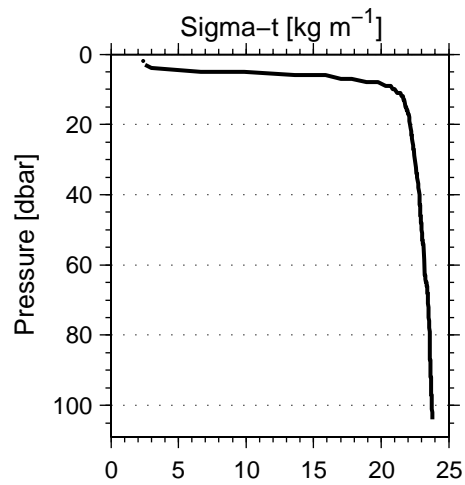
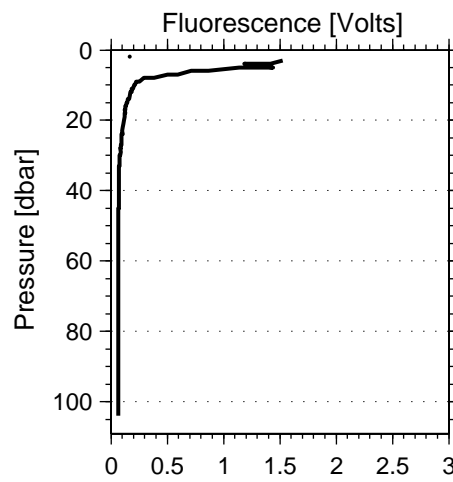
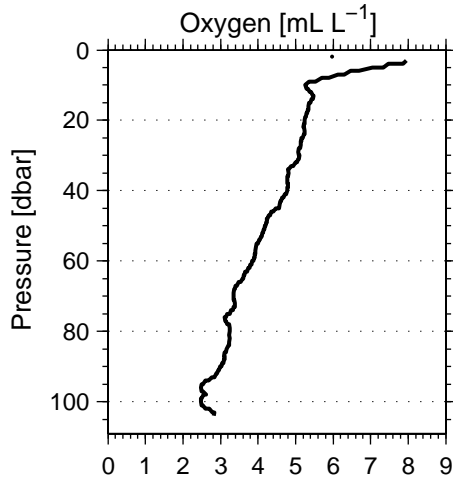
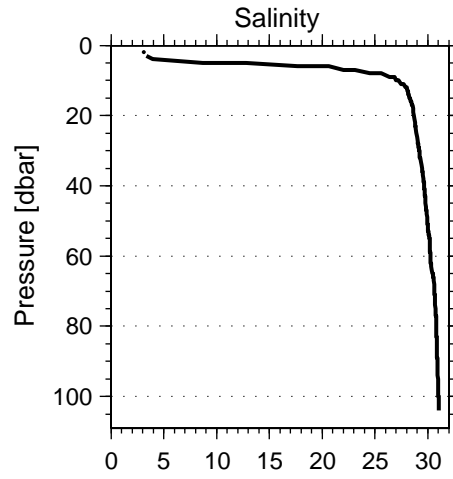
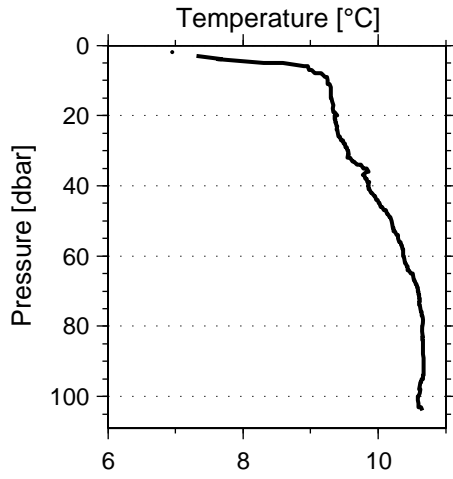
CRUISE	: Aysen September 2009	STATION	: CC	CAST	: 28
DATE	: 2009-09-26	LAT	: 45°26.595	Z-CTD	: 103.0 m
TIME	: 09:28	LON	: 72°54.797	DEPTH	: 182 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	7.309	3.343	2.532	7.954	1.523	-
4.0	7.622	4.031	3.054	7.471	1.183	-
6.0	8.956	20.622	15.892	6.467	0.714	-
8.0	9.157	25.627	19.768	5.704	0.290	-
10.0	9.250	27.218	20.996	5.255	0.208	-
12.0	9.298	28.008	21.605	5.413	0.174	-
14.0	9.296	28.193	21.750	5.432	0.153	-
16.0	9.322	28.468	21.961	5.344	0.130	-
18.0	9.333	28.627	22.083	5.284	0.122	-
20.0	9.358	28.727	22.158	5.241	0.115	-
22.0	9.372	28.814	22.224	5.221	0.106	-
24.0	9.395	28.908	22.293	5.217	0.097	-
26.0	9.429	29.017	22.373	5.144	0.093	-
28.0	9.509	29.113	22.436	5.080	0.085	-
30.0	9.557	29.217	22.510	5.105	0.079	-
35.0	9.828	29.484	22.676	4.817	0.072	-
40.0	9.855	29.691	22.833	4.774	0.070	-
45.0	10.016	29.814	22.903	4.474	0.067	-
50.0	10.204	29.991	23.011	4.191	0.066	-
60.0	10.378	30.264	23.195	3.852	0.065	-
70.0	10.593	30.652	23.461	3.347	0.065	-
80.0	10.656	30.826	23.586	3.239	0.065	-
90.0	10.676	30.919	23.655	2.986	0.065	-
100.0	10.592	31.034	23.758	2.486	0.067	-
103.0	10.638	31.073	23.782	2.831	0.066	-

Aysen September 2009
Station CC Cast 28



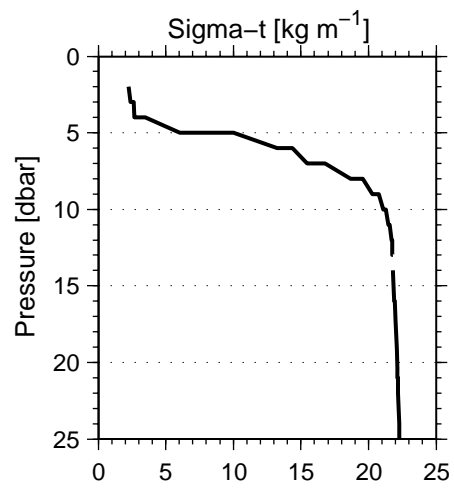
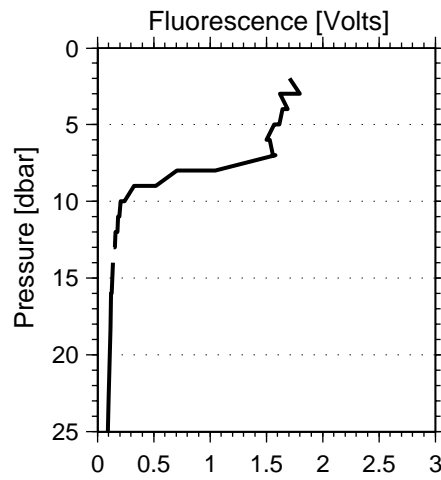
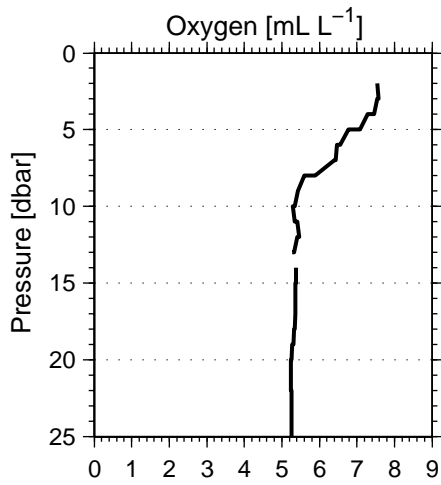
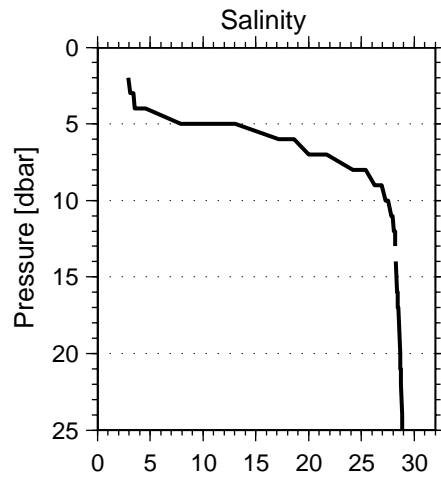
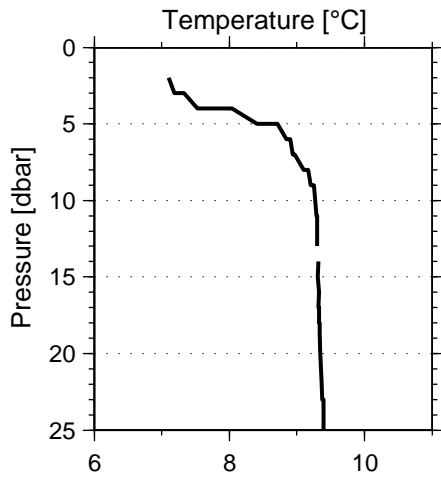
Aysen September 2009
Station CC Cast 28



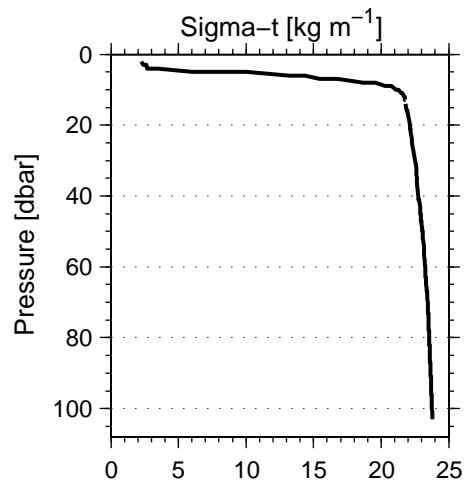
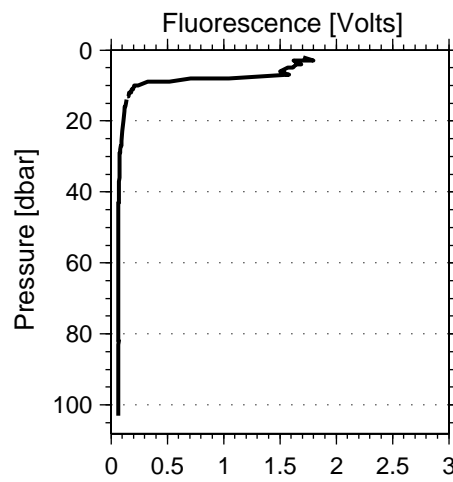
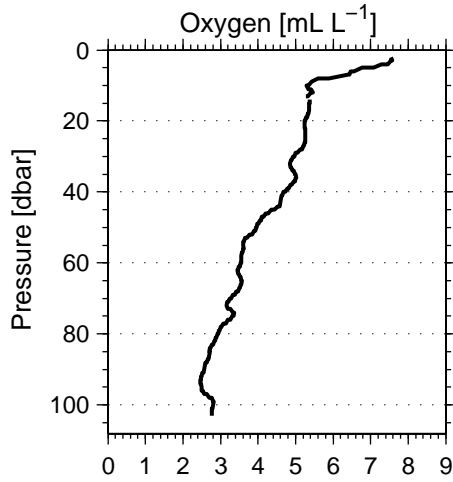
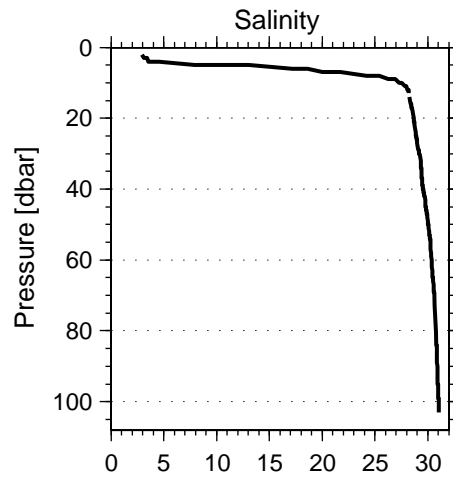
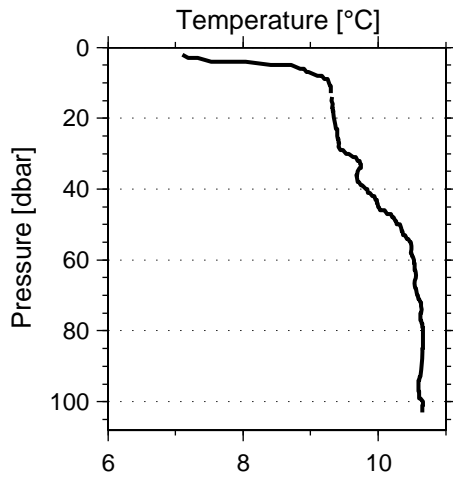
CRUISE	: Aysen September 2009	STATION	: CS	CAST	: 29
DATE	: 2009-09-26	LAT	: 45°27.365	Z-CTD	: 102.0 m
TIME	: 10:09	LON	: 72°54.822	DEPTH	: 165 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.102	2.963	2.245	7.540	1.706	-
3.0	7.331	3.454	2.619	7.544	1.622	-
4.0	8.041	4.583	3.458	7.286	1.643	-
6.0	8.899	18.661	14.370	6.461	1.532	-
8.0	9.167	25.408	19.596	5.603	0.710	-
10.0	9.273	27.570	21.267	5.298	0.210	-
12.0	9.296	28.189	21.747	5.410	0.162	-
14.0	9.315	28.277	21.813	5.382	0.140	-
16.0	9.325	28.452	21.948	5.361	0.124	-
18.0	9.336	28.594	22.057	5.319	0.116	-
20.0	9.346	28.692	22.132	5.244	0.108	-
22.0	9.370	28.778	22.196	5.251	0.103	-
24.0	9.396	28.884	22.274	5.258	0.097	-
26.0	9.410	28.970	22.339	5.245	0.092	-
28.0	9.413	29.084	22.428	5.123	0.081	-
30.0	9.569	29.240	22.526	4.932	0.078	-
35.0	9.701	29.417	22.644	5.006	0.075	-
40.0	9.843	29.590	22.756	4.679	0.070	-
45.0	10.009	29.830	22.917	4.347	0.066	-
50.0	10.323	30.083	23.063	3.948	0.065	-
60.0	10.532	30.381	23.260	3.541	0.065	-
70.0	10.590	30.633	23.447	3.242	0.065	-
80.0	10.667	30.786	23.553	2.917	0.066	-
90.0	10.641	30.916	23.659	2.559	0.067	-
100.0	10.666	31.060	23.766	2.796	0.066	-
102.0	10.656	31.078	23.782	2.772	0.065	-

Aysen September 2009
Station CS Cast 29



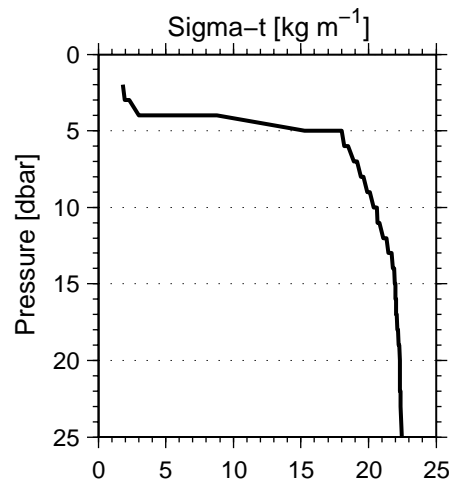
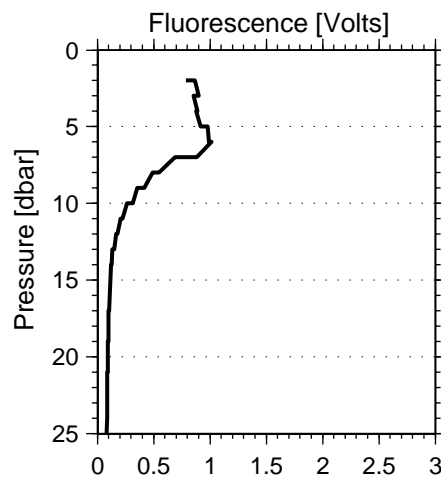
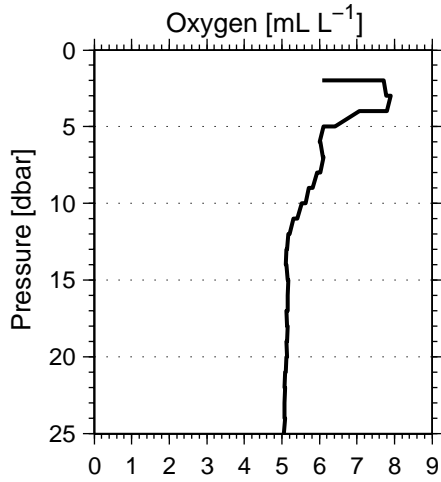
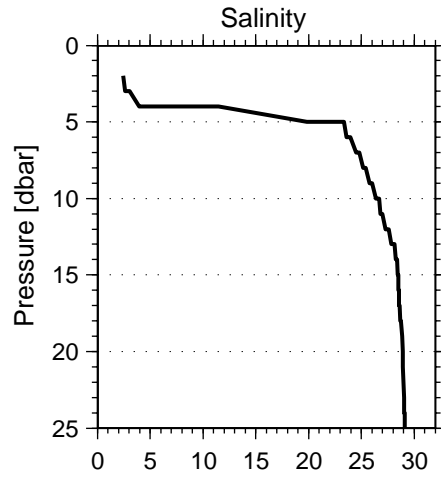
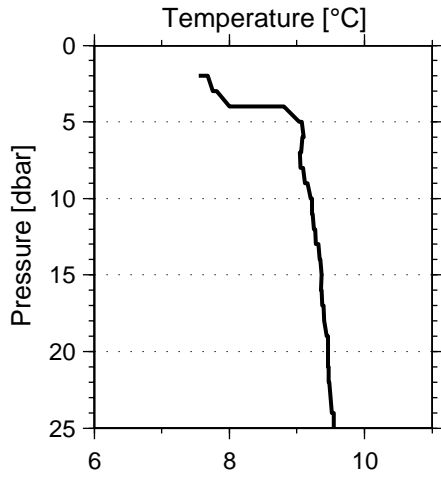
Aysen September 2009
Station CS Cast 29



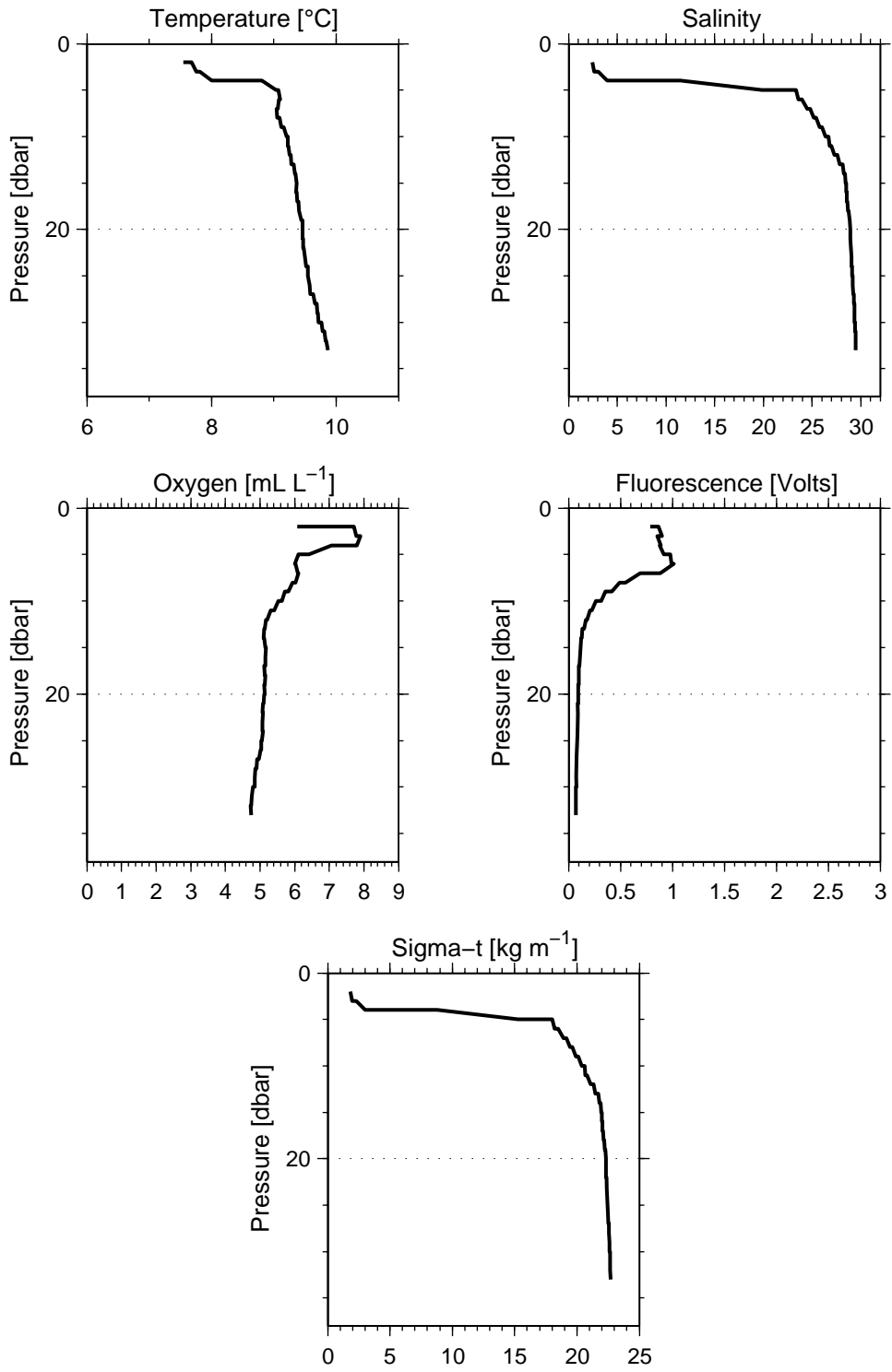
CRUISE	: Aysen September 2009	STATION	: CN	CAST	: 30
DATE	: 2009-09-26	LAT	: 45°25.718	Z-CTD	: 32.0 m
TIME	: 12:08	LON	: 72°54.656	DEPTH	: 50 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.686	2.472	1.823	7.715	0.868	-
3.0	7.809	3.062	2.279	7.908	0.854	-
4.0	8.808	11.509	8.802	7.069	0.878	-
6.0	9.081	23.992	18.503	6.024	1.016	-
8.0	9.094	25.416	19.612	5.940	0.490	-
10.0	9.221	26.703	20.598	5.528	0.264	-
12.0	9.267	27.628	21.314	5.165	0.168	-
14.0	9.345	28.391	21.897	5.117	0.121	-
16.0	9.370	28.555	22.021	5.161	0.108	-
18.0	9.408	28.751	22.169	5.150	0.099	-
20.0	9.463	28.951	22.316	5.128	0.092	-
22.0	9.482	29.001	22.353	5.081	0.087	-
24.0	9.543	29.104	22.424	5.081	0.086	-
26.0	9.572	29.191	22.487	5.023	0.081	-
28.0	9.691	29.340	22.585	4.871	0.075	-
30.0	9.767	29.423	22.638	4.796	0.073	-
32.0	9.837	29.484	22.674	4.723	0.071	-

Aysen September 2009
Station CN Cast 30



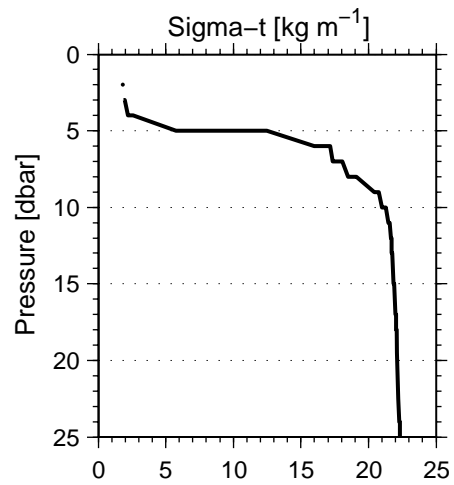
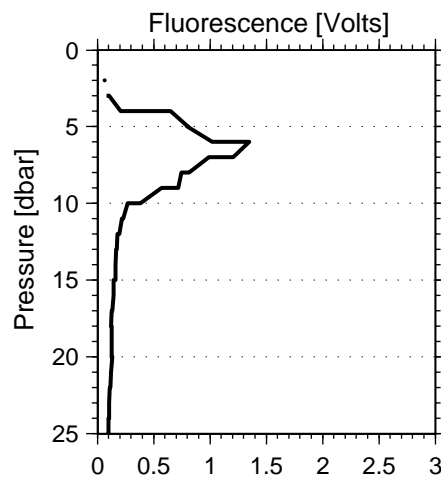
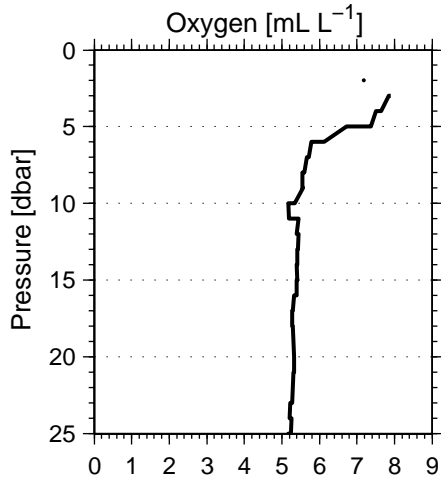
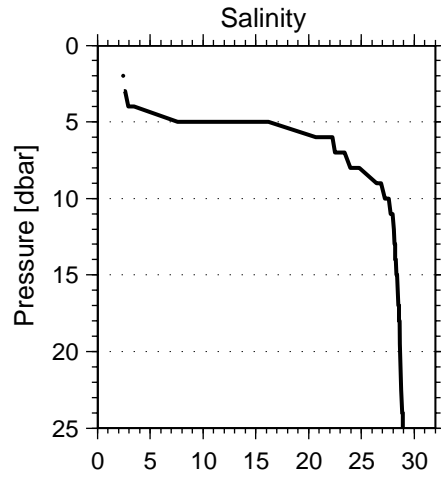
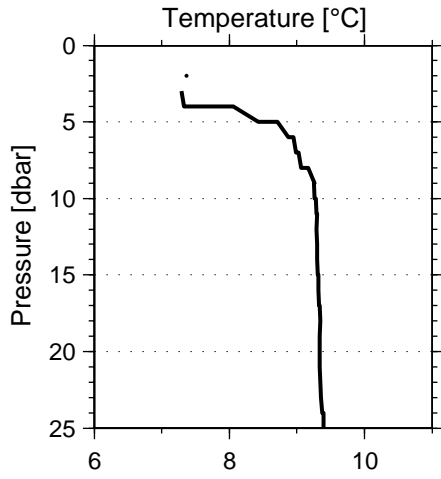
Aysen September 2009
Station CN Cast 30



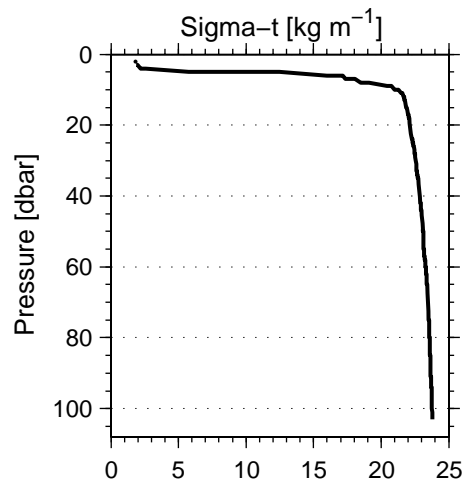
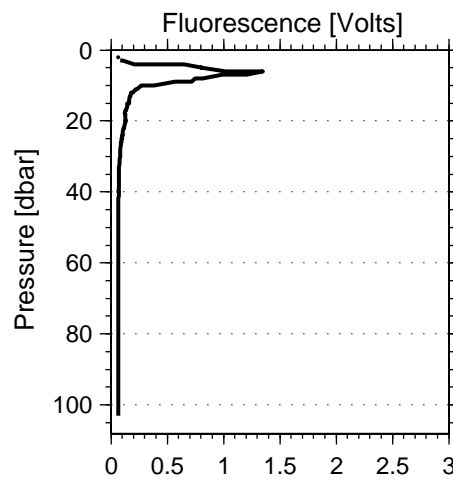
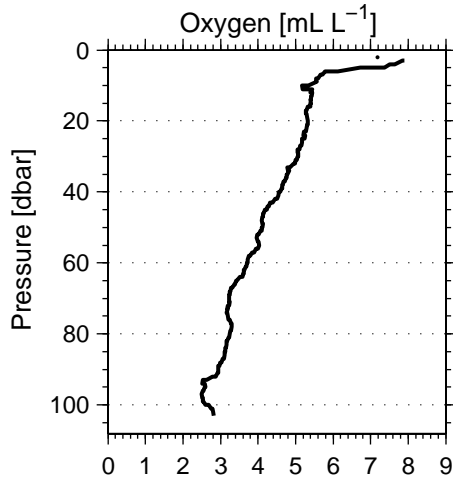
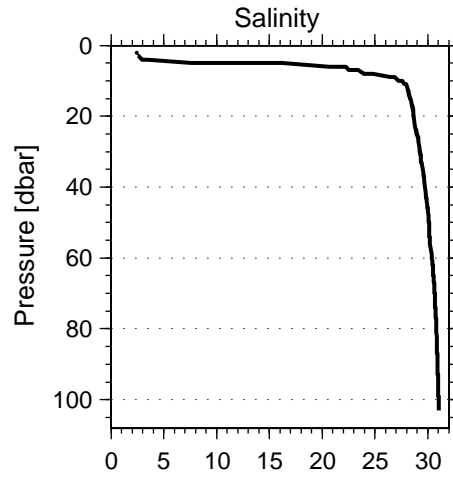
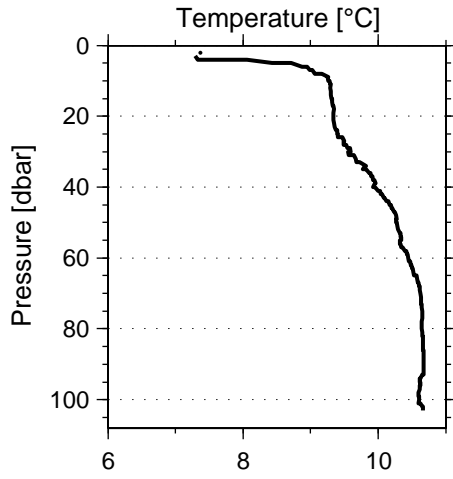
CRUISE	: Aysen September 2009	STATION	: CC	CAST	: 31
DATE	: 2009-09-26	LAT	: 45°26.591	Z-CTD	: 102.0 m
TIME	: 12:29	LON	: 72°54.774	DEPTH	: 182 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	7.288	2.646	1.984	7.845	0.104	-
4.0	8.056	3.489	2.598	7.517	0.650	-
6.0	8.946	22.249	17.161	5.789	1.349	-
8.0	9.172	24.803	19.123	5.543	0.746	-
10.0	9.278	27.615	21.301	5.174	0.271	-
12.0	9.294	28.113	21.688	5.442	0.180	-
14.0	9.300	28.285	21.821	5.402	0.164	-
16.0	9.317	28.459	21.955	5.318	0.143	-
18.0	9.345	28.622	22.078	5.292	0.125	-
20.0	9.339	28.696	22.136	5.326	0.133	-
22.0	9.347	28.754	22.180	5.299	0.113	-
24.0	9.397	28.926	22.307	5.255	0.100	-
26.0	9.475	29.093	22.425	5.169	0.088	-
28.0	9.526	29.199	22.501	5.057	0.082	-
30.0	9.558	29.293	22.569	5.057	0.080	-
35.0	9.821	29.564	22.739	4.766	0.071	-
40.0	9.953	29.745	22.860	4.554	0.068	-
45.0	10.191	29.978	23.003	4.192	0.066	-
50.0	10.273	30.130	23.107	4.099	0.067	-
60.0	10.449	30.411	23.298	3.714	0.065	-
70.0	10.626	30.676	23.475	3.225	0.065	-
80.0	10.649	30.819	23.582	3.242	0.065	-
90.0	10.674	30.939	23.671	2.938	0.065	-
100.0	10.603	31.039	23.761	2.683	0.065	-
102.0	10.664	31.089	23.790	2.811	0.065	-

Aysen September 2009
Station CC Cast 31



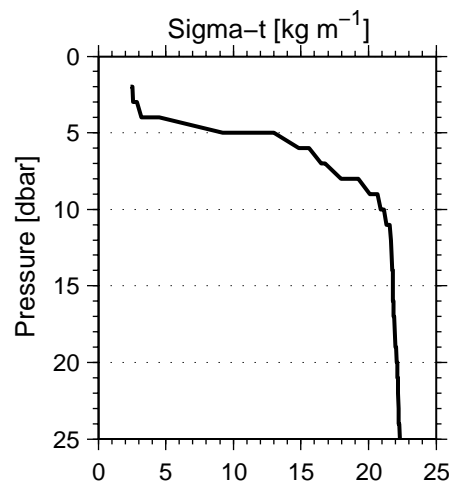
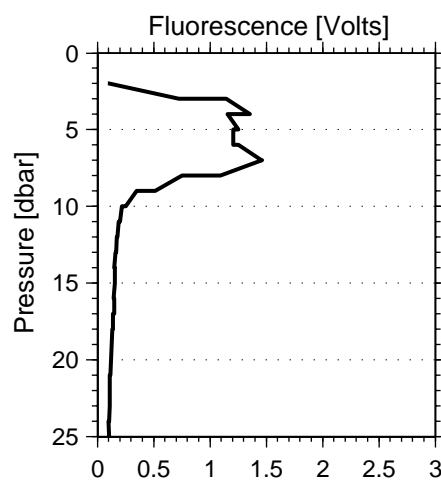
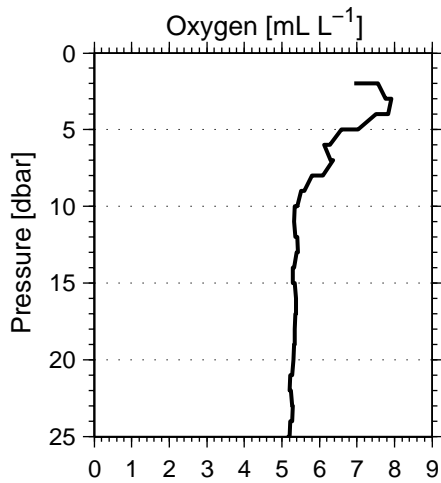
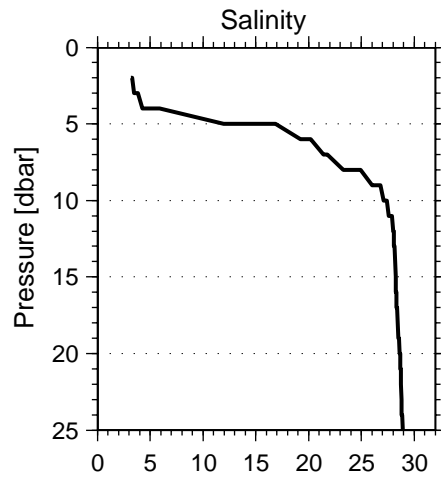
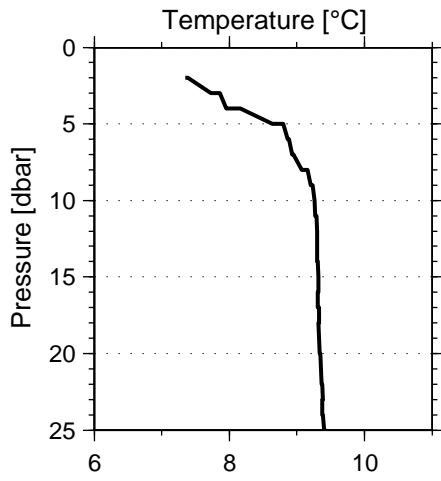
Aysen September 2009
Station CC Cast 31



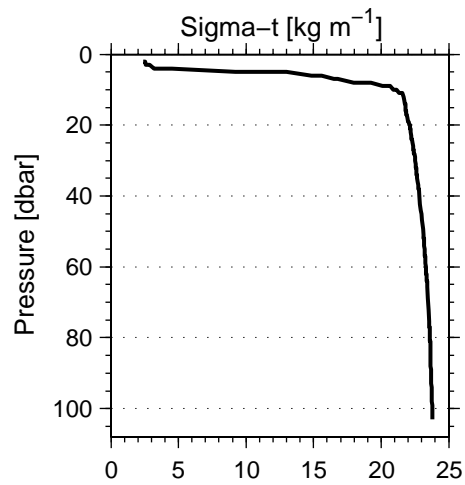
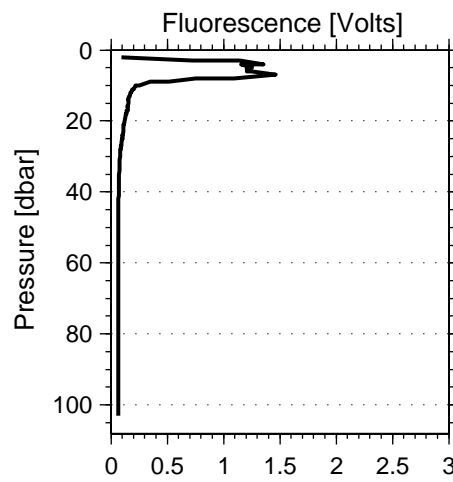
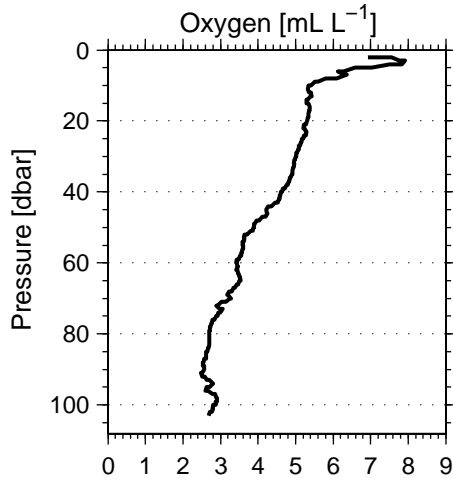
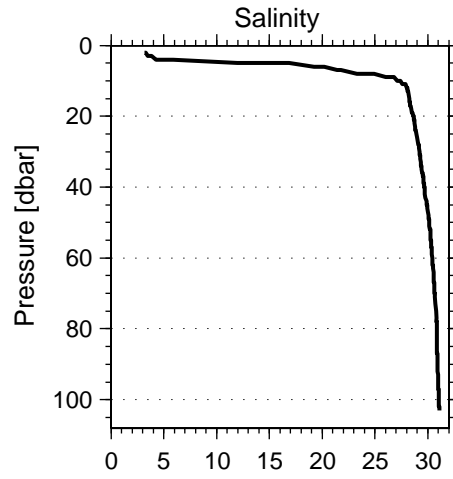
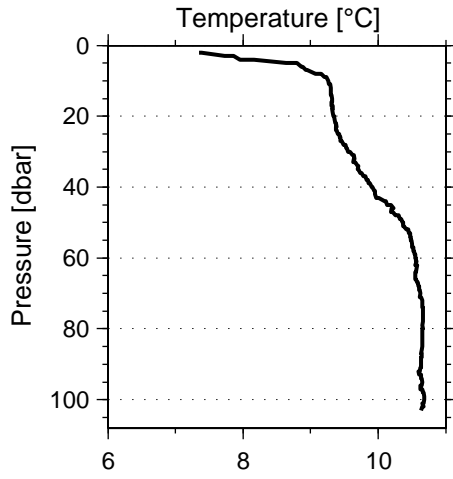
CRUISE	: Aysen September 2009	STATION	: CS	CAST	: 32
DATE	: 2009-09-26	LAT	: 45°27.350	Z-CTD	: 102.0 m
TIME	: 13:00	LON	: 72°54.986	DEPTH	: 165 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.386	3.328	2.516	7.568	0.100	-
3.0	7.857	3.837	2.885	7.915	1.144	-
4.0	8.164	5.929	4.504	7.507	1.157	-
6.0	8.888	20.227	15.592	6.120	1.252	-
8.0	9.154	24.943	19.235	5.802	0.754	-
10.0	9.265	27.415	21.148	5.342	0.217	-
12.0	9.300	28.092	21.671	5.405	0.175	-
14.0	9.308	28.238	21.783	5.286	0.156	-
16.0	9.313	28.308	21.838	5.378	0.150	-
18.0	9.319	28.471	21.964	5.341	0.136	-
20.0	9.347	28.677	22.120	5.302	0.120	-
22.0	9.380	28.787	22.201	5.234	0.111	-
24.0	9.387	28.875	22.269	5.226	0.102	-
26.0	9.438	29.008	22.365	5.139	0.094	-
28.0	9.517	29.163	22.474	5.067	0.084	-
30.0	9.585	29.246	22.528	5.002	0.081	-
35.0	9.707	29.452	22.670	4.896	0.072	-
40.0	9.918	29.706	22.835	4.616	0.070	-
45.0	10.193	29.950	22.980	4.217	0.066	-
50.0	10.370	30.153	23.110	3.882	0.065	-
60.0	10.558	30.444	23.305	3.437	0.065	-
70.0	10.628	30.683	23.480	3.252	0.066	-
80.0	10.659	30.869	23.619	2.703	0.066	-
90.0	10.632	30.945	23.682	2.567	0.067	-
100.0	10.680	31.076	23.777	2.810	0.066	-
102.0	10.656	31.094	23.795	2.716	0.066	-

Aysen September 2009
Station CS Cast 32



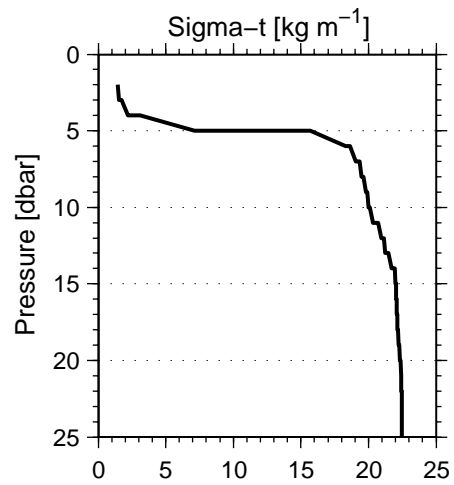
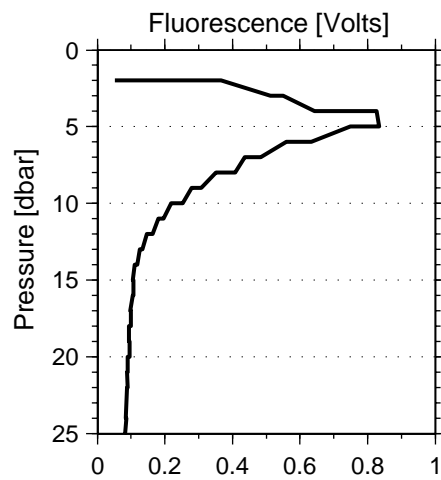
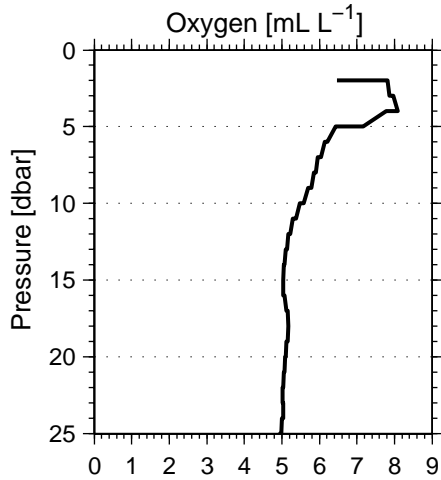
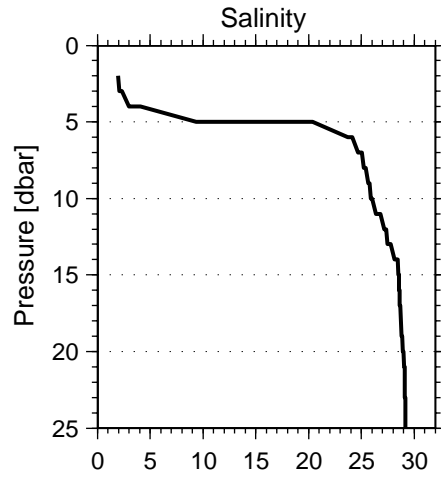
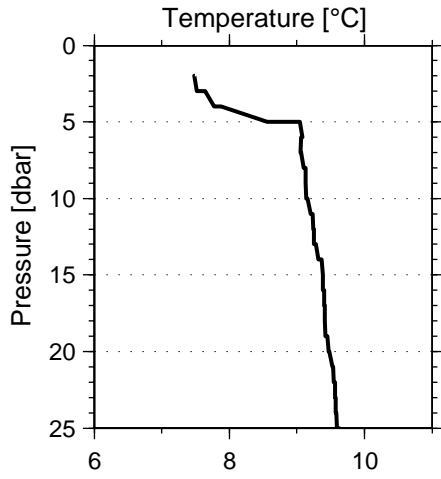
Aysen September 2009
Station CS Cast 32



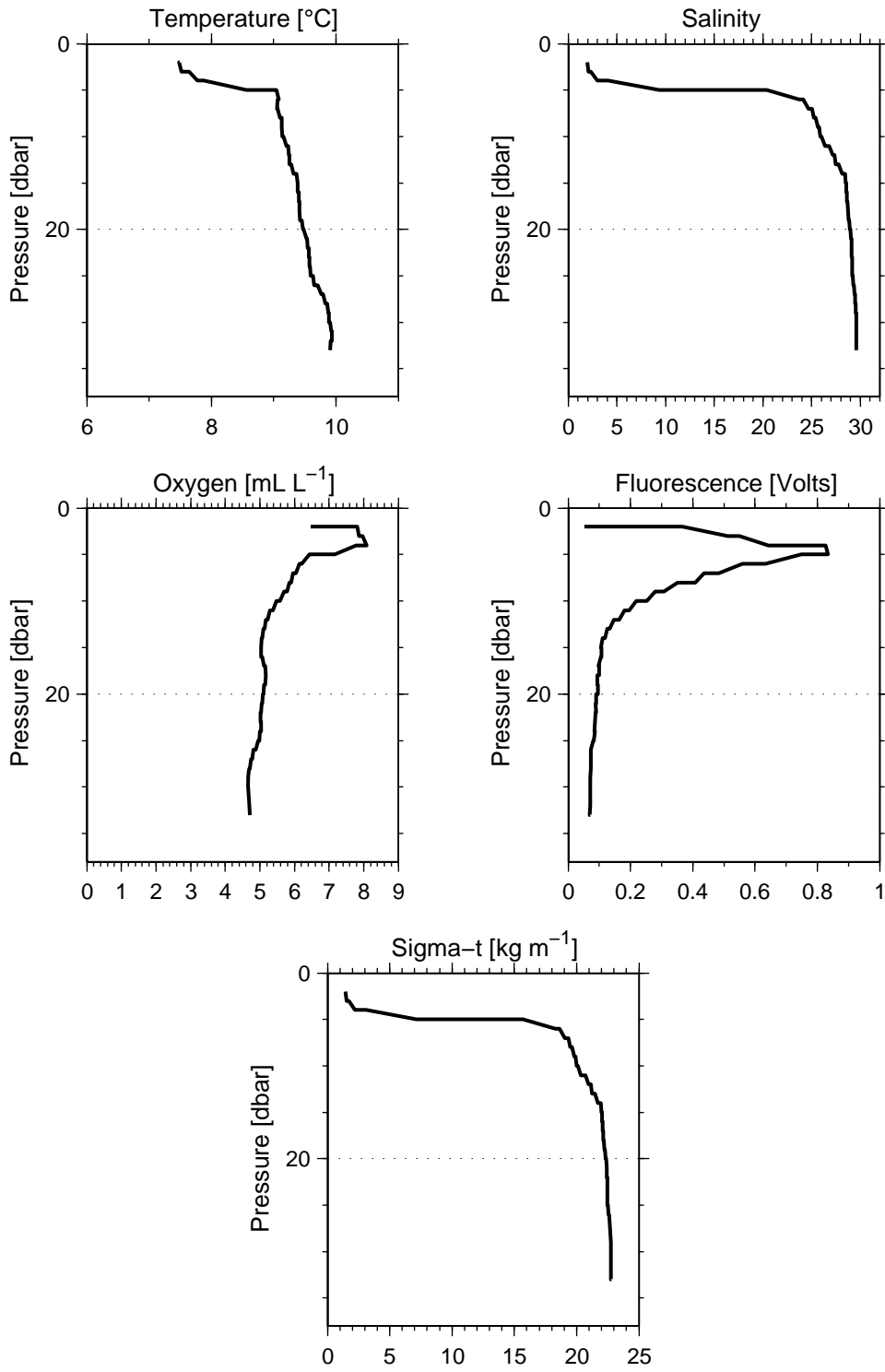
CRUISE	: Aysen September 2009	STATION	: CN	CAST	: 33
DATE	: 2009-09-26	LAT	: 45°25.718	Z-CTD	: 32.5 m
TIME	: 14:59	LON	: 72°54.656	DEPTH	: 50 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.478	1.998	1.463	7.819	0.366	-
3.0	7.640	2.337	1.720	7.966	0.550	-
4.0	7.880	4.091	3.084	7.789	0.826	-
6.0	9.060	24.125	18.610	6.137	0.561	-
8.0	9.126	25.451	19.634	5.853	0.352	-
10.0	9.162	26.031	20.082	5.475	0.219	-
12.0	9.252	27.393	21.132	5.169	0.146	-
14.0	9.364	28.436	21.929	5.056	0.111	-
16.0	9.400	28.625	22.072	5.071	0.105	-
18.0	9.414	28.774	22.186	5.169	0.094	-
20.0	9.483	28.997	22.349	5.081	0.091	-
22.0	9.561	29.138	22.447	5.026	0.088	-
24.0	9.585	29.174	22.472	5.010	0.086	-
26.0	9.711	29.363	22.600	4.823	0.073	-
28.0	9.859	29.548	22.721	4.692	0.072	-
30.0	9.902	29.584	22.742	4.668	0.071	-
32.5	9.907	29.623	22.772	4.715	0.070	-

Aysen September 2009
Station CN Cast 33



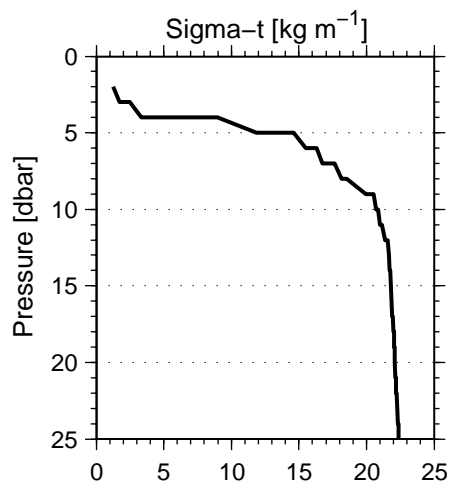
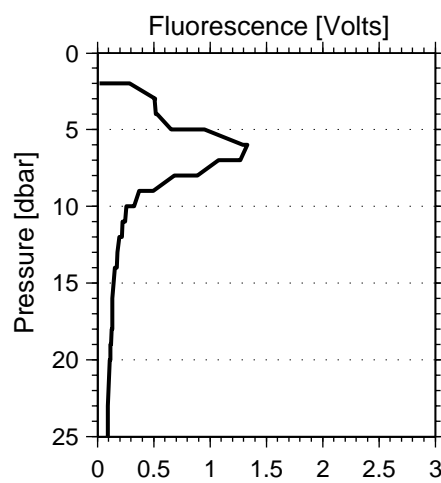
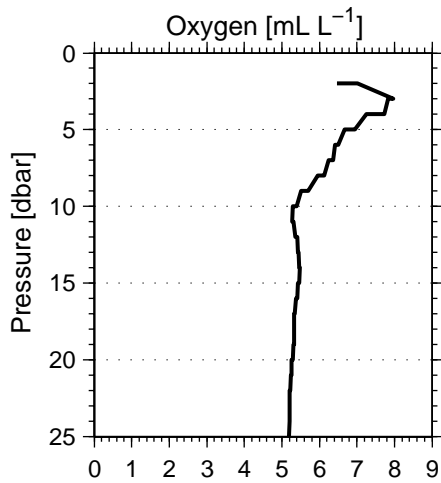
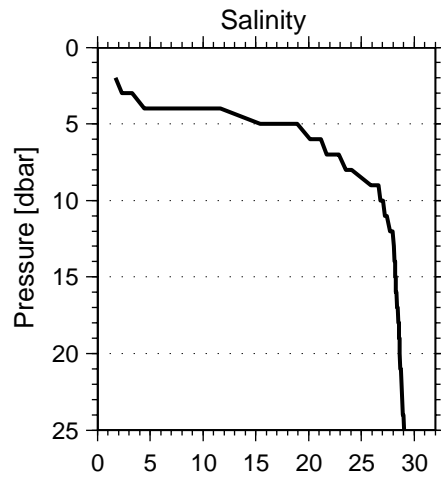
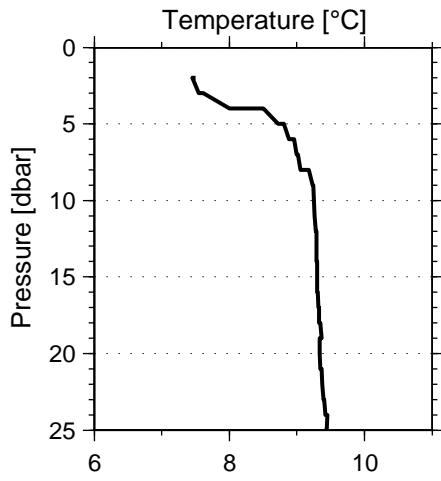
Aysen September 2009
Station CN Cast 33



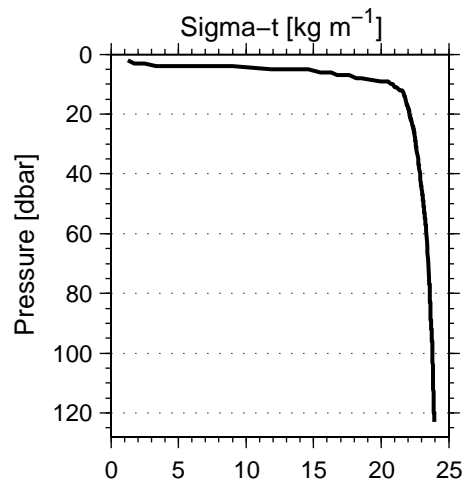
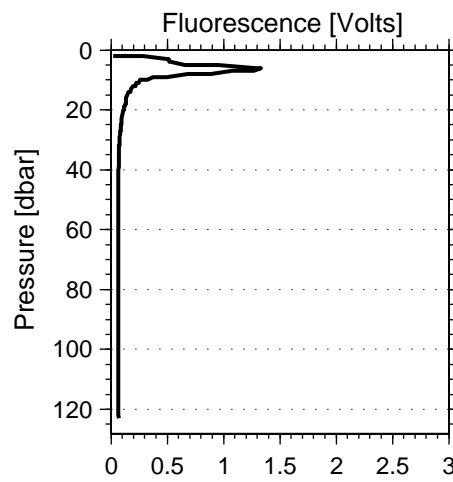
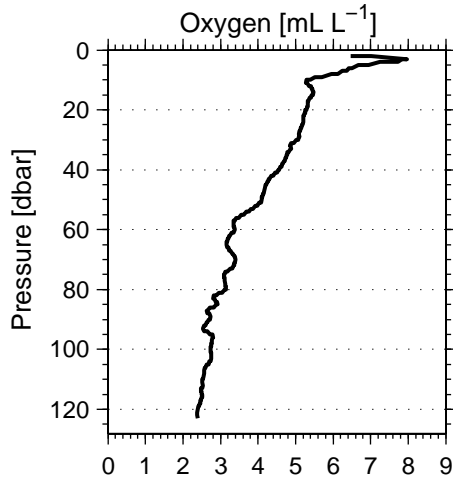
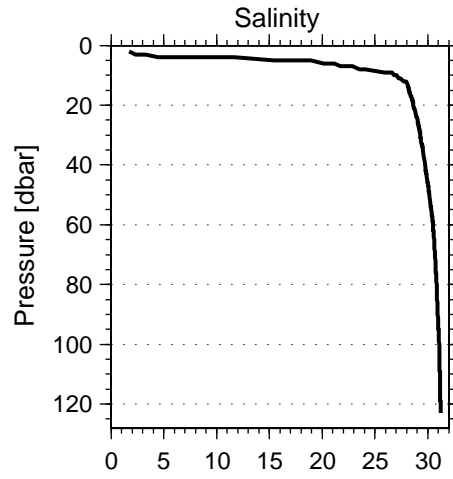
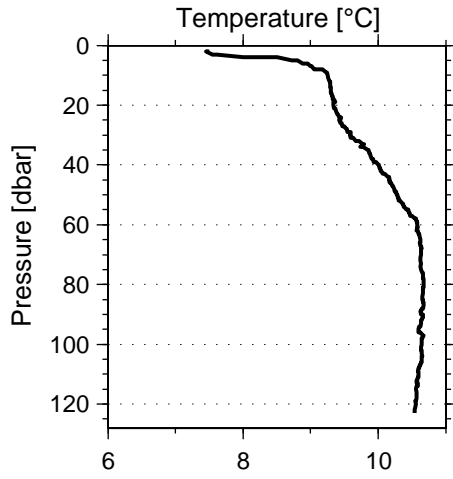
CRUISE	: Aysen September 2009	STATION	: CC	CAST	: 34
DATE	: 2009-09-26	LAT	: 45°26.451	Z-CTD	: 122.0 m
TIME	: 15:22	LON	: 72°54.744	DEPTH	: 182 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.452	1.747	1.266	7.017	0.287	-
3.0	7.619	3.316	2.491	7.836	0.509	-
4.0	8.505	11.689	8.975	7.256	0.533	-
6.0	8.963	21.164	16.313	6.411	1.333	-
8.0	9.181	24.075	18.554	5.961	0.682	-
10.0	9.256	27.070	20.880	5.300	0.260	-
12.0	9.293	27.972	21.578	5.406	0.194	-
14.0	9.297	28.185	21.744	5.473	0.159	-
16.0	9.310	28.338	21.861	5.380	0.136	-
18.0	9.348	28.549	22.020	5.330	0.127	-
20.0	9.336	28.661	22.109	5.263	0.112	-
22.0	9.374	28.825	22.232	5.213	0.097	-
24.0	9.450	29.005	22.361	5.201	0.092	-
26.0	9.457	29.117	22.447	5.139	0.087	-
28.0	9.537	29.215	22.512	5.085	0.083	-
30.0	9.581	29.305	22.574	5.023	0.078	-
35.0	9.859	29.573	22.740	4.773	0.070	-
40.0	10.013	29.787	22.882	4.536	0.067	-
45.0	10.158	29.976	23.006	4.199	0.067	-
50.0	10.288	30.175	23.140	4.093	0.065	-
60.0	10.580	30.503	23.348	3.384	0.065	-
70.0	10.633	30.709	23.499	3.395	0.065	-
80.0	10.670	30.852	23.604	3.108	0.065	-
90.0	10.662	30.960	23.689	2.687	0.066	-
100.0	10.640	31.098	23.801	2.740	0.066	-
122.0	10.537	31.252	23.938	2.384	0.067	-

Aysen September 2009
Station CC Cast 34



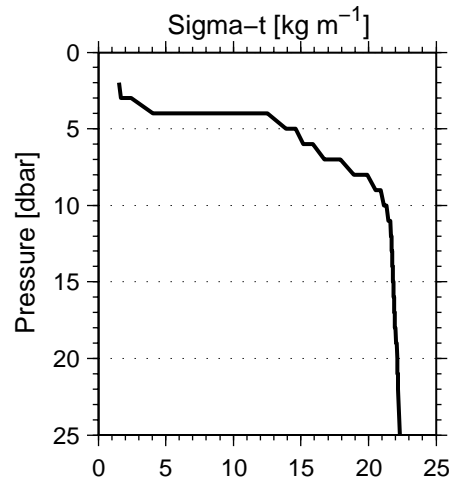
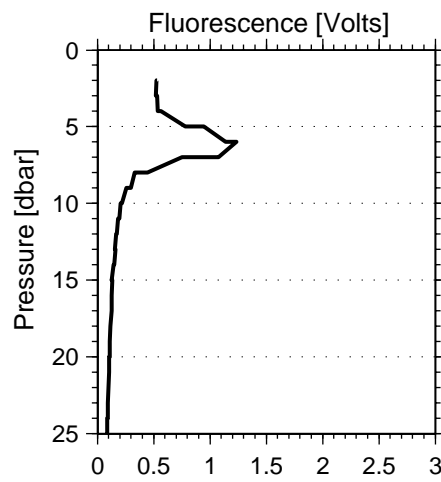
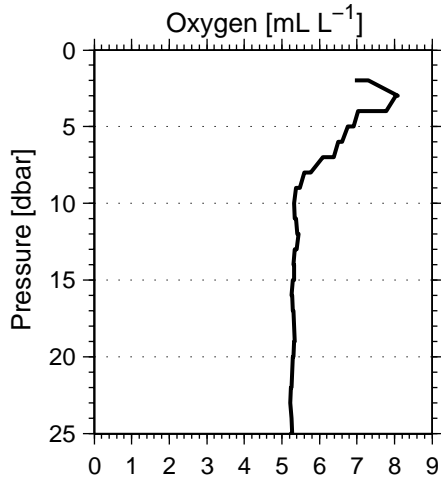
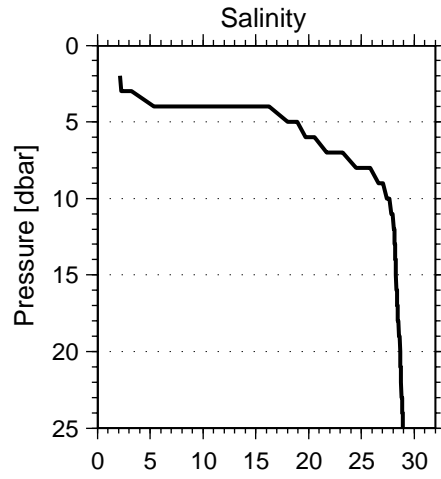
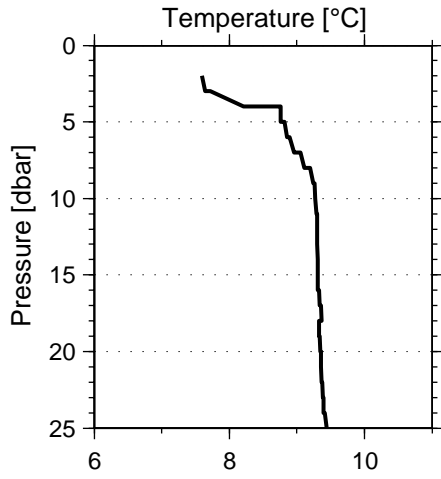
Aysen September 2009
Station CC Cast 34



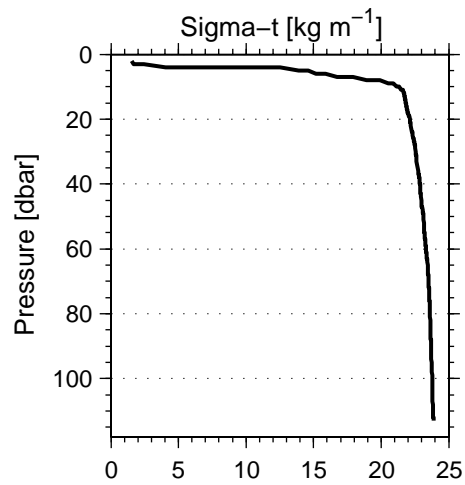
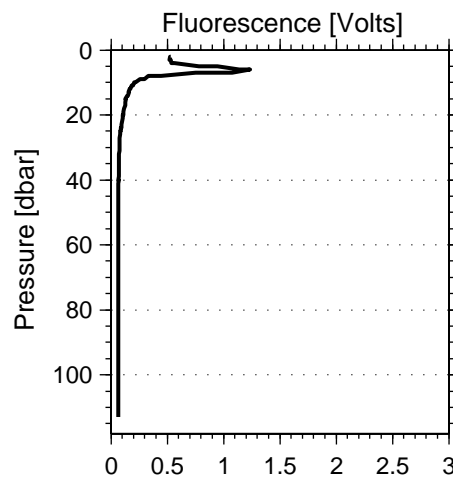
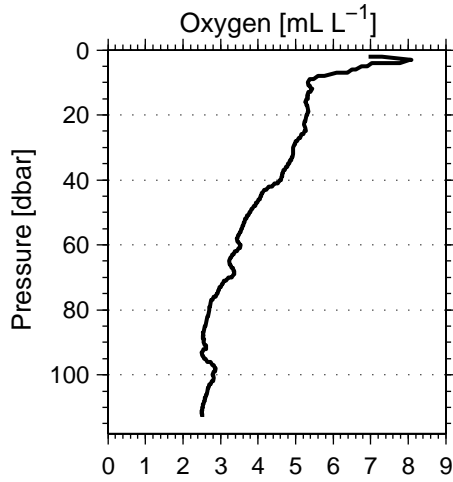
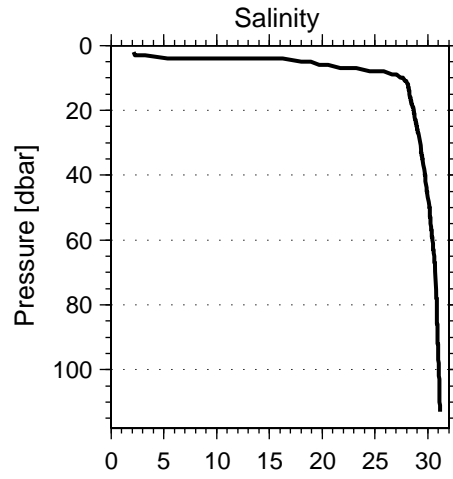
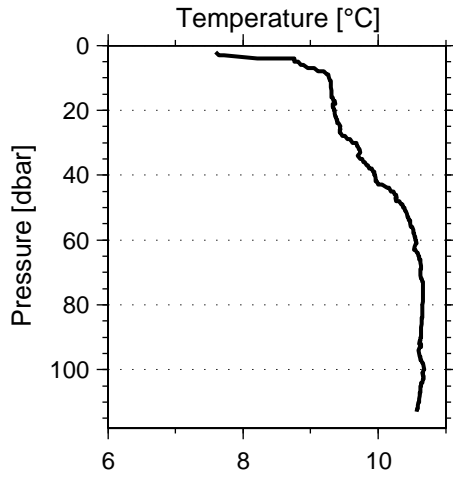
CRUISE	: Aysen September 2009	STATION	: CS	CAST	: 35
DATE	: 2009-09-26	LAT	: 45°27.405	Z-CTD	: 112.0 m
TIME	: 16:01	LON	: 72°54.744	DEPTH	: 165 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.598	2.132	1.560	7.297	0.524	-
3.0	7.719	3.236	2.422	8.037	0.533	-
4.0	8.759	16.273	12.528	7.028	0.565	-
6.0	8.896	20.583	15.868	6.503	1.234	-
8.0	9.198	25.832	19.922	5.603	0.333	-
10.0	9.273	27.637	21.319	5.330	0.207	-
12.0	9.298	28.136	21.705	5.442	0.169	-
14.0	9.312	28.250	21.792	5.334	0.144	-
16.0	9.324	28.366	21.881	5.268	0.127	-
18.0	9.332	28.506	21.989	5.335	0.116	-
20.0	9.352	28.713	22.148	5.298	0.105	-
22.0	9.372	28.777	22.195	5.239	0.100	-
24.0	9.415	28.926	22.304	5.267	0.089	-
26.0	9.435	29.055	22.402	5.162	0.080	-
28.0	9.512	29.192	22.497	5.004	0.076	-
30.0	9.676	29.326	22.576	4.928	0.074	-
35.0	9.763	29.528	22.721	4.801	0.071	-
40.0	9.955	29.759	22.870	4.578	0.068	-
45.0	10.231	29.954	22.977	4.069	0.065	-
50.0	10.385	30.187	23.134	3.771	0.065	-
60.0	10.560	30.481	23.334	3.529	0.065	-
70.0	10.629	30.724	23.511	3.217	0.065	-
80.0	10.658	30.866	23.617	2.696	0.066	-
90.0	10.630	30.946	23.684	2.540	0.066	-
100.0	10.669	31.076	23.779	2.804	0.065	-
112.0	10.582	31.175	23.870	2.508	0.066	-

Aysen September 2009
Station CS Cast 35



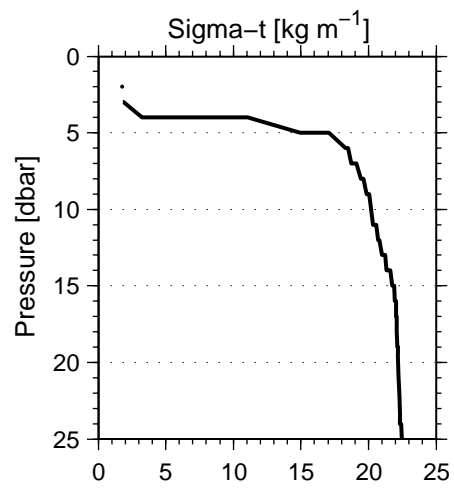
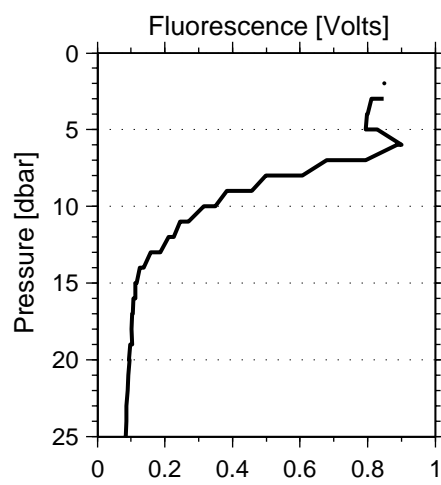
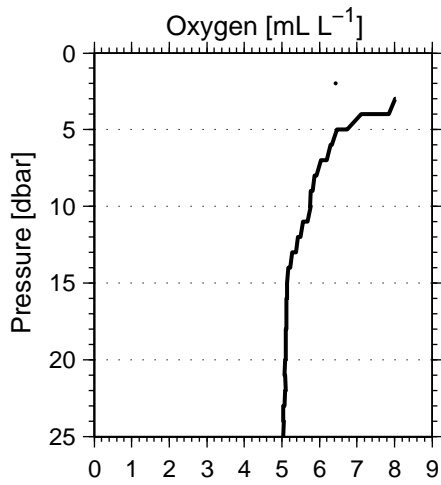
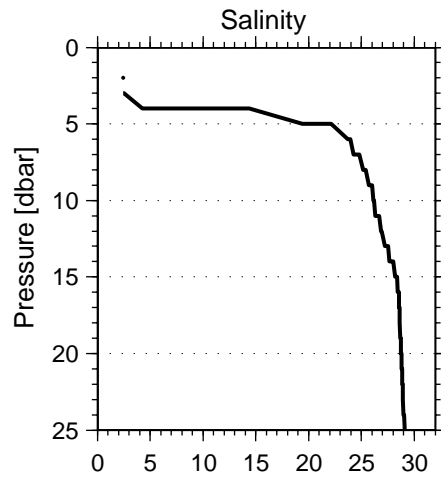
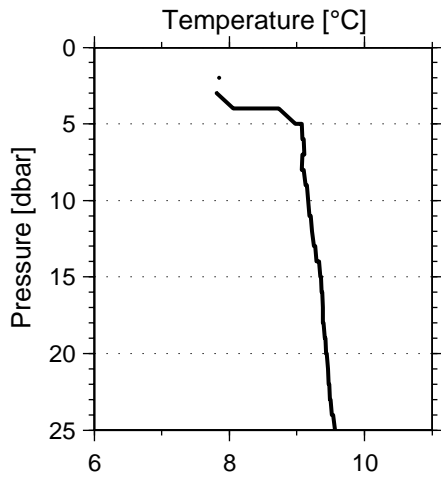
Aysen September 2009
Station CS Cast 35



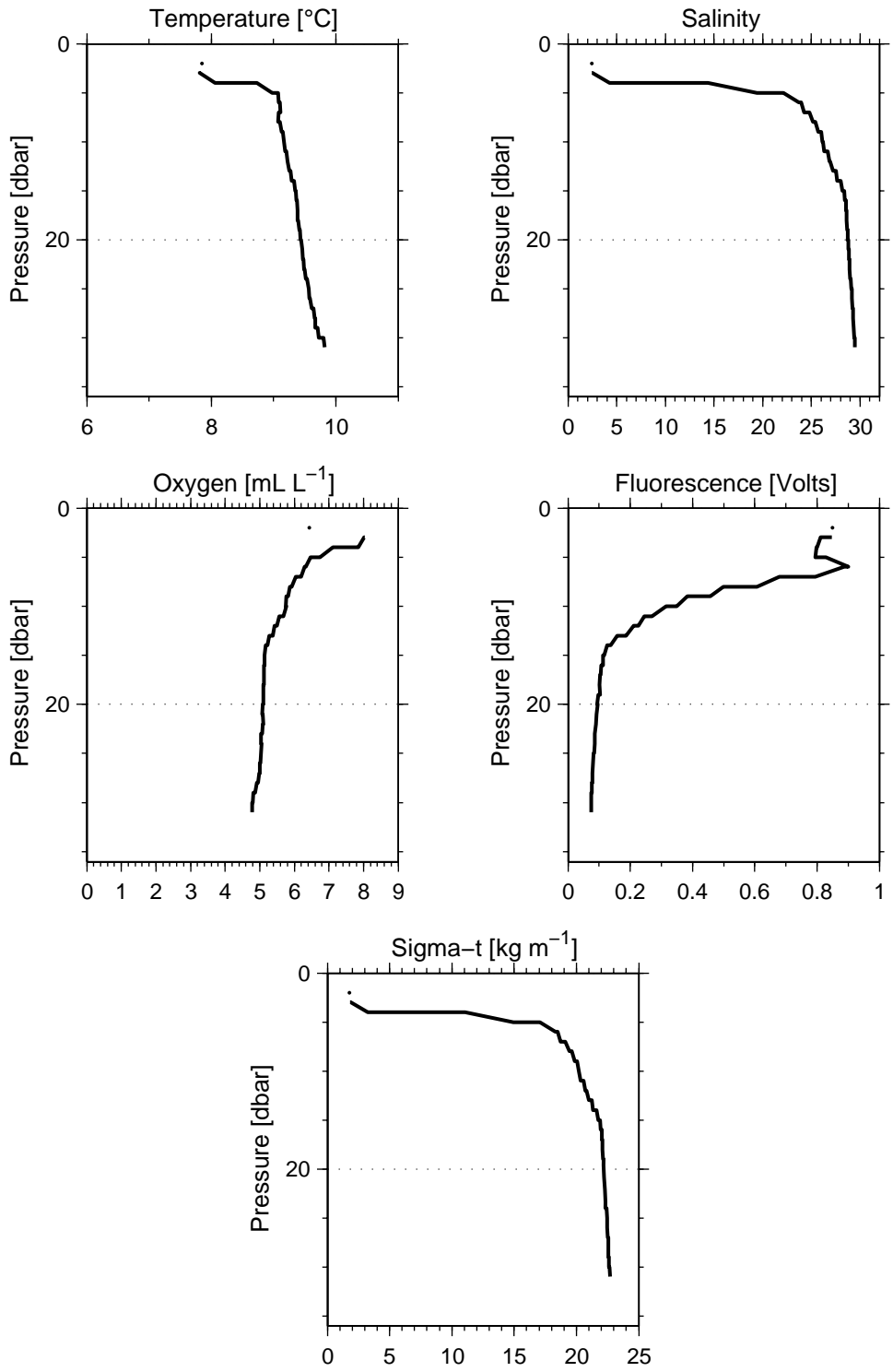
CRUISE	: Aysen September 2009	STATION	: CN	CAST	: 36
DATE	: 2009-09-26	LAT	: 45°25.654	Z-CTD	: 30.0 m
TIME	: 17:20	LON	: 72°54.568	DEPTH	: 50 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	7.812	2.522	1.855	8.015	0.812	-
4.0	8.735	14.399	11.065	7.111	0.798	-
6.0	9.099	23.979	18.491	6.295	0.888	-
8.0	9.102	25.424	19.618	5.865	0.498	-
10.0	9.170	26.200	20.213	5.774	0.316	-
12.0	9.224	26.944	20.786	5.429	0.211	-
14.0	9.327	28.050	21.634	5.168	0.127	-
16.0	9.378	28.563	22.027	5.122	0.108	-
18.0	9.395	28.644	22.087	5.111	0.101	-
20.0	9.440	28.793	22.197	5.090	0.095	-
22.0	9.478	28.915	22.286	5.093	0.090	-
24.0	9.538	29.075	22.402	5.052	0.086	-
26.0	9.587	29.193	22.487	5.009	0.080	-
28.0	9.666	29.326	22.578	4.921	0.077	-
30.0	9.800	29.479	22.677	4.788	0.074	-

Aysen September 2009
Station CN Cast 36



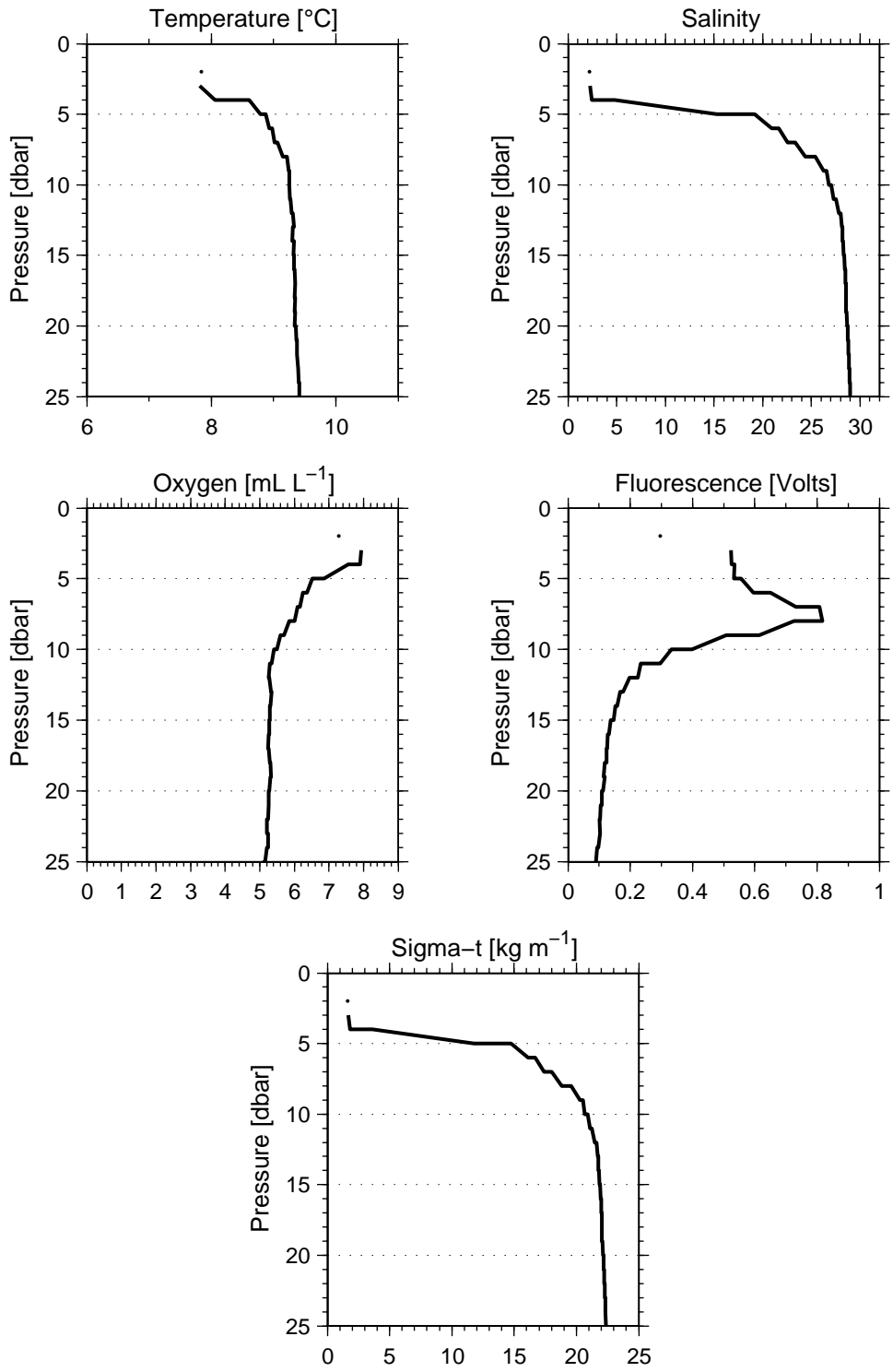
Aysen September 2009
Station CN Cast 36



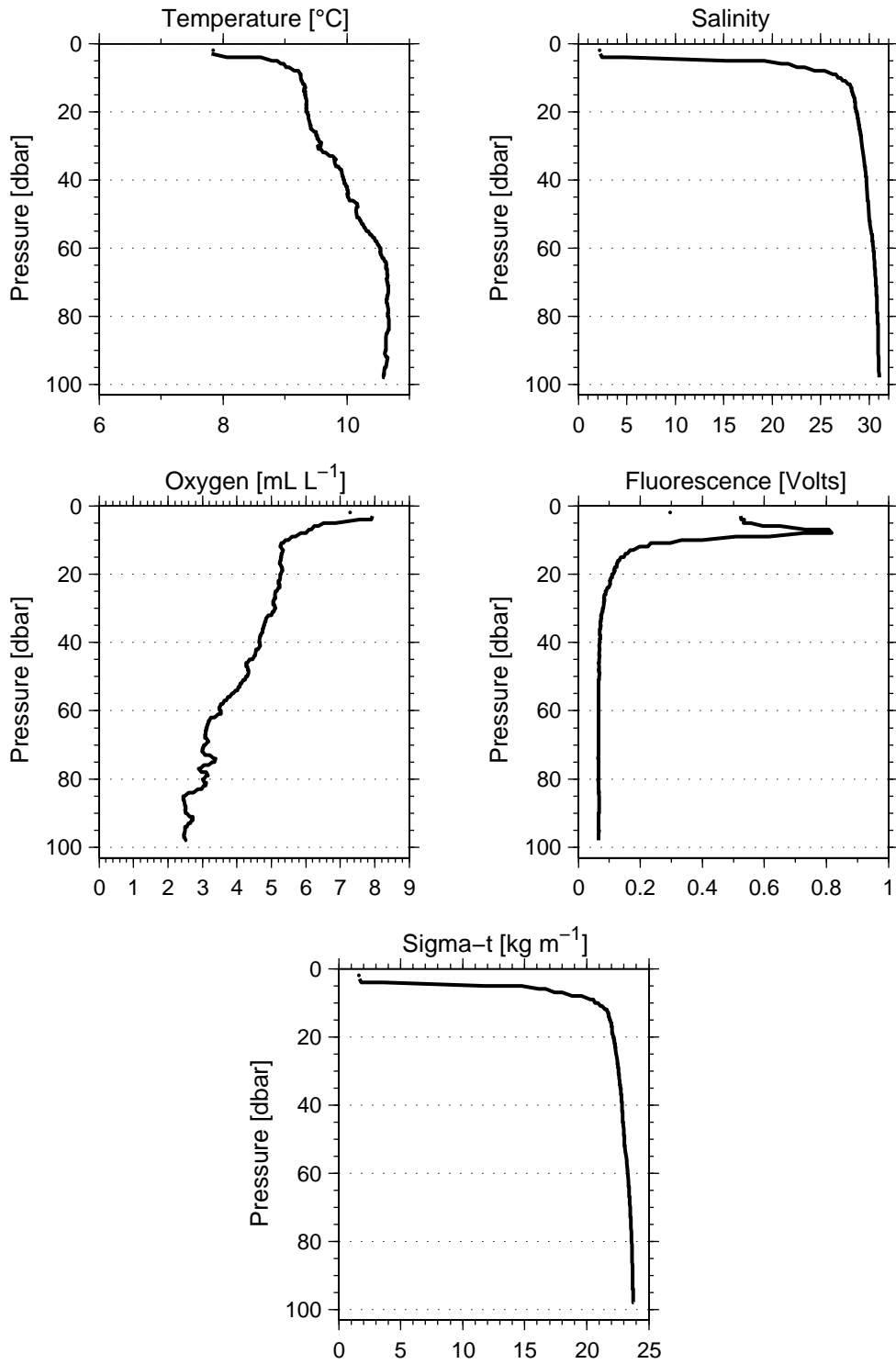
CRUISE	: Aysen September 2009	STATION	: CC	CAST	: 37
DATE	: 2009-09-26	LAT	: 45°26.720	Z-CTD	: 97.5 m
TIME	: 18:12	LON	: 72°54.676	DEPTH	: 182 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	7.811	2.286	1.669	7.939	0.524	-
4.0	8.612	4.846	3.617	7.568	0.535	-
6.0	8.975	21.656	16.695	6.256	0.651	-
8.0	9.211	25.409	19.590	5.864	0.725	-
10.0	9.255	27.072	20.882	5.416	0.333	-
12.0	9.306	28.008	21.604	5.277	0.199	-
14.0	9.328	28.266	21.802	5.294	0.153	-
16.0	9.337	28.485	21.972	5.253	0.128	-
18.0	9.350	28.581	22.045	5.317	0.119	-
20.0	9.356	28.748	22.174	5.265	0.109	-
22.0	9.379	28.866	22.263	5.215	0.101	-
24.0	9.416	28.981	22.347	5.206	0.094	-
26.0	9.496	29.115	22.440	5.113	0.085	-
28.0	9.534	29.200	22.500	5.055	0.083	-
30.0	9.524	29.284	22.567	5.098	0.079	-
35.0	9.803	29.554	22.734	4.779	0.073	-
40.0	9.951	29.718	22.839	4.662	0.068	-
45.0	10.023	29.840	22.923	4.367	0.067	-
50.0	10.155	30.000	23.026	4.277	0.067	-
60.0	10.539	30.446	23.310	3.536	0.065	-
70.0	10.653	30.707	23.494	3.039	0.066	-
80.0	10.666	30.880	23.626	3.004	0.064	-
90.0	10.613	30.948	23.688	2.543	0.066	-
97.5	10.588	31.046	23.769	2.509	0.066	-

Aysen September 2009
Station CC Cast 37



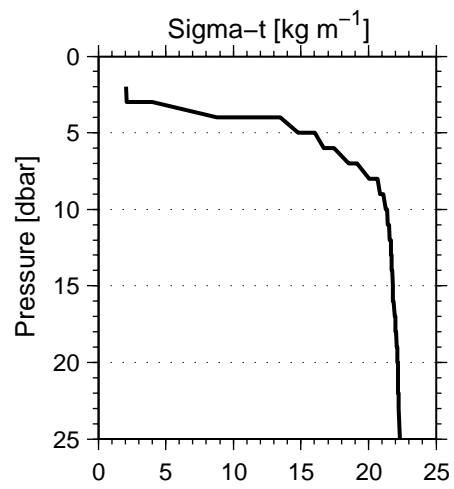
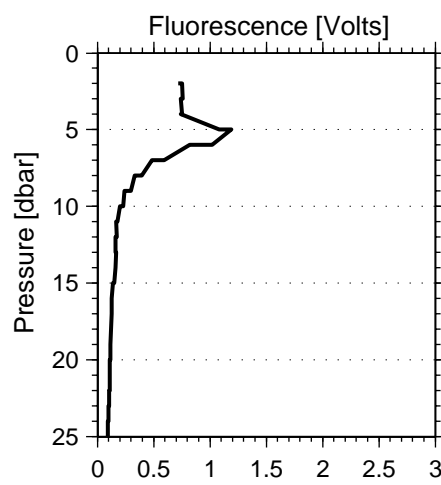
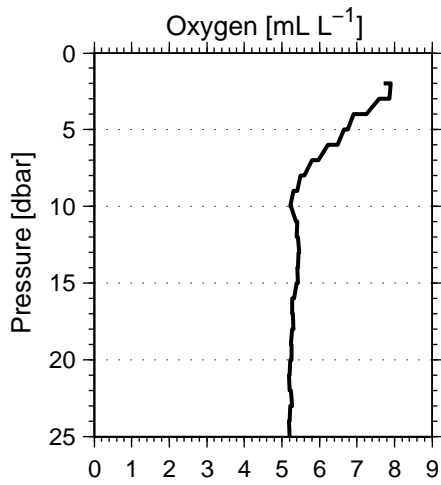
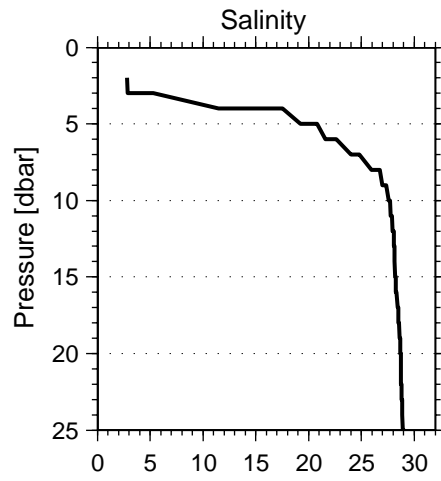
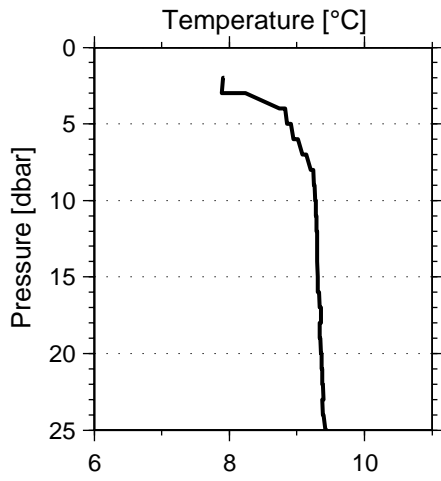
Aysen September 2009
Station CC Cast 37



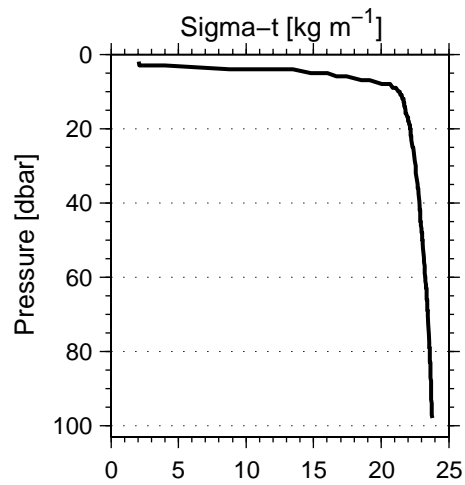
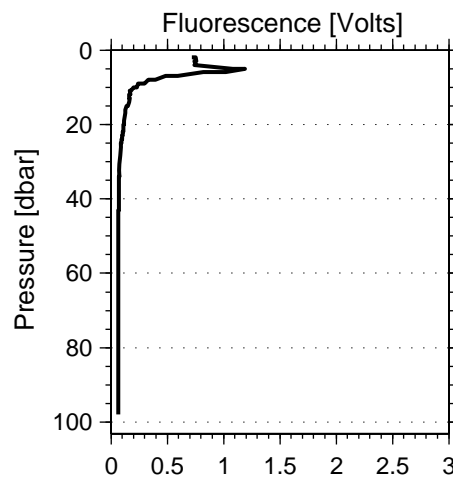
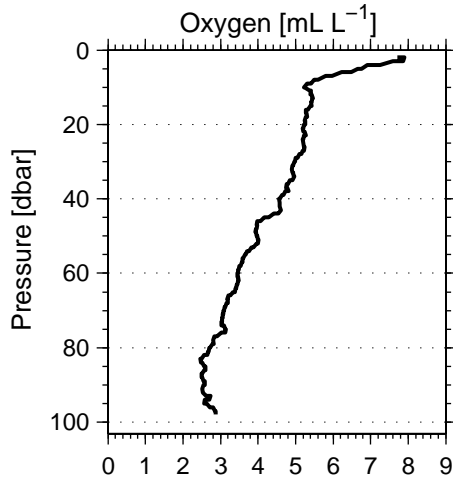
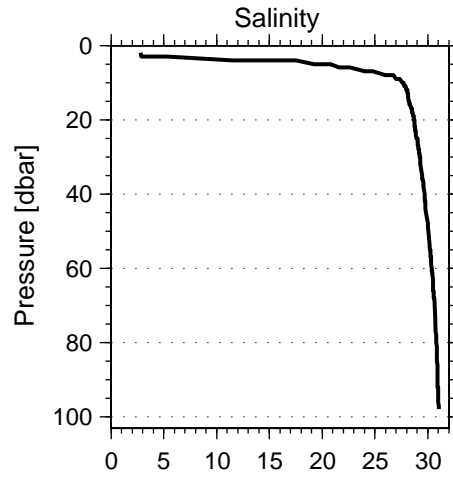
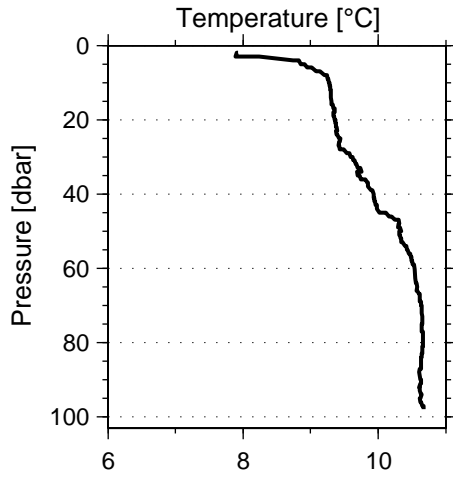
CRUISE	: Aysen September 2009	STATION	: CS	CAST	: 39
DATE	: 2009-09-26	LAT	: 45°27.399	Z-CTD	: 97.0 m
TIME	: 18:53	LON	: 72°54.819	DEPTH	: 165 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.905	2.811	2.076	7.896	0.753	-
3.0	8.243	5.323	4.018	7.598	0.739	-
4.0	8.824	17.526	13.494	6.913	0.740	-
6.0	9.015	22.623	17.444	6.233	0.821	-
8.0	9.240	26.780	20.656	5.493	0.334	-
10.0	9.277	27.721	21.384	5.233	0.200	-
12.0	9.300	28.070	21.654	5.423	0.164	-
14.0	9.303	28.173	21.733	5.407	0.159	-
16.0	9.324	28.349	21.868	5.281	0.127	-
18.0	9.337	28.559	22.029	5.270	0.121	-
20.0	9.362	28.750	22.175	5.228	0.112	-
22.0	9.388	28.801	22.211	5.240	0.107	-
24.0	9.397	28.908	22.293	5.195	0.094	-
26.0	9.421	29.077	22.422	5.238	0.088	-
28.0	9.488	29.166	22.481	5.108	0.082	-
30.0	9.621	29.280	22.549	4.964	0.077	-
35.0	9.723	29.491	22.698	4.852	0.071	-
40.0	9.933	29.718	22.842	4.563	0.069	-
45.0	10.119	29.876	22.935	4.161	0.066	-
50.0	10.317	30.081	23.062	3.980	0.065	-
60.0	10.545	30.408	23.279	3.444	0.065	-
70.0	10.642	30.678	23.473	3.085	0.065	-
80.0	10.661	30.846	23.601	2.701	0.066	-
90.0	10.632	30.955	23.690	2.544	0.066	-
97.0	10.670	31.060	23.765	2.875	0.065	-

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Station CS Cast 39



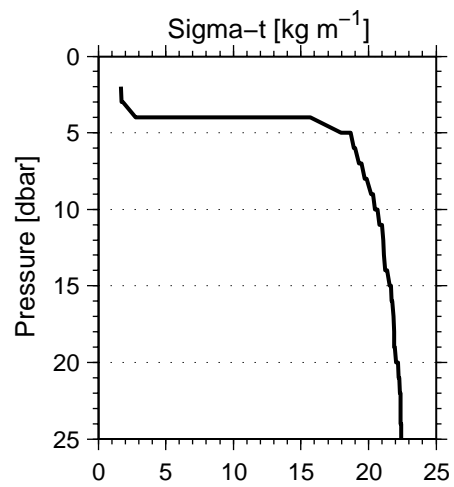
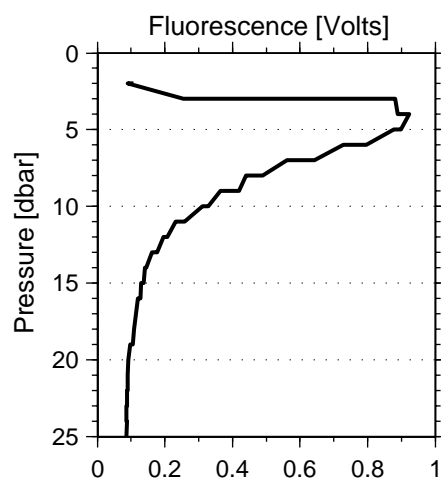
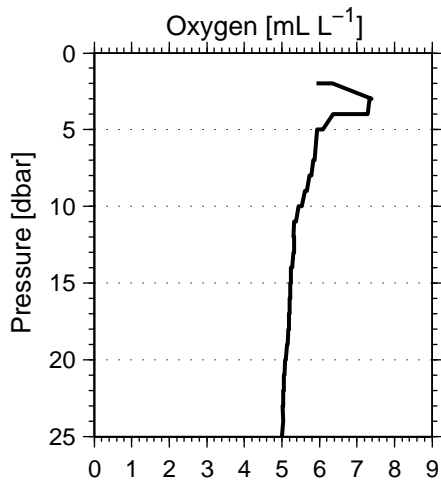
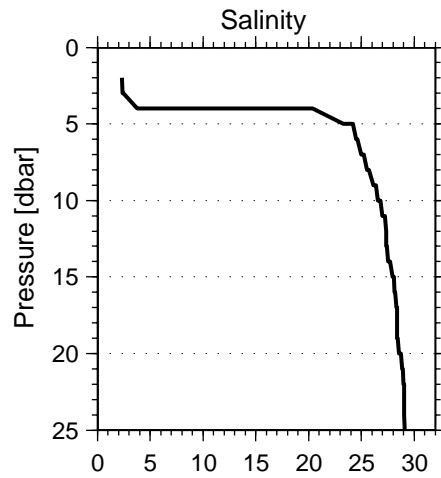
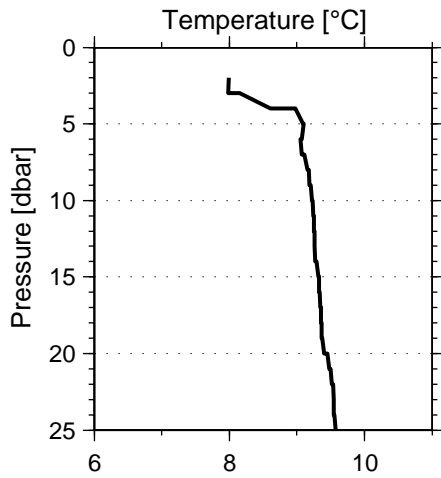
Aysen September 2009
Station CS Cast 39



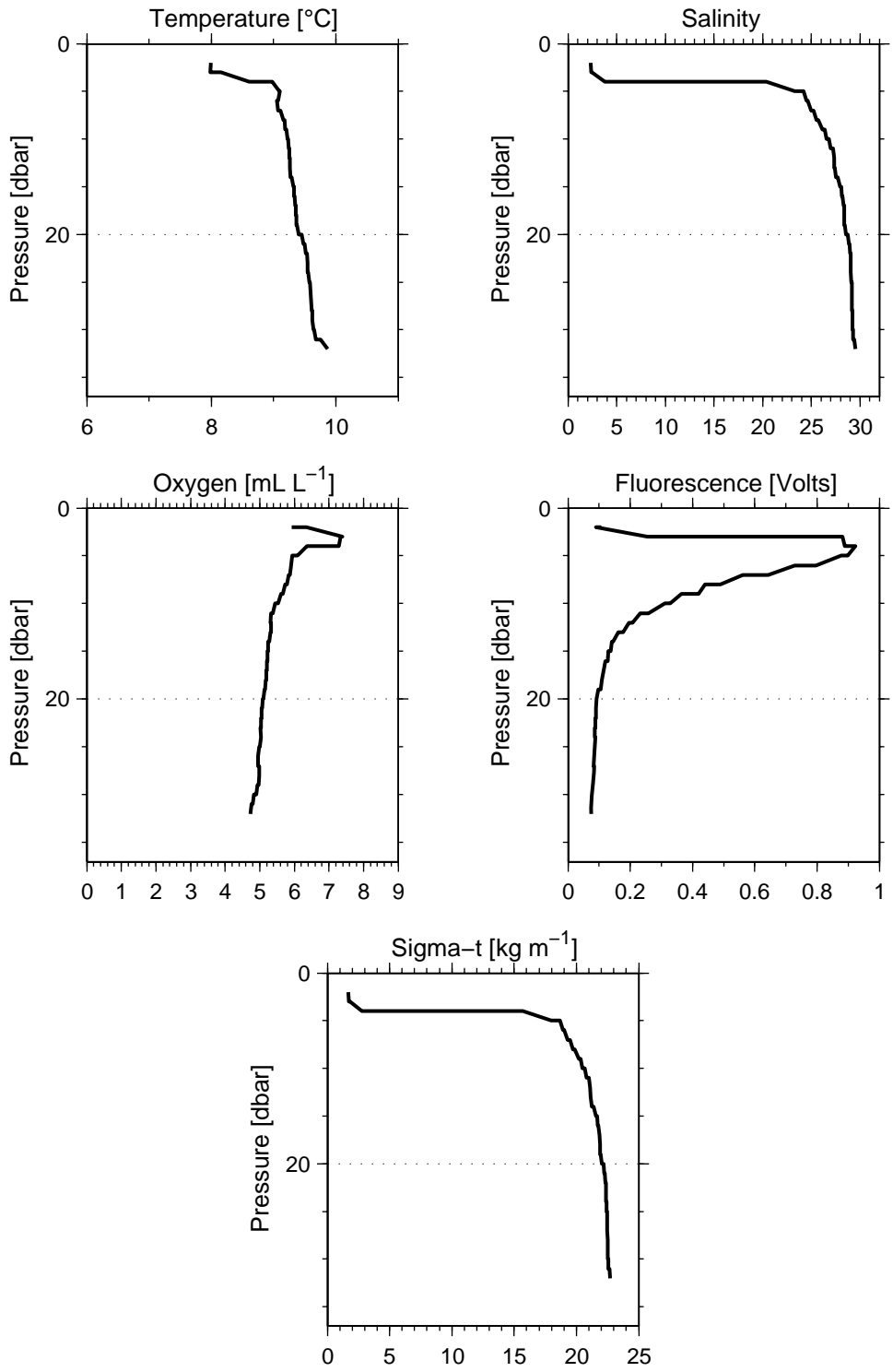
CRUISE	: Aysen September 2009	STATION	: CN	CAST	: 40
DATE	: 2009-09-26	LAT	: 45°25.728	Z-CTD	: 31.0 m
TIME	: 20:40	LON	: 72°54.622	DEPTH	: 50 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.990	2.333	1.694	6.353	0.090	-
3.0	8.158	2.483	1.800	7.344	0.881	-
4.0	8.976	20.372	15.693	6.363	0.924	-
6.0	9.057	24.653	19.022	5.914	0.728	-
8.0	9.176	25.755	19.865	5.729	0.440	-
10.0	9.235	26.796	20.669	5.446	0.311	-
12.0	9.258	27.368	21.112	5.320	0.195	-
14.0	9.291	27.736	21.394	5.249	0.141	-
16.0	9.334	28.195	21.746	5.214	0.121	-
18.0	9.364	28.388	21.892	5.180	0.109	-
20.0	9.456	28.770	22.177	5.085	0.092	-
22.0	9.536	29.031	22.368	5.035	0.089	-
24.0	9.554	29.087	22.408	5.029	0.088	-
26.0	9.598	29.181	22.475	4.948	0.084	-
28.0	9.619	29.226	22.507	4.984	0.082	-
30.0	9.651	29.275	22.541	4.839	0.076	-
31.0	9.754	29.414	22.633	4.765	0.076	-

Aysen September 2009
Station CN Cast 40



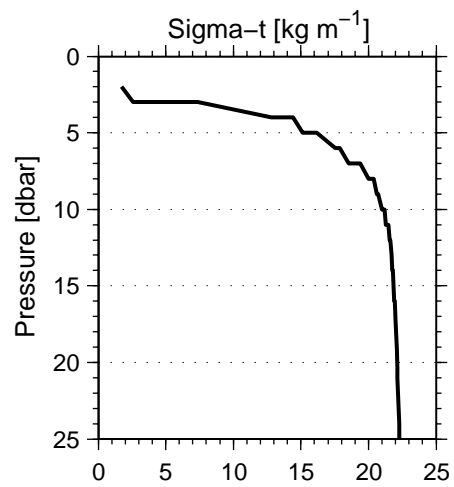
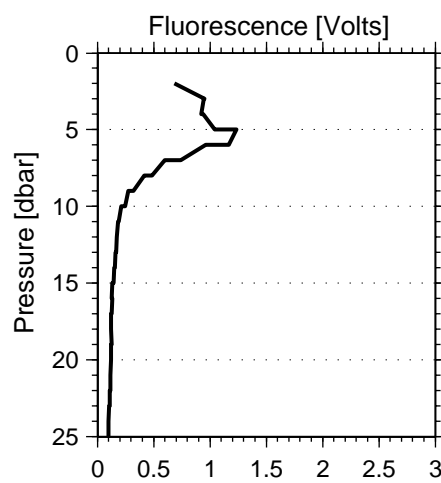
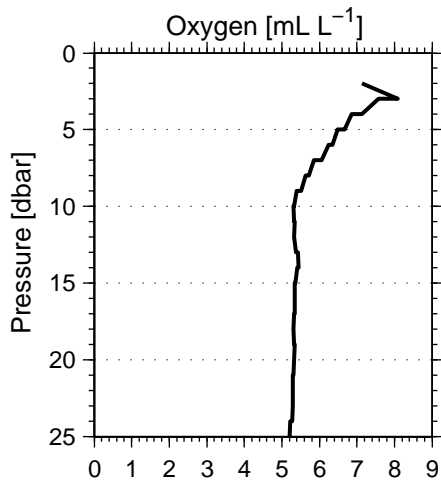
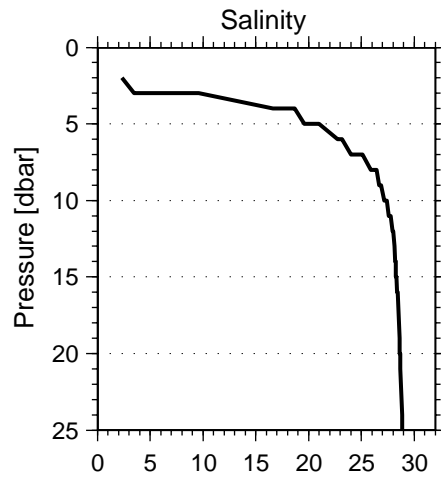
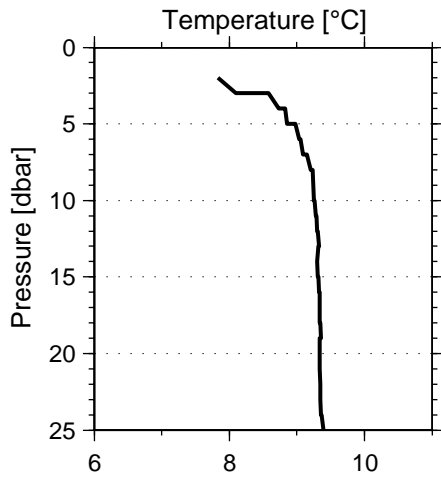
Aysen September 2009
Station CN Cast 40



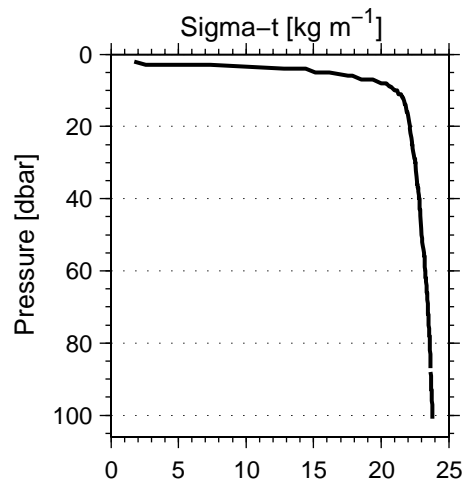
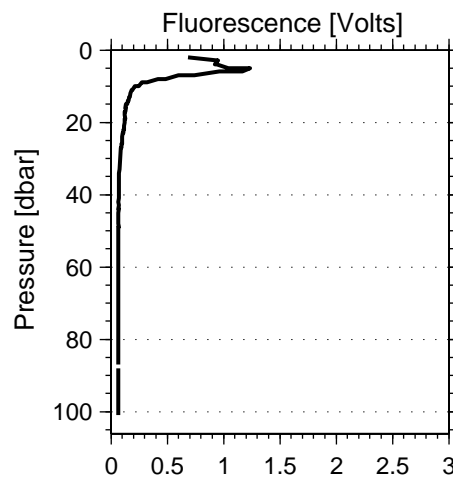
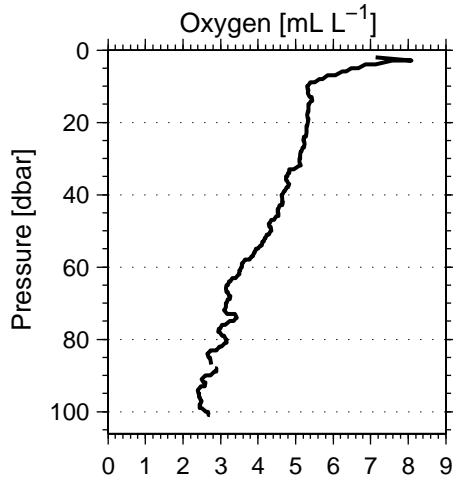
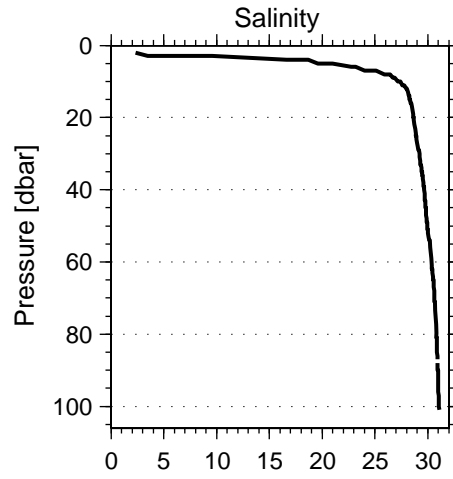
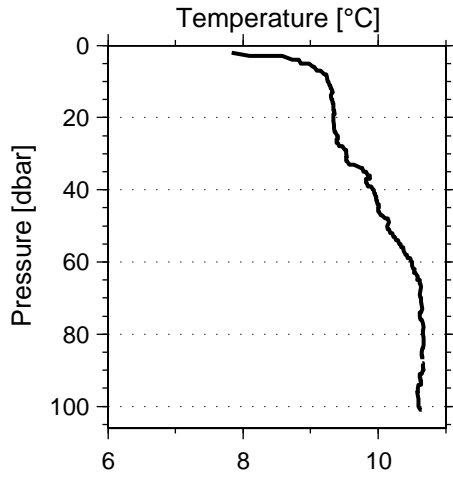
CRUISE	: Aysen September 2009	STATION	: CC	CAST	: 41
DATE	: 2009-09-26	LAT	: 45°26.624	Z-CTD	: 100.5 m
TIME	: 21:05	LON	: 72°54.731	DEPTH	: 182 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.829	2.349	1.718	7.135	0.687	-
3.0	8.579	9.625	7.355	7.580	0.946	-
4.0	8.824	18.712	14.419	6.865	0.942	-
6.0	9.055	23.158	17.856	6.255	0.962	-
8.0	9.236	26.451	20.400	5.629	0.415	-
10.0	9.266	27.444	21.170	5.318	0.211	-
12.0	9.307	28.043	21.631	5.322	0.176	-
14.0	9.304	28.247	21.791	5.416	0.149	-
16.0	9.338	28.467	21.957	5.340	0.132	-
18.0	9.344	28.588	22.051	5.313	0.120	-
20.0	9.340	28.690	22.131	5.322	0.124	-
22.0	9.348	28.768	22.191	5.292	0.112	-
24.0	9.368	28.871	22.269	5.231	0.102	-
26.0	9.383	28.968	22.342	5.240	0.095	-
28.0	9.469	29.088	22.423	5.132	0.086	-
30.0	9.526	29.250	22.540	5.106	0.081	-
35.0	9.821	29.464	22.661	4.754	0.071	-
40.0	9.939	29.694	22.822	4.629	0.070	-
45.0	10.000	29.824	22.914	4.542	0.068	-
50.0	10.129	29.965	23.003	4.332	0.068	-
60.0	10.504	30.379	23.264	3.557	0.065	-
70.0	10.631	30.648	23.452	3.149	0.065	-
80.0	10.667	30.839	23.594	3.159	0.065	-
90.0	10.660	30.970	23.697	2.599	0.066	-
100.0	10.602	31.088	23.799	2.674	0.066	-
100.5	10.623	31.097	23.803	2.690	0.066	-

Aysen September 2009
Station CC Cast 41



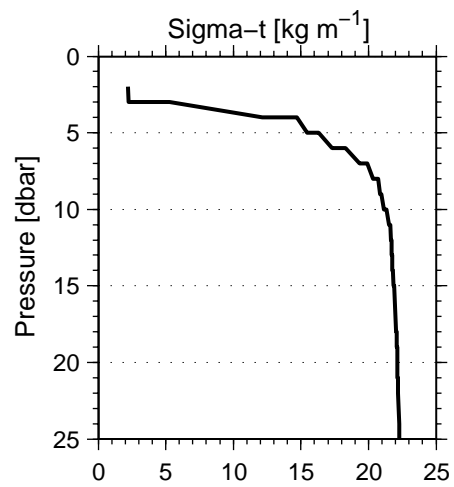
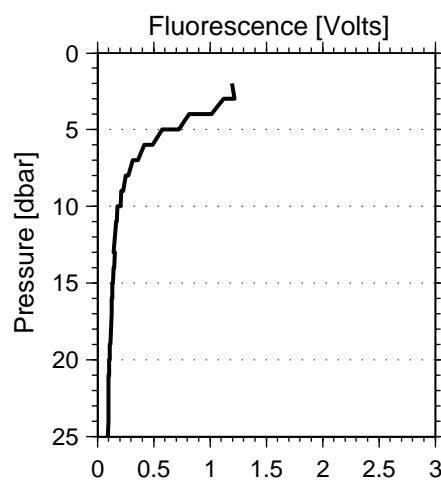
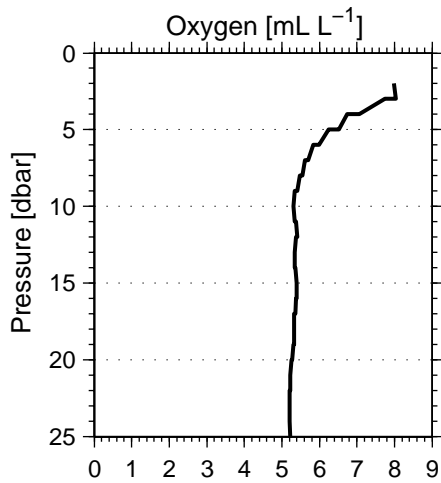
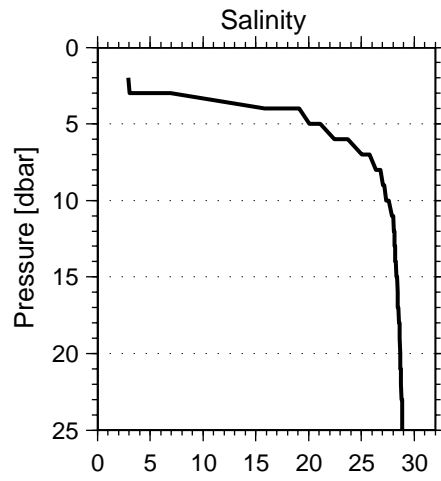
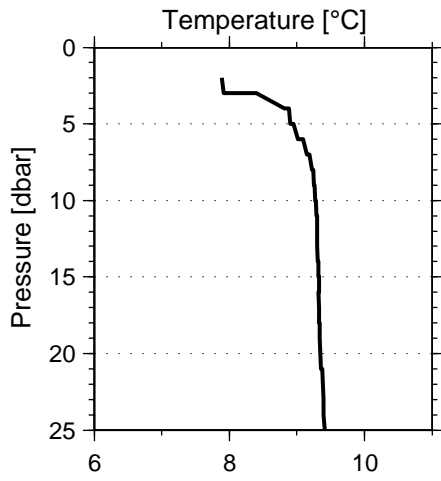
Aysen September 2009
Station CC Cast 41



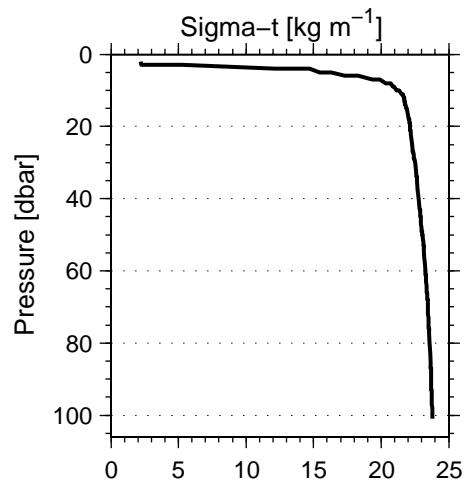
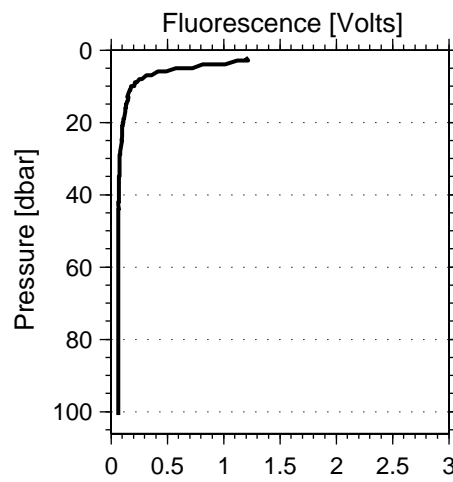
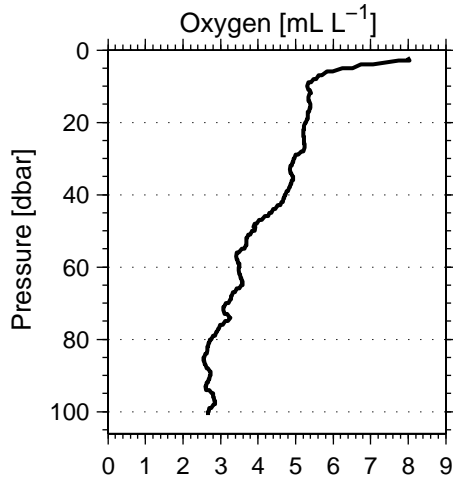
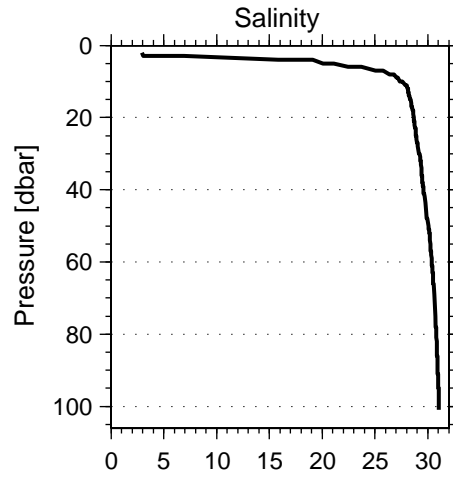
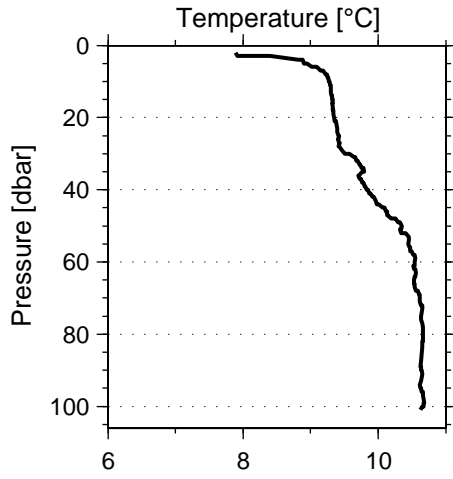
CRUISE	: Aysen September 2009	STATION	: CS	CAST	: 42
DATE	: 2009-09-26	LAT	: 45°27.316	Z-CTD	: 100.0 m
TIME	: 21:45	LON	: 72°54.865	DEPTH	: 165 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.888	2.943	2.181	7.986	1.199	-
3.0	8.398	6.936	5.269	7.750	1.119	-
4.0	8.880	19.101	14.715	6.734	0.818	-
6.0	9.088	23.716	18.287	5.840	0.418	-
8.0	9.244	26.841	20.703	5.474	0.252	-
10.0	9.278	27.626	21.310	5.312	0.180	-
12.0	9.302	28.130	21.700	5.378	0.155	-
14.0	9.320	28.276	21.811	5.367	0.143	-
16.0	9.324	28.452	21.948	5.380	0.130	-
18.0	9.337	28.615	22.073	5.333	0.120	-
20.0	9.350	28.699	22.137	5.252	0.106	-
22.0	9.387	28.784	22.198	5.209	0.099	-
24.0	9.397	28.877	22.269	5.220	0.100	-
26.0	9.409	28.957	22.329	5.240	0.092	-
28.0	9.424	29.076	22.420	5.149	0.082	-
30.0	9.574	29.243	22.528	4.944	0.078	-
35.0	9.766	29.449	22.658	4.930	0.072	-
40.0	9.849	29.613	22.773	4.705	0.069	-
45.0	10.100	29.859	22.925	4.310	0.066	-
50.0	10.355	30.097	23.069	3.847	0.066	-
60.0	10.542	30.413	23.284	3.492	0.065	-
70.0	10.618	30.662	23.464	3.152	0.065	-
80.0	10.665	30.830	23.588	2.724	0.066	-
90.0	10.647	30.963	23.694	2.716	0.066	-
100.0	10.658	31.080	23.784	2.672	0.065	-

Aysen September 2009
Station CS Cast 42



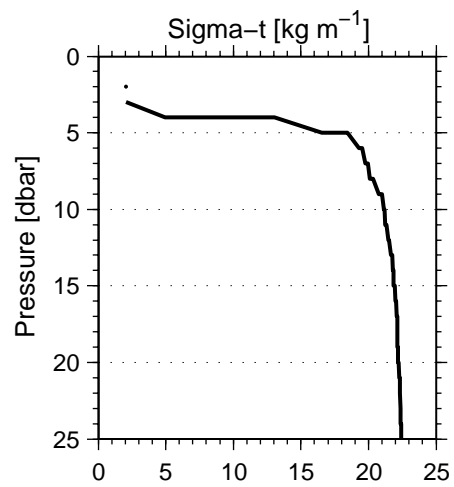
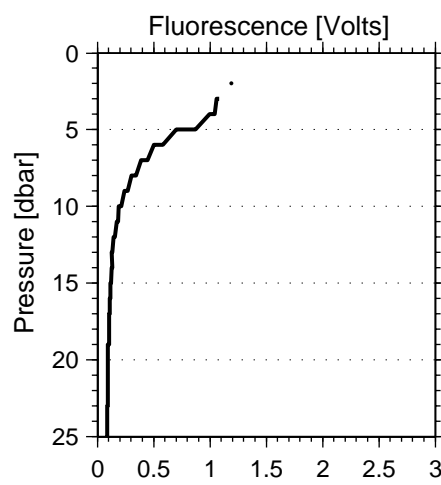
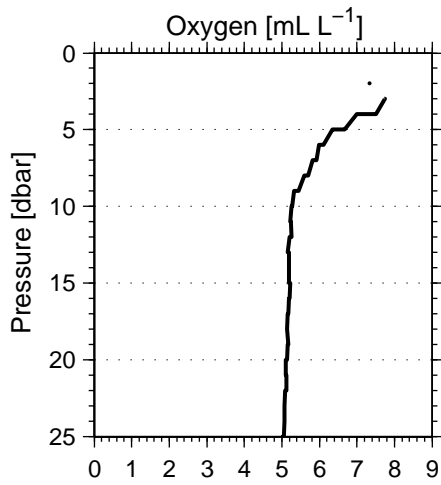
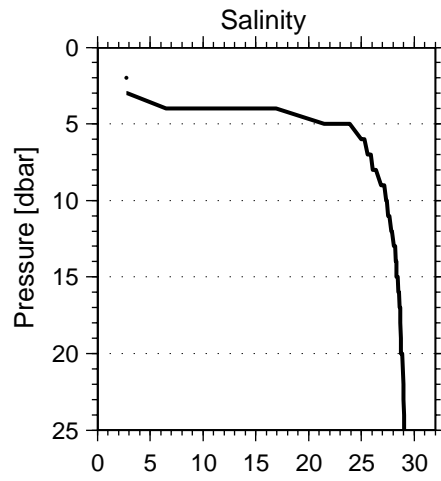
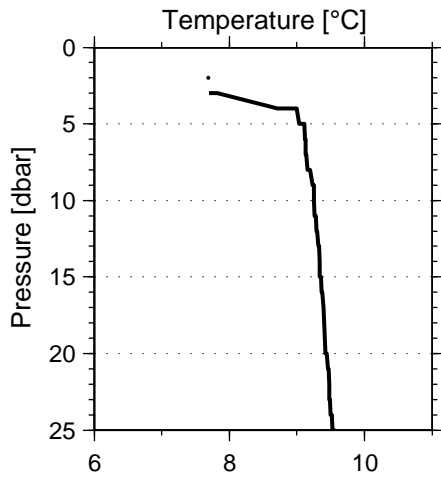
Aysen September 2009
Station CS Cast 42



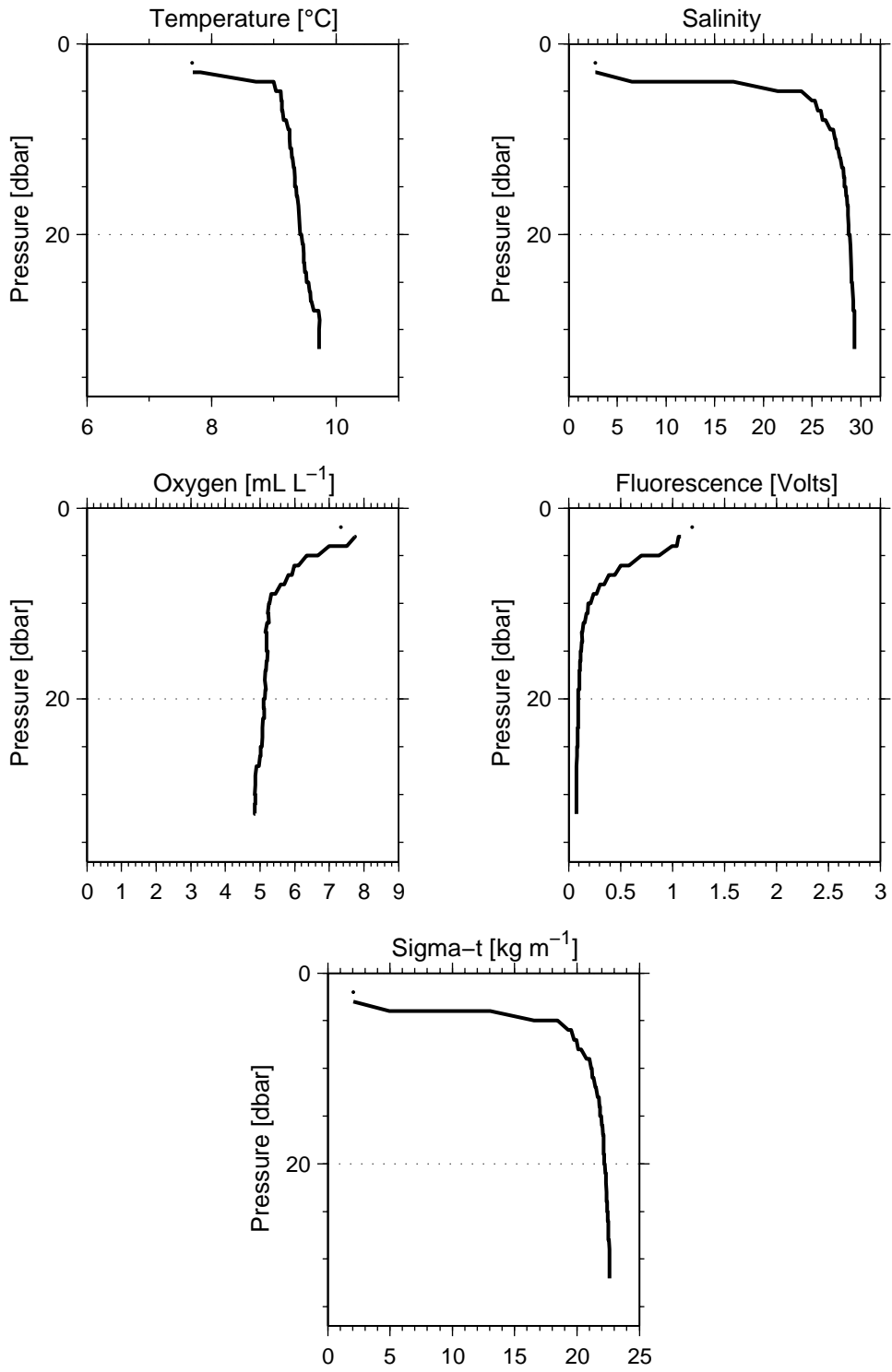
CRUISE	: Aysen September 2009	STATION	: CN	CAST	: 43
DATE	: 2009-09-27	LAT	: 45°25.740	Z-CTD	: 31.5 m
TIME	: 00:15	LON	: 72°54.707	DEPTH	: 50 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	7.819	2.799	2.072	7.745	1.058	-
4.0	8.999	16.962	13.033	7.001	0.998	-
6.0	9.127	25.303	19.520	5.992	0.505	-
8.0	9.191	26.364	20.338	5.596	0.306	-
10.0	9.257	27.442	21.169	5.253	0.191	-
12.0	9.301	27.917	21.534	5.213	0.143	-
14.0	9.337	28.330	21.851	5.182	0.125	-
16.0	9.380	28.597	22.053	5.191	0.109	-
18.0	9.404	28.717	22.143	5.145	0.105	-
20.0	9.447	28.861	22.249	5.112	0.096	-
22.0	9.479	28.991	22.346	5.092	0.093	-
24.0	9.519	29.073	22.403	5.074	0.087	-
26.0	9.588	29.205	22.496	5.011	0.080	-
28.0	9.714	29.340	22.581	4.866	0.076	-
30.0	9.728	29.376	22.607	4.867	0.079	-
31.5	9.728	29.384	22.613	4.850	0.076	-

Aysen September 2009
Station CN Cast 43



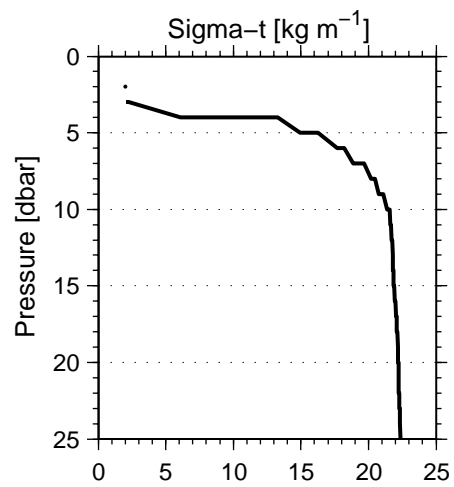
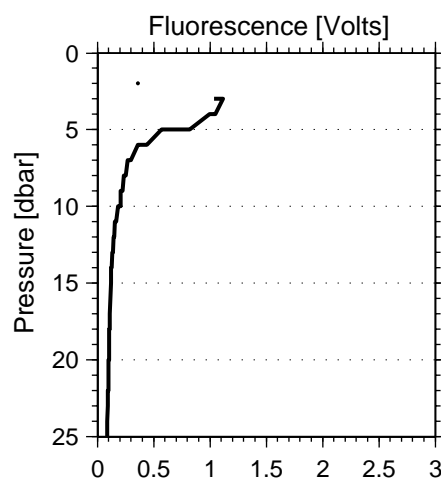
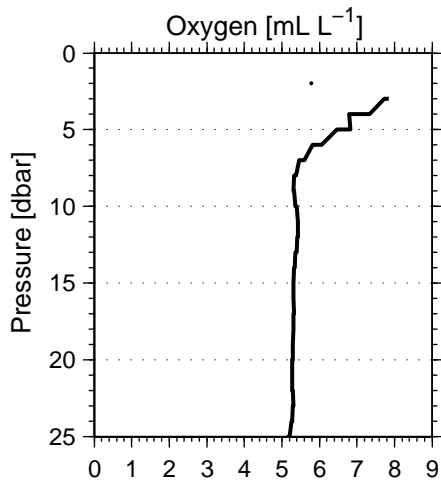
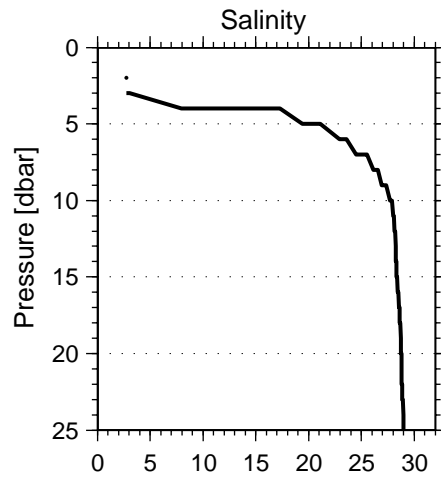
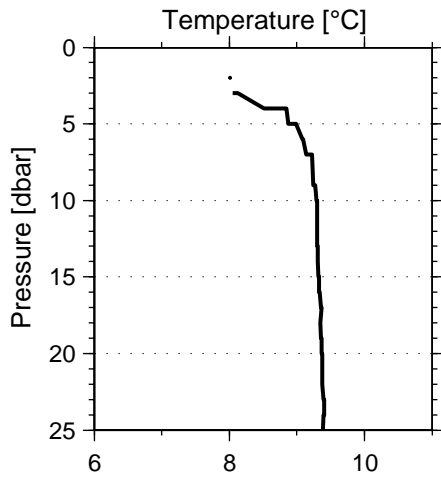
Aysen September 2009
Station CN Cast 43



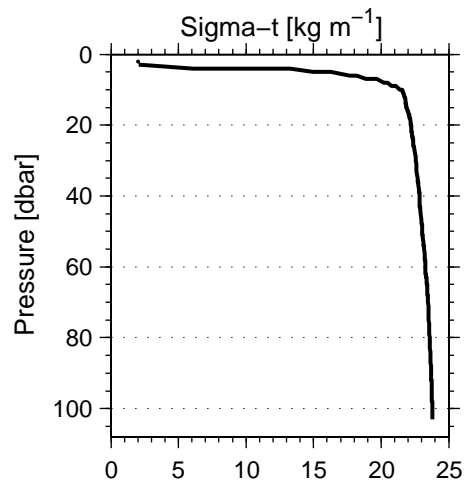
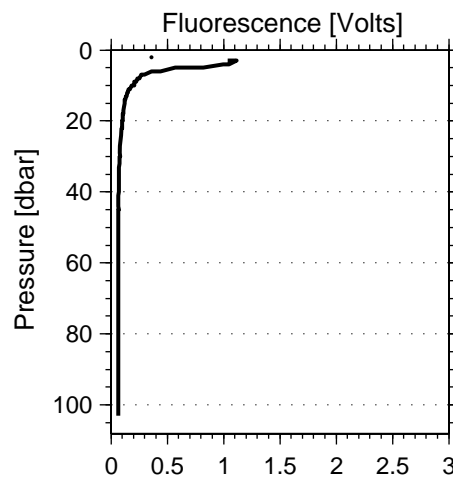
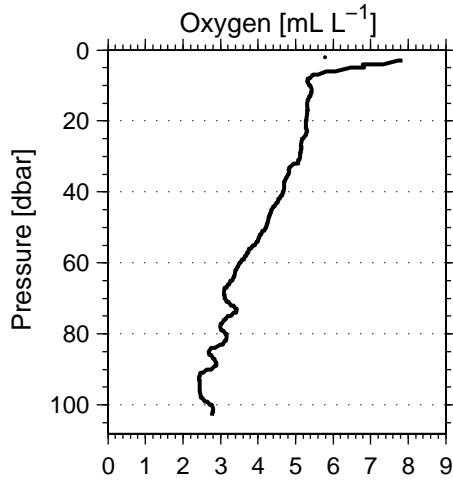
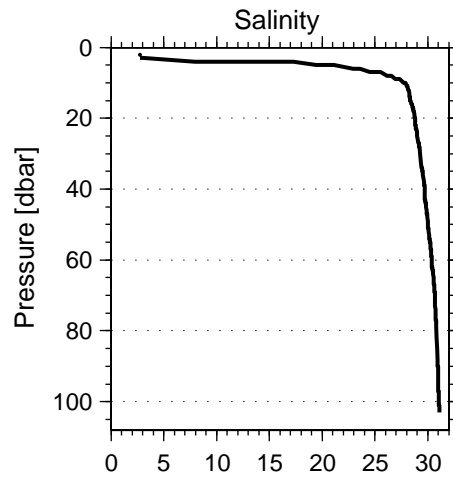
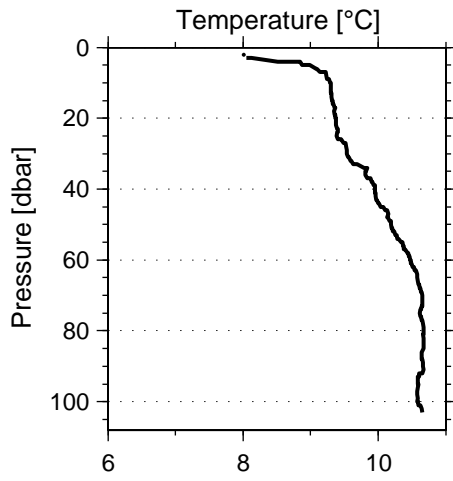
CRUISE	: Aysen September 2009	STATION	: CC	CAST	: 44
DATE	: 2009-09-27	LAT	: 45°26.609	Z-CTD	: 102.5 m
TIME	: 00:35	LON	: 72°54.854	DEPTH	: 182 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	8.122	3.077	2.270	7.724	1.119	-
4.0	8.842	17.275	13.297	6.793	0.999	-
6.0	9.088	23.636	18.224	5.818	0.361	-
8.0	9.237	26.566	20.489	5.328	0.234	-
10.0	9.298	27.935	21.549	5.397	0.187	-
12.0	9.301	28.200	21.755	5.417	0.144	-
14.0	9.310	28.317	21.845	5.319	0.123	-
16.0	9.339	28.513	21.994	5.317	0.114	-
18.0	9.347	28.713	22.149	5.302	0.106	-
20.0	9.375	28.797	22.210	5.277	0.102	-
22.0	9.374	28.867	22.264	5.295	0.096	-
24.0	9.395	28.993	22.360	5.252	0.087	-
26.0	9.447	29.070	22.412	5.149	0.083	-
28.0	9.530	29.230	22.524	5.145	0.084	-
30.0	9.538	29.296	22.574	5.114	0.079	-
35.0	9.812	29.519	22.705	4.796	0.069	-
40.0	9.953	29.710	22.832	4.669	0.068	-
45.0	10.079	29.873	22.939	4.356	0.068	-
50.0	10.192	30.028	23.041	4.195	0.066	-
60.0	10.483	30.399	23.283	3.508	0.065	-
70.0	10.656	30.689	23.480	3.132	0.065	-
80.0	10.670	30.832	23.588	3.156	0.065	-
90.0	10.667	30.976	23.701	2.638	0.066	-
100.0	10.587	31.072	23.789	2.771	0.066	-
102.5	10.654	31.111	23.808	2.777	0.066	-

Aysen September 2009
Station CC Cast 44



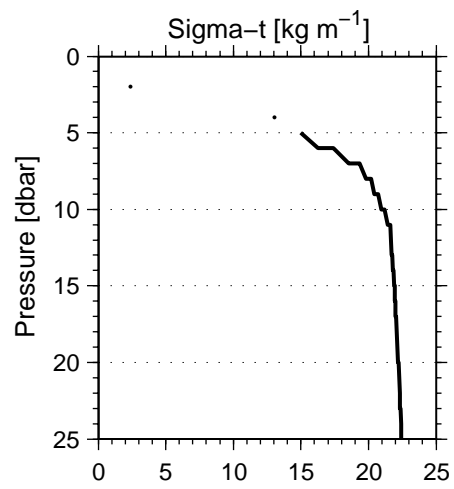
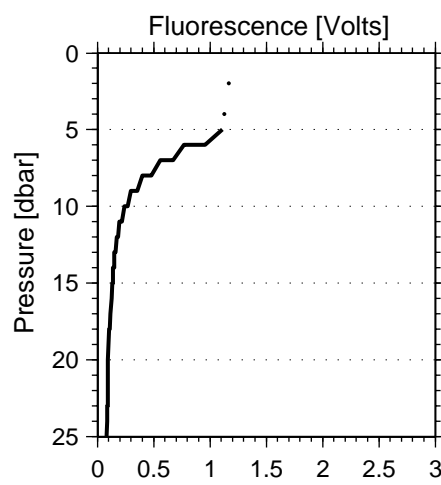
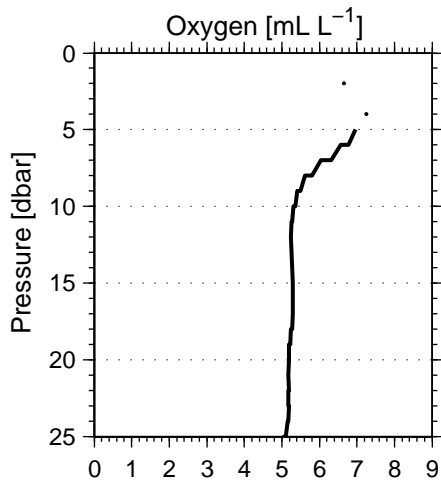
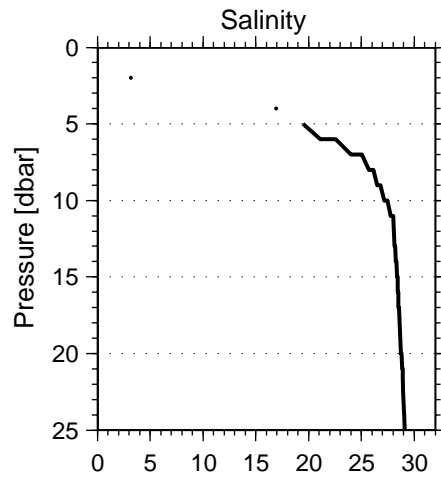
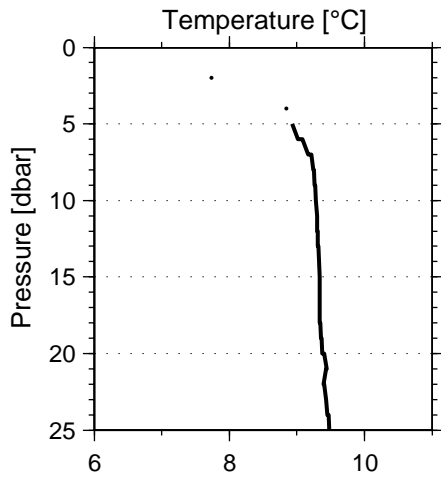
Aysen September 2009
Station CC Cast 44



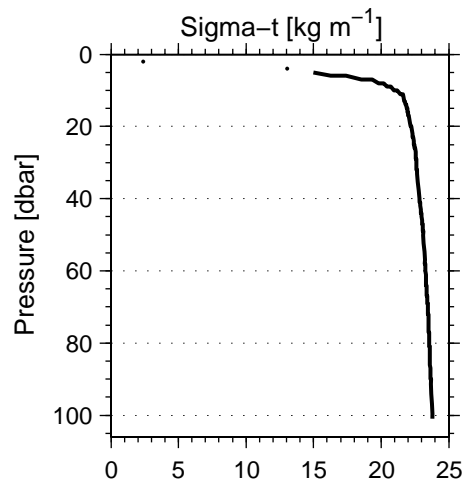
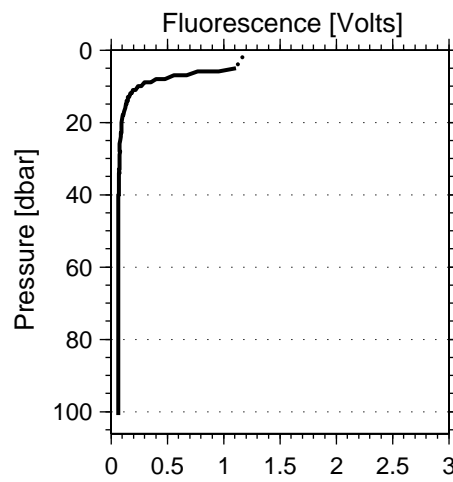
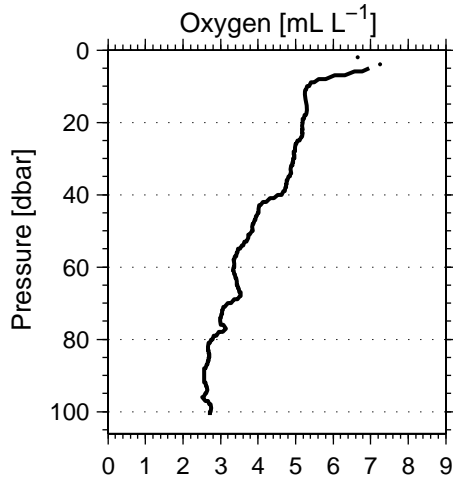
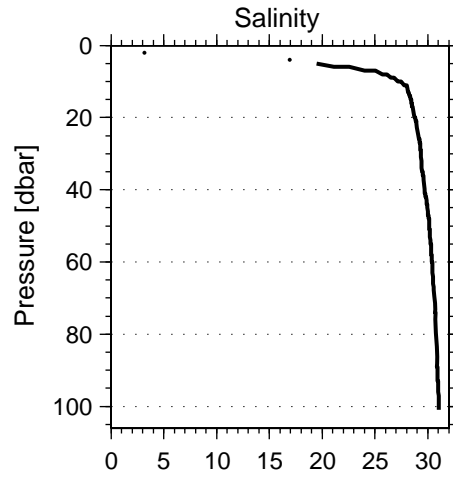
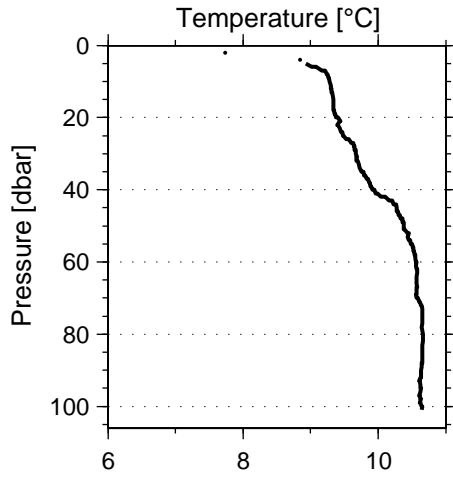
CRUISE	: Aysen September 2009	STATION	: CS	CAST	: 45
DATE	: 2009-09-27	LAT	: 45°27.299	Z-CTD	: 100.0 m
TIME	: 01:00	LON	: 72°54.868	DEPTH	: 165 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.738	3.207	2.399	6.659	1.166	-
3.0	-	-	-	-	-	-
4.0	8.850	16.962	13.062	7.253	1.127	-
6.0	9.087	22.584	17.404	6.578	0.768	-
8.0	9.250	26.174	20.182	5.617	0.401	-
10.0	9.286	27.474	21.191	5.313	0.240	-
12.0	9.305	28.112	21.685	5.241	0.173	-
14.0	9.333	28.351	21.868	5.284	0.141	-
16.0	9.337	28.499	21.983	5.286	0.127	-
18.0	9.344	28.646	22.097	5.246	0.104	-
20.0	9.402	28.812	22.217	5.185	0.094	-
22.0	9.408	28.957	22.329	5.181	0.092	-
24.0	9.471	29.084	22.419	5.159	0.086	-
26.0	9.570	29.230	22.518	4.997	0.079	-
28.0	9.649	29.313	22.571	4.954	0.081	-
30.0	9.672	29.361	22.604	4.938	0.077	-
35.0	9.781	29.534	22.722	4.816	0.072	-
40.0	9.941	29.729	22.849	4.527	0.067	-
45.0	10.279	29.996	23.002	3.991	0.067	-
50.0	10.378	30.174	23.125	3.836	0.065	-
60.0	10.565	30.427	23.290	3.353	0.065	-
70.0	10.585	30.656	23.466	3.190	0.065	-
80.0	10.664	30.808	23.571	2.747	0.066	-
90.0	10.633	30.940	23.679	2.568	0.066	-
100.0	10.651	31.084	23.787	2.720	0.066	-

Aysen September 2009
Station CS Cast 45



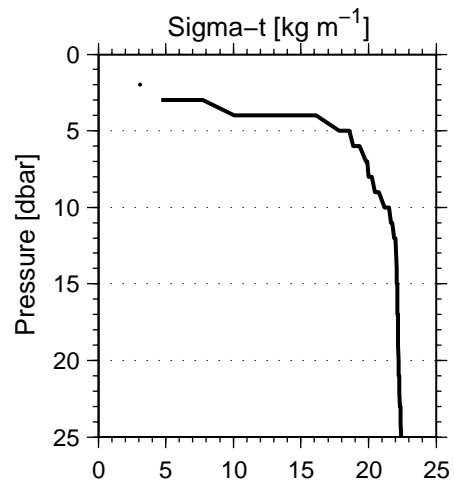
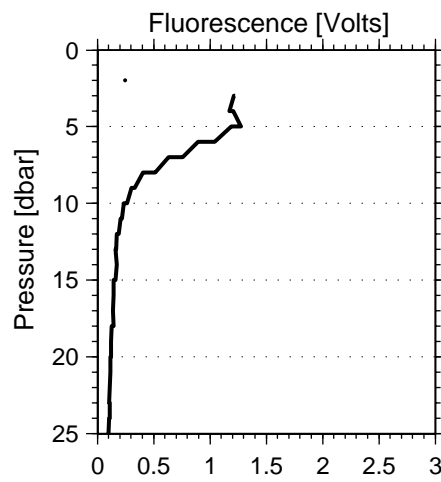
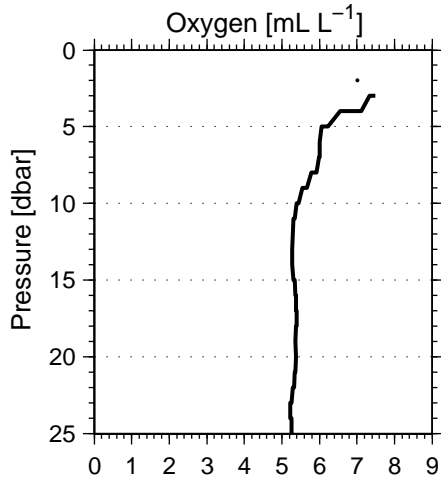
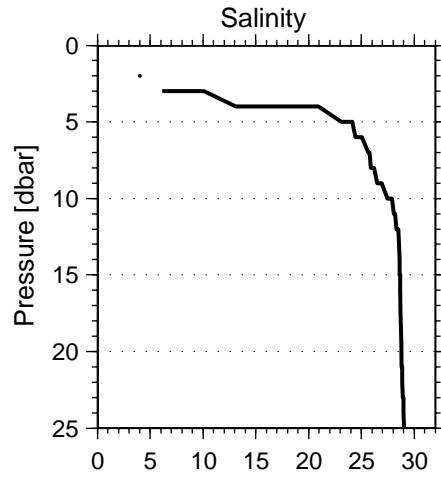
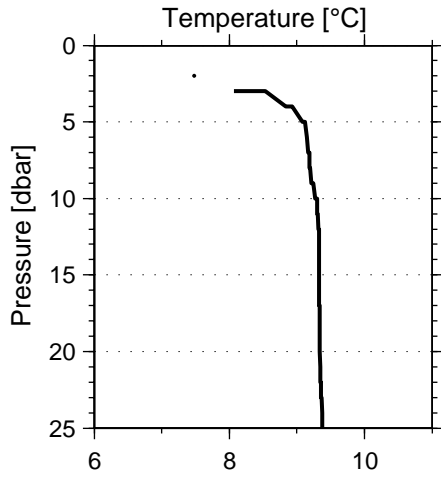
Aysen September 2009
Station CS Cast 45



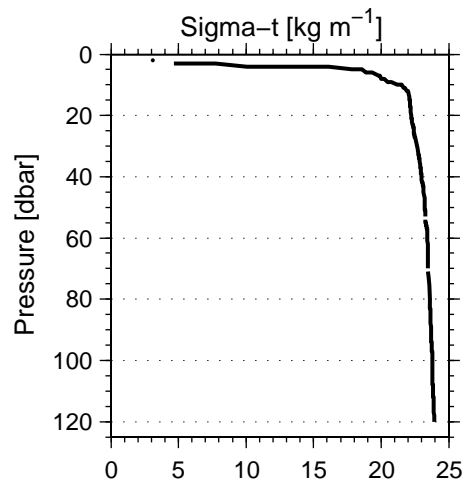
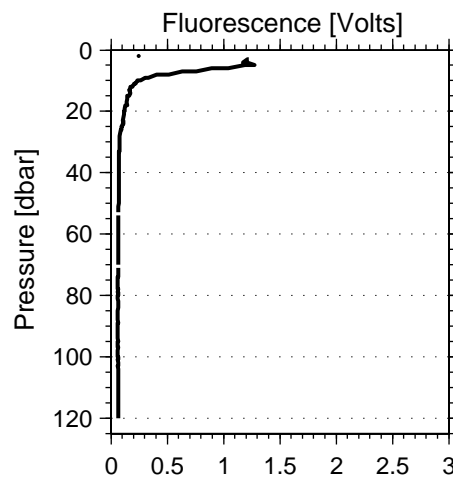
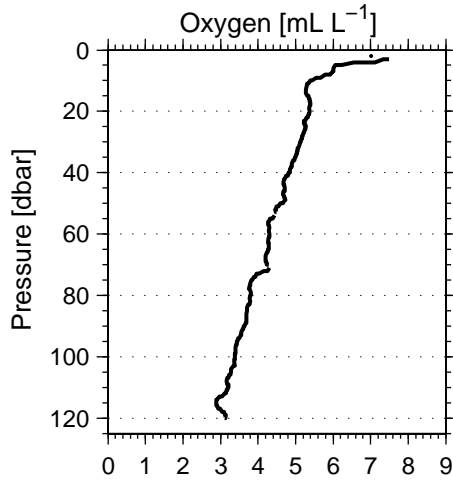
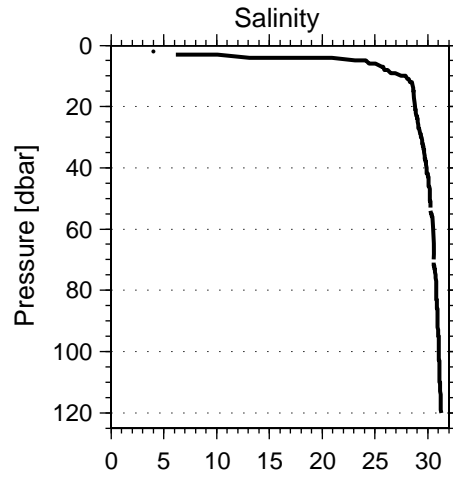
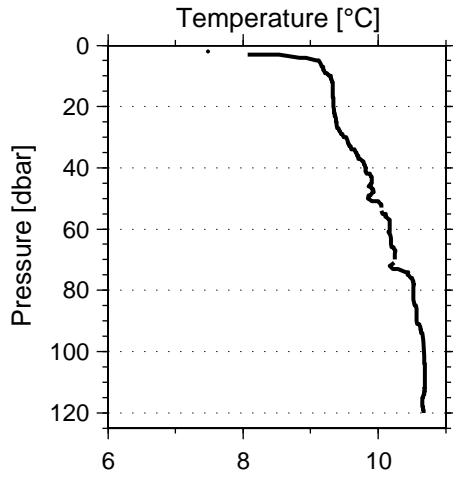
CRUISE	: Aysen September 2009	STATION	: CUN	CAST	: 46
DATE	: 2009-09-27	LAT	: 45°21.194	Z-CTD	: 119.5 m
TIME	: 12:00	LON	: 73°03.779	DEPTH	: 150 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	-	-	-	-	-	-
3.0	8.535	10.111	7.740	7.345	1.212	-
4.0	8.930	20.935	16.139	6.547	1.210	-
6.0	9.152	25.068	19.332	6.003	0.896	-
8.0	9.195	26.211	20.218	5.793	0.406	-
10.0	9.297	27.911	21.530	5.391	0.236	-
12.0	9.326	28.514	21.996	5.285	0.173	-
14.0	9.330	28.620	22.078	5.282	0.173	-
16.0	9.332	28.694	22.136	5.381	0.146	-
18.0	9.335	28.752	22.180	5.374	0.128	-
20.0	9.342	28.811	22.226	5.371	0.119	-
22.0	9.352	28.907	22.299	5.290	0.110	-
24.0	9.376	29.054	22.410	5.250	0.103	-
26.0	9.388	29.102	22.446	5.237	0.086	-
28.0	9.434	29.267	22.567	5.181	0.079	-
30.0	9.530	29.428	22.679	5.126	0.076	-
35.0	9.678	29.691	22.860	4.991	0.071	-
40.0	9.816	29.887	22.992	4.822	0.070	-
45.0	9.893	30.088	23.136	4.718	0.070	-
50.0	9.864	30.210	23.236	4.595	0.068	-
60.0	10.175	30.498	23.410	4.311	0.065	-
70.0	10.246	30.598	23.477	4.284	0.064	-
80.0	10.520	30.835	23.616	3.798	0.062	-
90.0	10.572	30.931	23.682	3.619	0.062	-
100.0	10.679	31.079	23.779	3.377	0.063	-
119.5	10.670	31.281	23.938	3.129	0.064	-

Aysen September 2009
Station CUN Cast 46



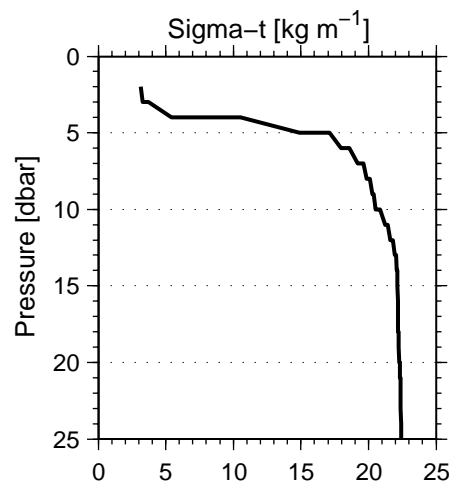
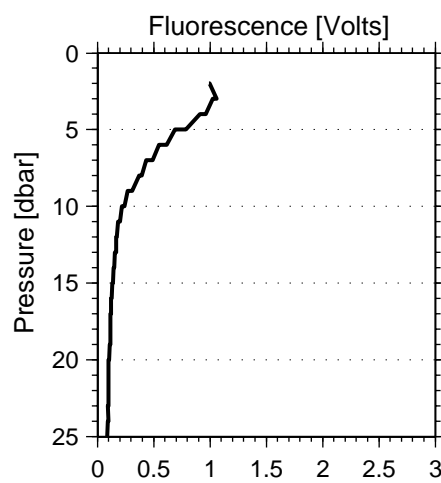
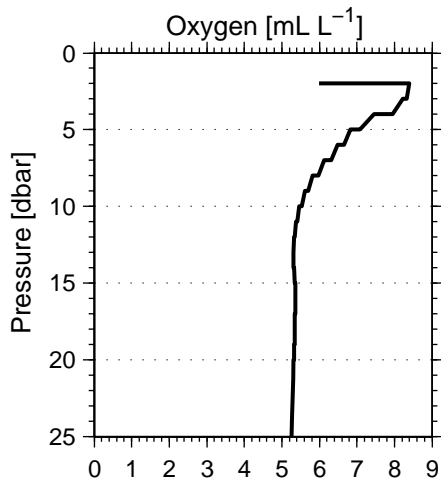
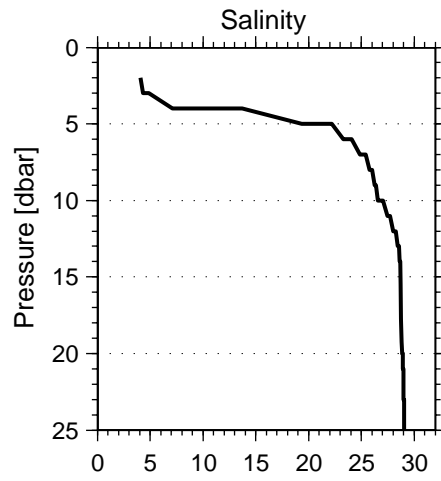
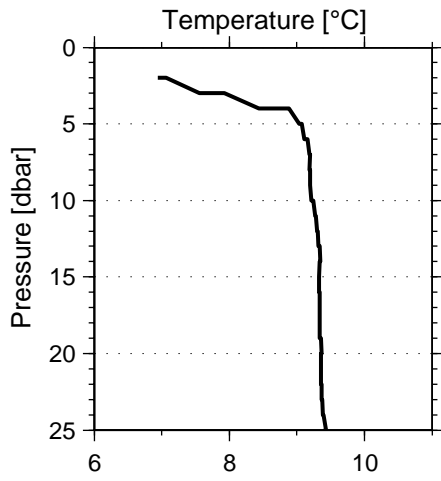
Aysen September 2009
Station CUN Cast 46



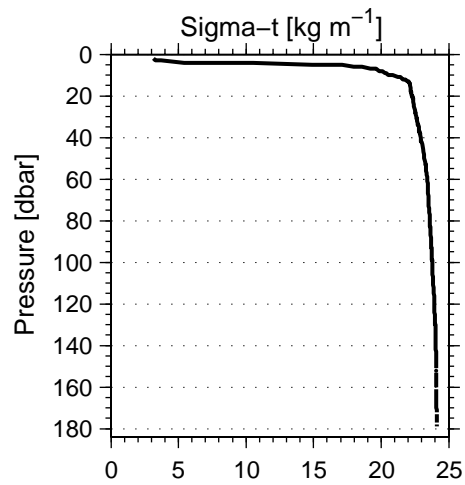
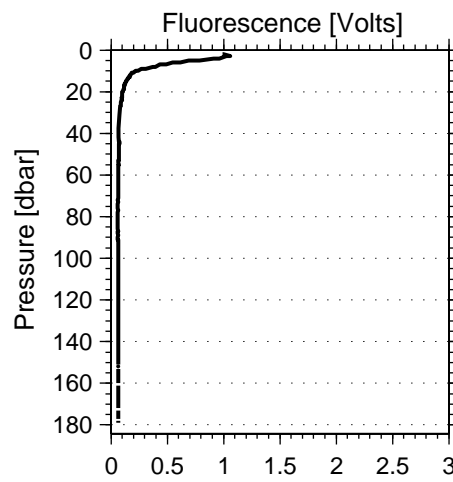
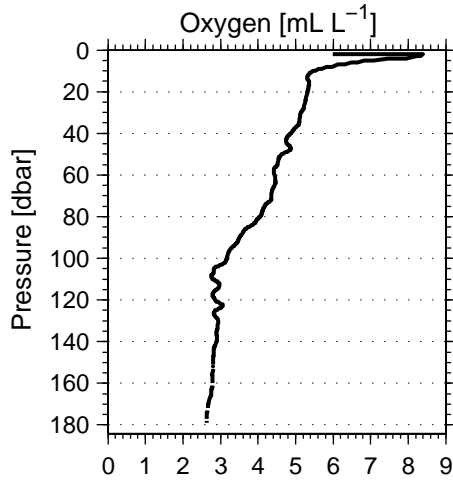
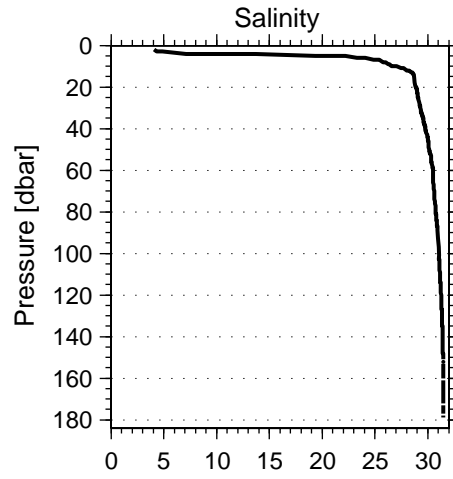
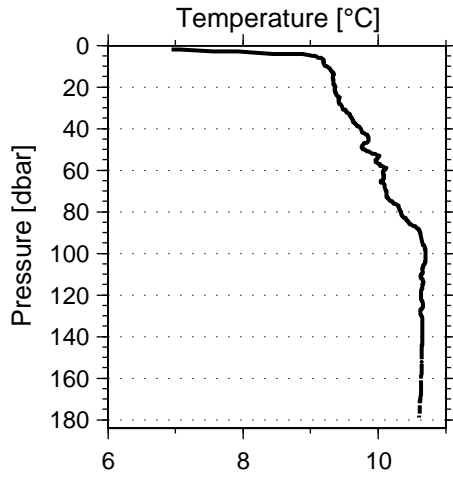
CRUISE : Aysen September 2009	STATION : CU1	CAST : 47
DATE : 2009-09-27	LAT : 45°21.492	Z-CTD : 178.5 m
TIME : 12:40	LON : 73°04.307	DEPTH : 220 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.062	4.114	3.155	8.395	1.000	-
3.0	7.927	4.899	3.715	8.222	1.028	-
4.0	8.884	13.723	10.524	7.462	0.913	-
6.0	9.161	24.112	18.586	6.492	0.551	-
8.0	9.191	26.032	20.079	5.824	0.372	-
10.0	9.244	27.049	20.865	5.463	0.217	-
12.0	9.311	28.259	21.800	5.323	0.167	-
14.0	9.337	28.669	22.116	5.323	0.142	-
16.0	9.334	28.734	22.166	5.361	0.124	-
18.0	9.336	28.785	22.206	5.343	0.115	-
20.0	9.361	28.923	22.310	5.315	0.100	-
22.0	9.364	29.009	22.377	5.293	0.099	-
24.0	9.397	29.065	22.415	5.266	0.094	-
26.0	9.421	29.145	22.474	5.233	0.087	-
28.0	9.441	29.236	22.542	5.208	0.081	-
30.0	9.470	29.325	22.608	5.140	0.076	-
35.0	9.614	29.587	22.790	5.096	0.071	-
40.0	9.748	29.809	22.942	4.856	0.071	-
45.0	9.862	30.030	23.096	4.789	0.073	-
50.0	9.804	30.151	23.199	4.624	0.069	-
60.0	10.081	30.498	23.426	4.448	0.065	-
70.0	10.120	30.628	23.521	4.361	0.064	-
80.0	10.337	30.783	23.606	4.039	0.062	-
90.0	10.621	30.954	23.692	3.500	0.062	-
100.0	10.701	31.076	23.773	3.167	0.064	-
125.0	10.663	31.317	23.967	2.863	0.065	-
150.0	10.645	31.458	24.080	2.800	0.065	-
175.0	10.614	31.485	24.106	2.630	0.067	-
178.5	10.609	31.485	24.107	2.632	0.067	-

Aysen September 2009
Station CU1 Cast 47



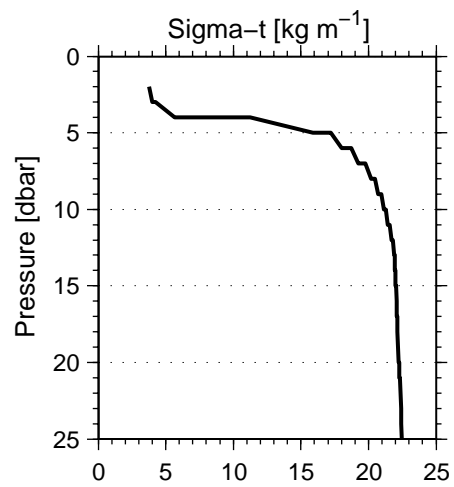
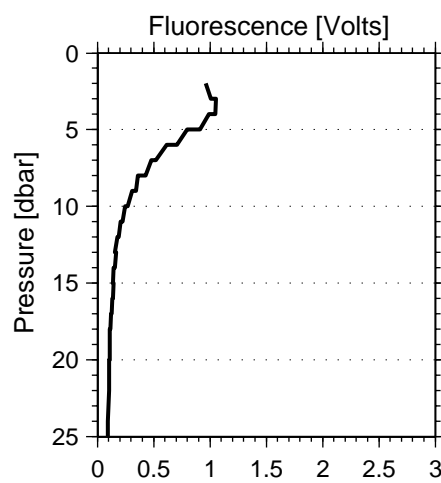
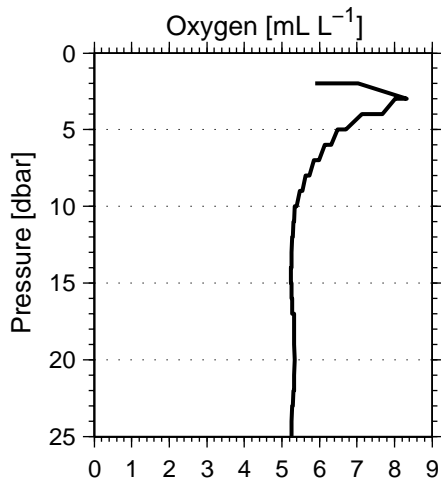
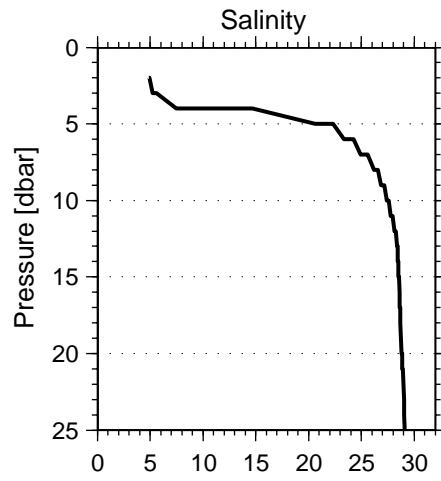
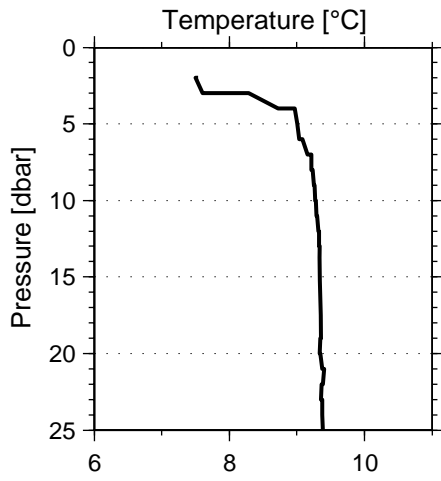
Aysen September 2009
Station CU1 Cast 47



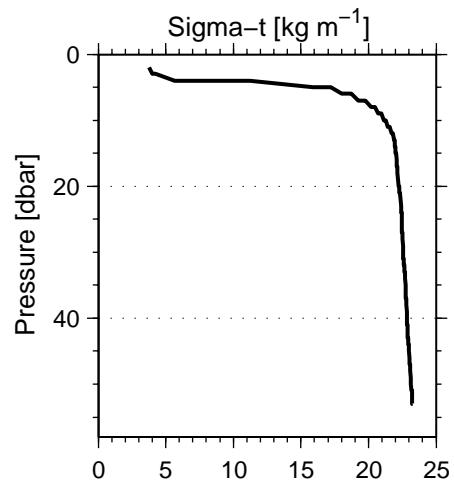
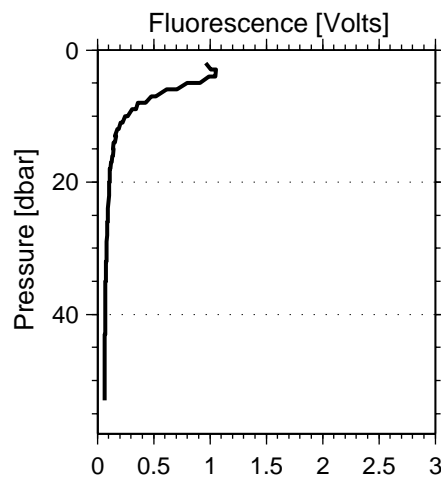
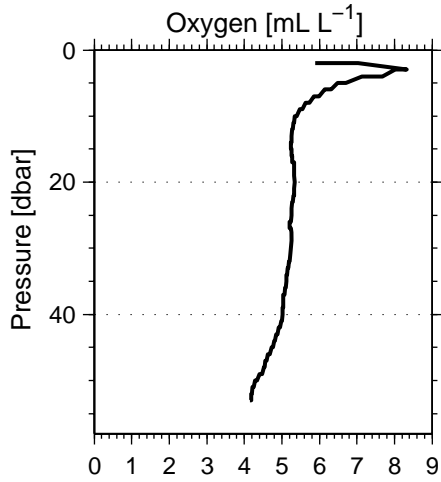
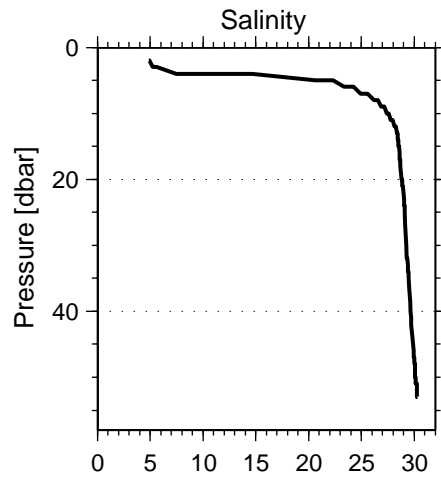
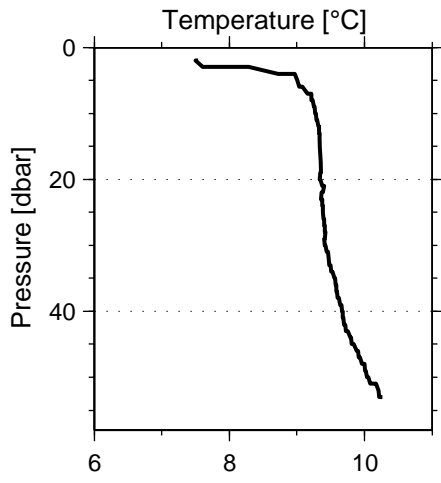
CRUISE : Aysen September 2009	STATION : CUC	CAST : 48
DATE : 2009-09-27	LAT : 45°22.051	Z-CTD : 52.5 m
TIME : 13:35	LON : 73°05.160	DEPTH : 77 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.504	4.953	3.787	7.024	0.964	-
3.0	8.287	5.628	4.258	8.022	1.056	-
4.0	8.970	14.671	11.252	7.138	0.990	-
6.0	9.081	24.275	18.724	6.149	0.619	-
8.0	9.232	26.566	20.490	5.640	0.360	-
10.0	9.282	27.593	21.284	5.351	0.246	-
12.0	9.327	28.275	21.810	5.280	0.180	-
14.0	9.339	28.498	21.982	5.246	0.143	-
16.0	9.348	28.641	22.092	5.272	0.133	-
18.0	9.358	28.712	22.146	5.330	0.113	-
20.0	9.347	28.861	22.264	5.338	0.107	-
22.0	9.365	29.017	22.383	5.311	0.104	-
24.0	9.383	29.098	22.443	5.259	0.094	-
26.0	9.401	29.151	22.482	5.216	0.091	-
28.0	9.419	29.195	22.514	5.256	0.086	-
30.0	9.428	29.268	22.569	5.237	0.080	-
35.0	9.567	29.515	22.741	5.114	0.073	-
40.0	9.675	29.689	22.860	5.017	0.070	-
45.0	9.839	29.907	23.004	4.729	0.067	-
50.0	10.059	30.130	23.143	4.292	0.065	-
52.5	10.215	30.282	23.235	4.183	0.065	-

Aysen September 2009
Station CUC Cast 48



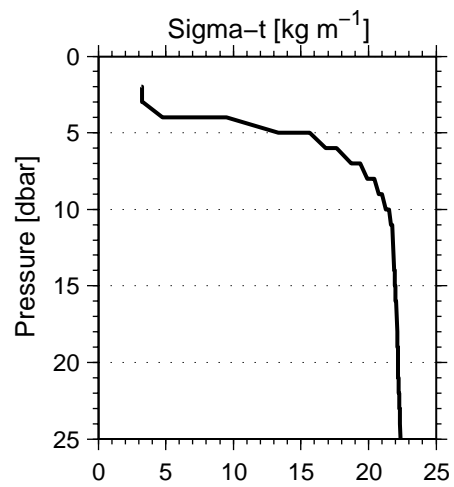
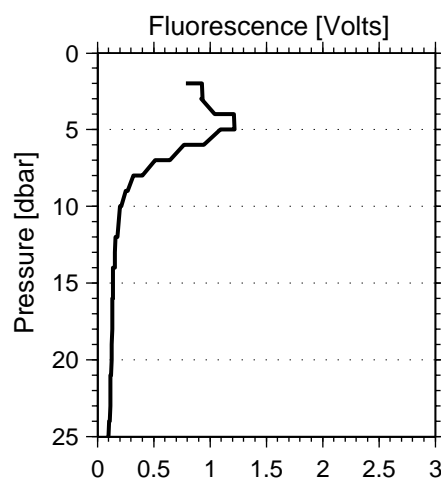
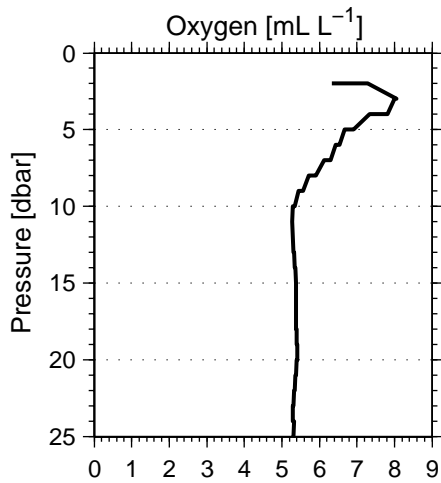
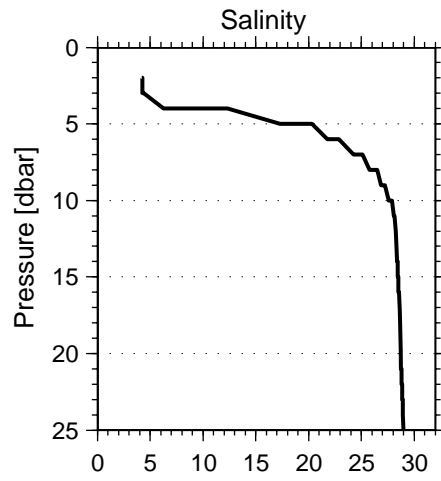
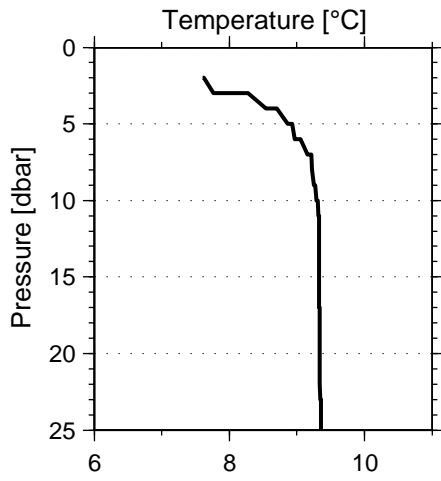
Aysen September 2009
Station CUC Cast 48



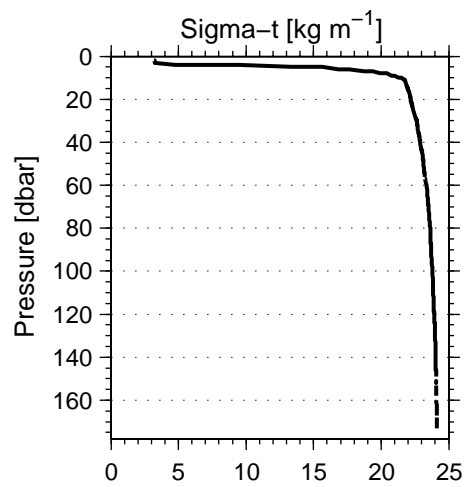
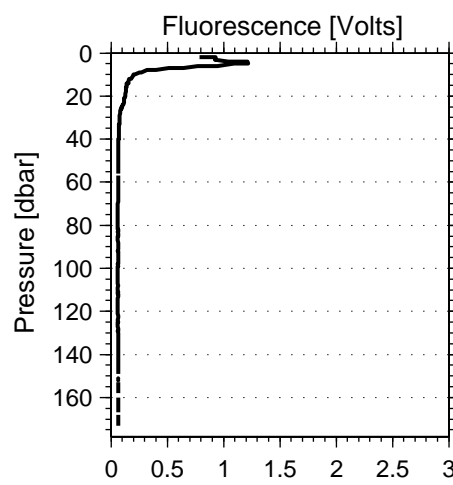
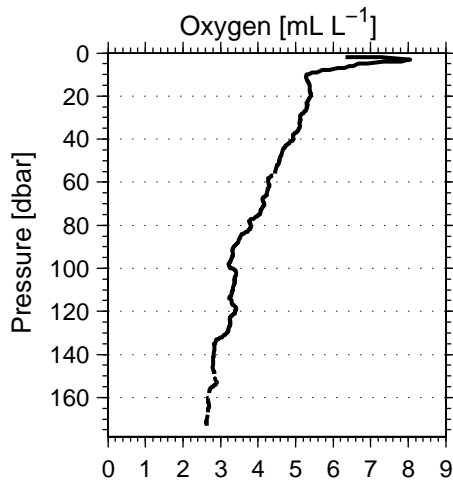
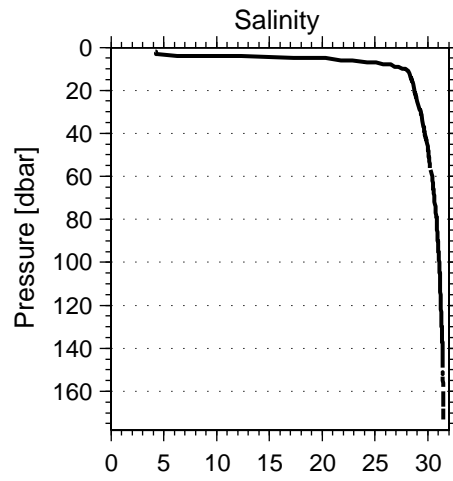
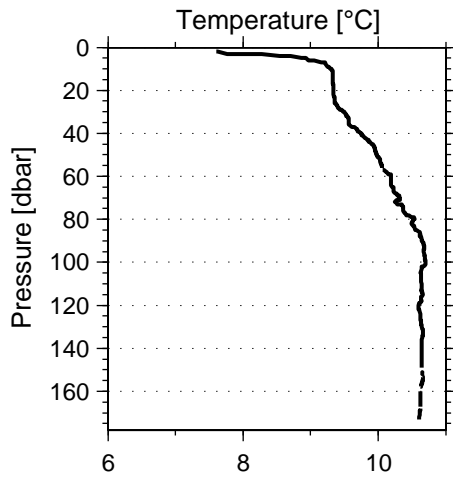
CRUISE	: Aysen September 2009	STATION	: CU2	CAST	: 49
DATE	: 2009-09-27	LAT	: 45°22.569	Z-CTD	: 172.5 m
TIME	: 14:10	LOX	: 73°06.110	DEPTH	: 210 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.624	4.251	3.227	7.289	0.926	-
3.0	8.278	4.366	3.269	8.011	0.921	-
4.0	8.705	12.350	9.471	7.331	1.213	-
6.0	9.050	22.898	17.654	6.437	0.773	-
8.0	9.225	26.508	20.445	5.714	0.323	-
10.0	9.309	27.895	21.515	5.300	0.204	-
12.0	9.331	28.292	21.822	5.295	0.160	-
14.0	9.327	28.445	21.942	5.358	0.142	-
16.0	9.331	28.577	22.045	5.374	0.135	-
18.0	9.335	28.697	22.138	5.392	0.133	-
20.0	9.338	28.740	22.171	5.398	0.127	-
22.0	9.339	28.855	22.260	5.330	0.116	-
24.0	9.354	28.967	22.345	5.318	0.107	-
26.0	9.372	29.070	22.423	5.292	0.090	-
28.0	9.417	29.198	22.516	5.169	0.081	-
30.0	9.502	29.374	22.640	5.125	0.077	-
35.0	9.562	29.546	22.765	5.090	0.071	-
40.0	9.755	29.748	22.893	4.941	0.068	-
45.0	9.929	29.993	23.057	4.660	0.066	-
50.0	9.981	30.094	23.127	4.566	0.066	-
60.0	10.187	30.451	23.372	4.277	0.065	-
70.0	10.322	30.649	23.504	4.169	0.062	-
80.0	10.526	30.858	23.632	3.811	0.062	-
90.0	10.654	30.971	23.699	3.344	0.064	-
100.0	10.704	31.103	23.794	3.325	0.062	-
125.0	10.629	31.302	23.961	3.263	0.062	-
150.0	-	-	-	-	-	-
172.5	10.610	31.495	24.114	2.631	0.067	-

Aysen September 2009
Station CU2 Cast 49



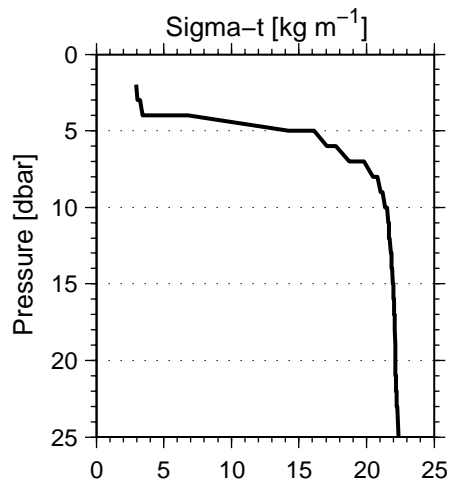
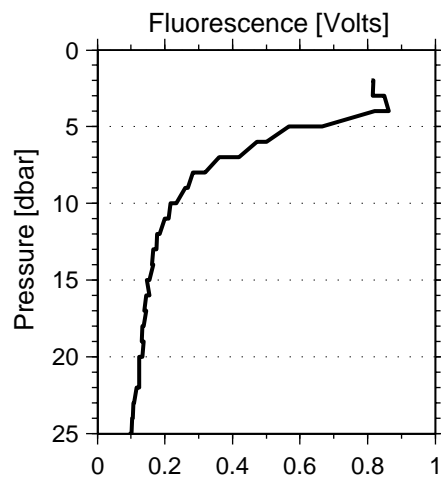
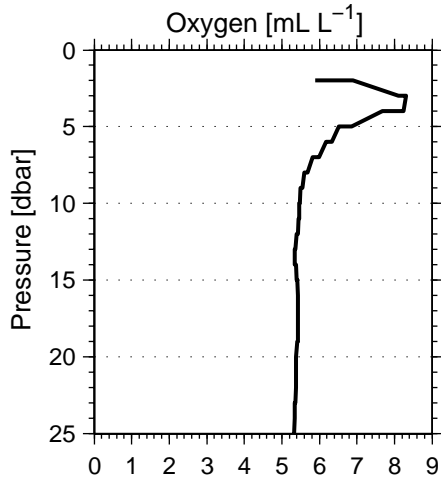
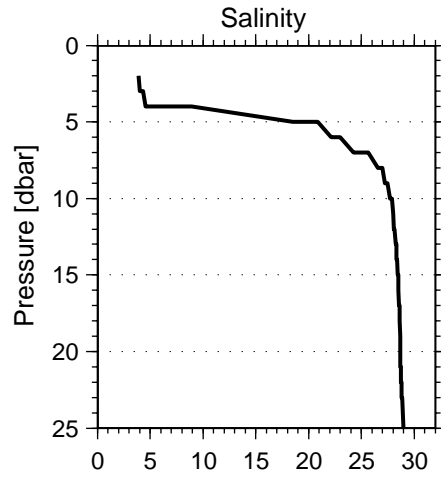
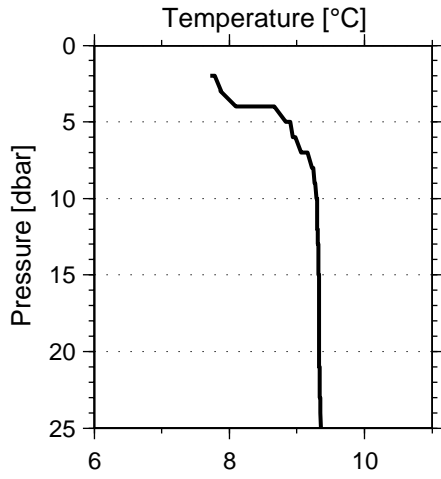
Aysen September 2009
Station CU2 Cast 49



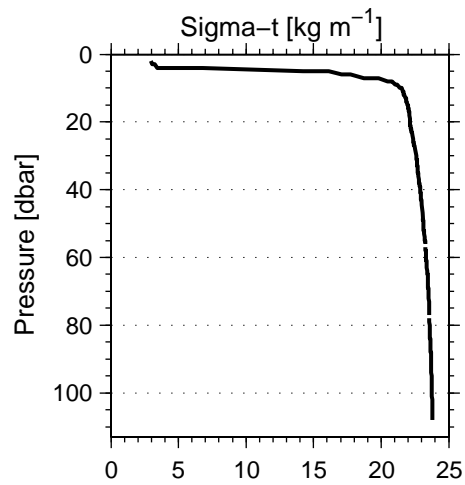
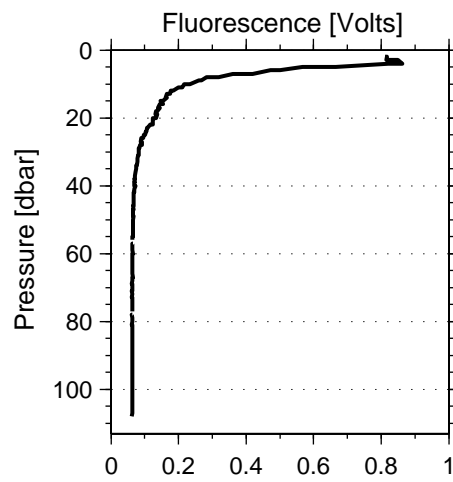
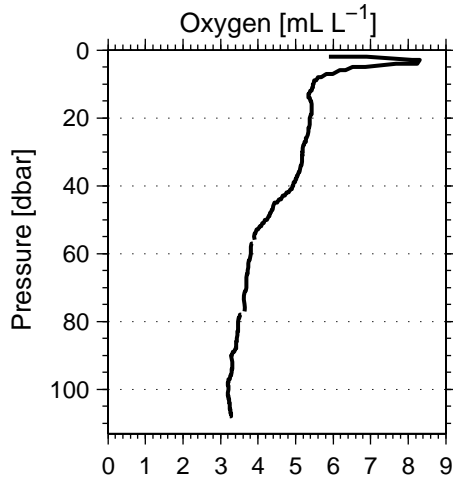
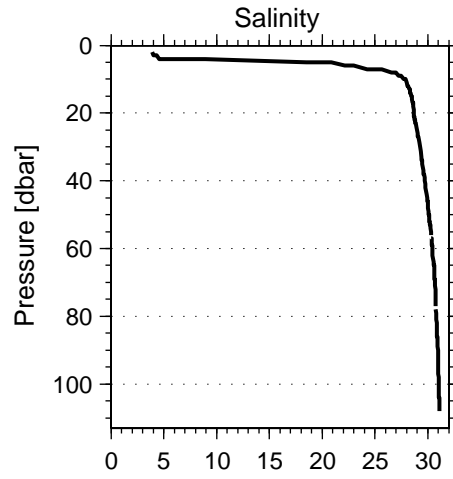
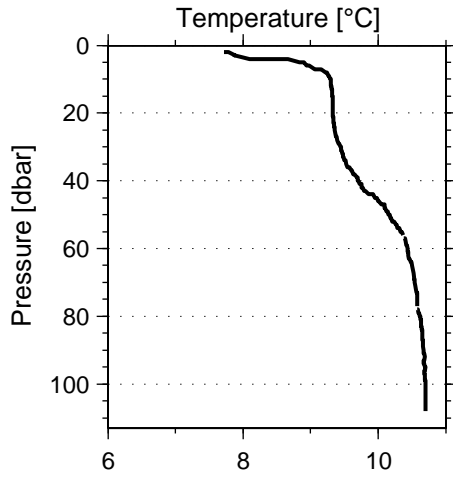
CRUISE : Aysen September 2009	STATION : CUS	CAST : 50
DATE : 2009-09-27	LAT : 45°22.978	Z-CTD : 107.5 m
TIME : 14:55	LON : 73°06.683	DEPTH : 140 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.789	3.914	2.951	6.893	0.816	-
3.0	7.874	4.320	3.264	8.302	0.849	-
4.0	8.668	8.936	6.809	7.680	0.821	-
6.0	8.977	22.977	17.725	6.172	0.473	-
8.0	9.247	26.979	20.810	5.603	0.284	-
10.0	9.297	27.924	21.540	5.463	0.217	-
12.0	9.307	28.155	21.719	5.393	0.178	-
14.0	9.319	28.391	21.901	5.371	0.166	-
16.0	9.328	28.543	22.019	5.436	0.144	-
18.0	9.326	28.660	22.110	5.426	0.134	-
20.0	9.329	28.710	22.148	5.375	0.124	-
22.0	9.339	28.801	22.218	5.378	0.117	-
24.0	9.356	28.968	22.346	5.344	0.104	-
26.0	9.368	29.064	22.419	5.279	0.091	-
28.0	9.398	29.200	22.521	5.213	0.085	-
30.0	9.450	29.322	22.608	5.181	0.082	-
35.0	9.530	29.501	22.736	5.117	0.074	-
40.0	9.710	29.737	22.892	4.920	0.072	-
45.0	9.979	29.978	23.037	4.448	0.067	-
50.0	10.168	30.124	23.121	4.192	0.066	-
60.0	10.439	30.459	23.337	3.809	0.064	-
70.0	10.544	30.694	23.502	3.687	0.064	-
80.0	10.625	30.834	23.598	3.467	0.064	-
90.0	10.671	30.977	23.701	3.287	0.064	-
100.0	10.700	31.066	23.765	3.207	0.064	-
107.5	10.699	31.126	23.812	3.279	0.062	-

Aysen September 2009
Station CUS Cast 50



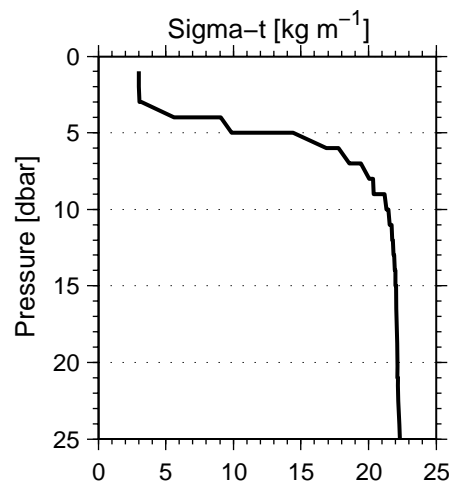
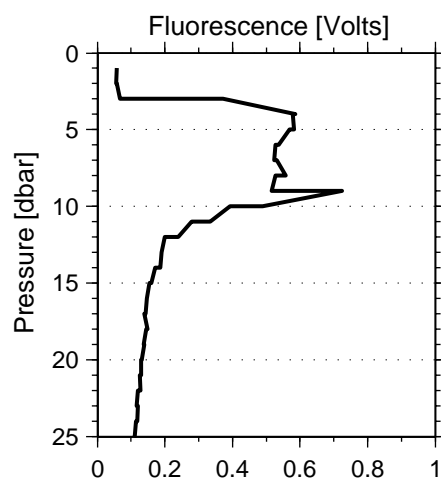
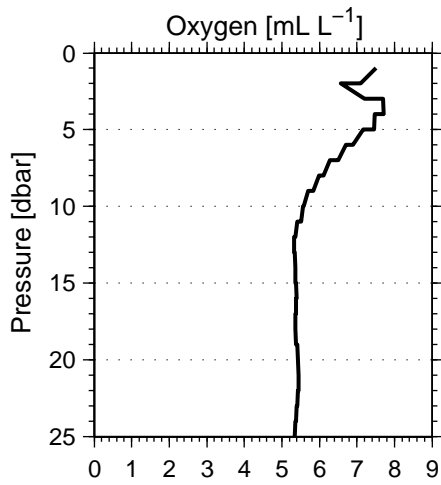
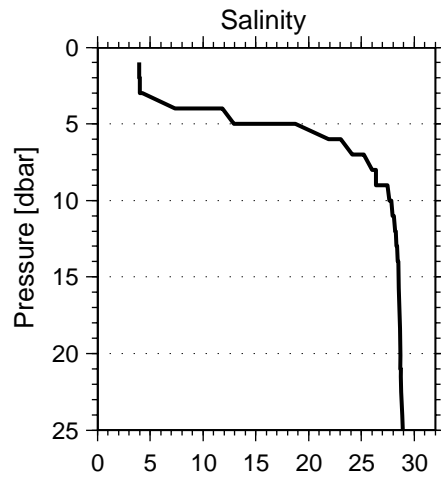
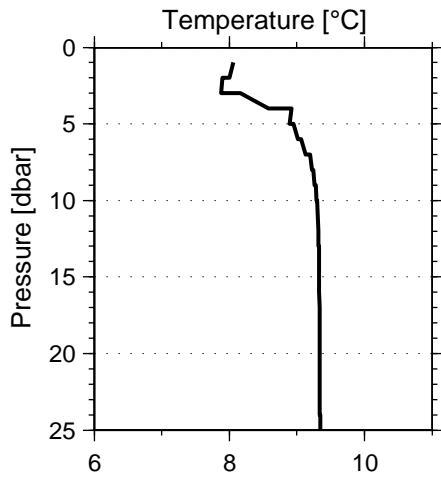
Aysen September 2009
Station CUS Cast 50



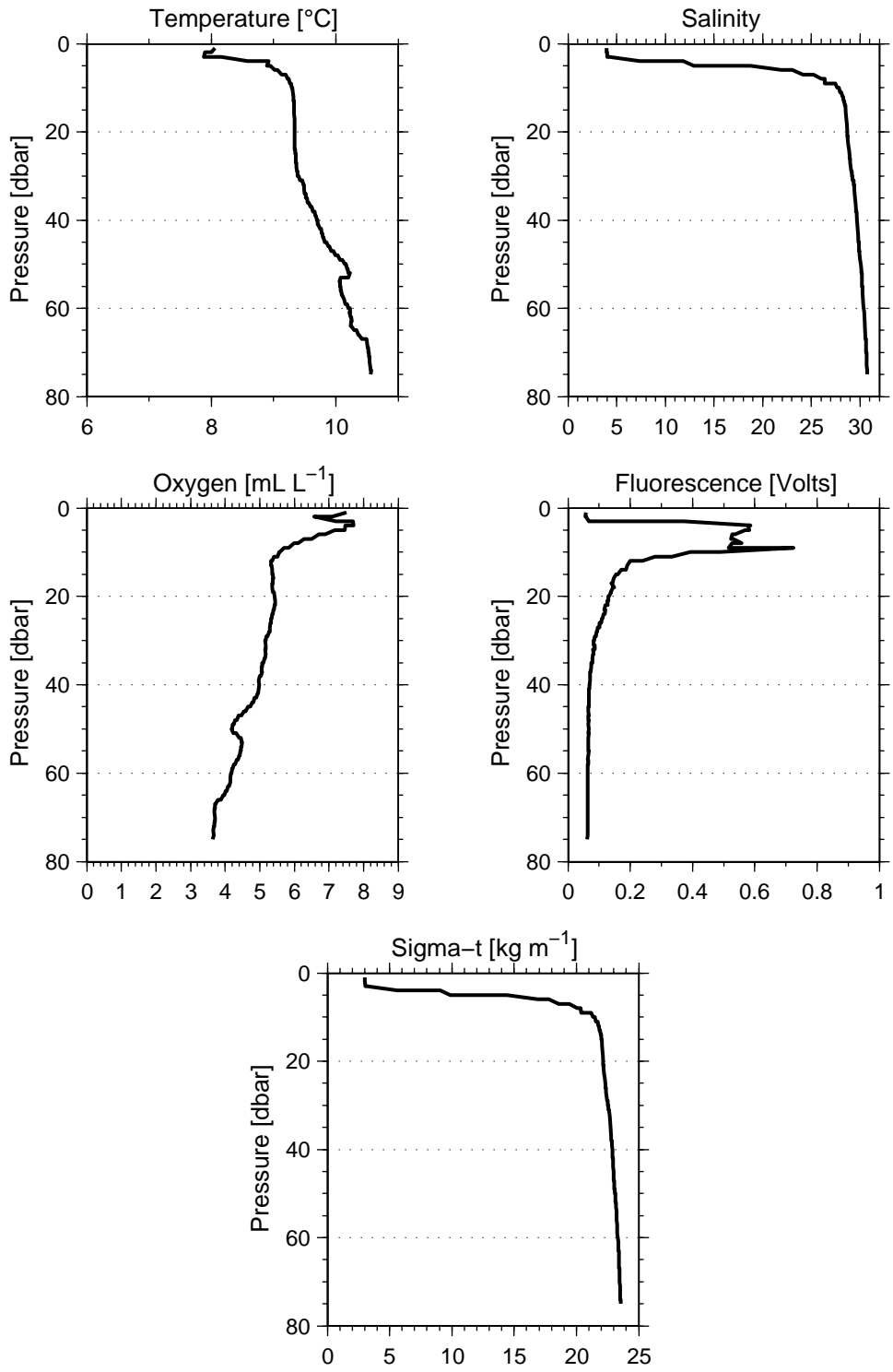
CRUISE : Aysen September 2009	STATION : CUS	CAST : 0
DATE : 2009-09-27	LAT : 45°23.041	Z-CTD : 74.0 m
TIME : 17:00	LON : 73°06.419	DEPTH : 140 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	8.059	3.984	2.987	7.506	0.057	-
2.0	7.895	4.020	3.027	6.565	0.058	-
3.0	8.168	4.248	3.185	7.700	0.373	-
4.0	8.918	11.833	9.048	7.473	0.578	-
6.0	9.063	23.038	17.762	6.712	0.528	-
8.0	9.244	26.399	20.357	5.995	0.528	-
10.0	9.303	27.863	21.491	5.562	0.393	-
12.0	9.320	28.292	21.824	5.334	0.200	-
14.0	9.325	28.491	21.979	5.361	0.171	-
16.0	9.332	28.593	22.057	5.386	0.146	-
18.0	9.337	28.651	22.101	5.368	0.144	-
20.0	9.338	28.699	22.139	5.436	0.129	-
22.0	9.340	28.777	22.199	5.427	0.121	-
24.0	9.344	28.875	22.276	5.364	0.114	-
26.0	9.358	28.979	22.355	5.306	0.102	-
28.0	9.368	29.086	22.436	5.269	0.092	-
30.0	9.405	29.226	22.540	5.162	0.082	-
35.0	9.537	29.506	22.739	5.066	0.076	-
40.0	9.705	29.718	22.877	4.979	0.068	-
45.0	9.853	29.883	22.983	4.664	0.066	-
50.0	10.163	30.105	23.107	4.193	0.067	-
60.0	10.232	30.419	23.339	4.163	0.064	-
70.0	10.529	30.669	23.485	3.703	0.064	-
74.0	10.564	30.740	23.534	3.670	0.063	-

Aysen September 2009
Station CUS Cast 0



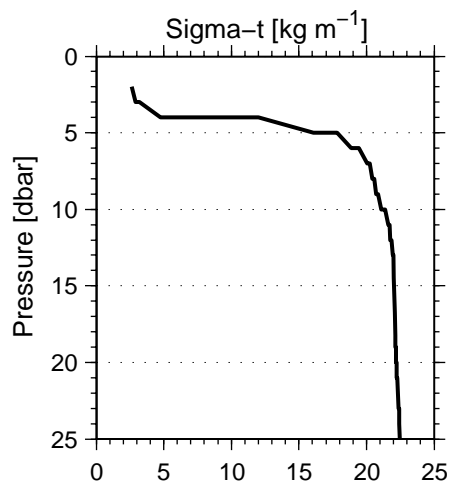
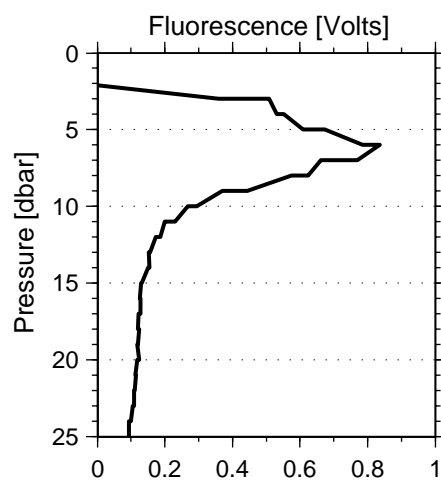
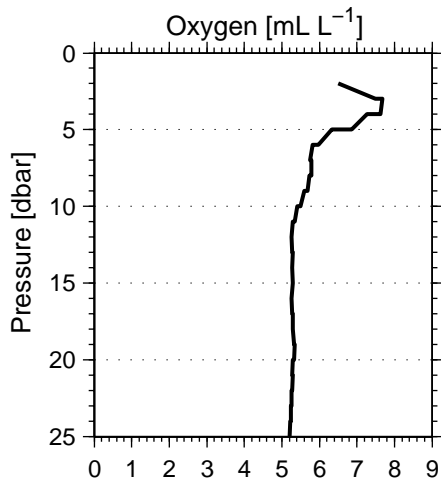
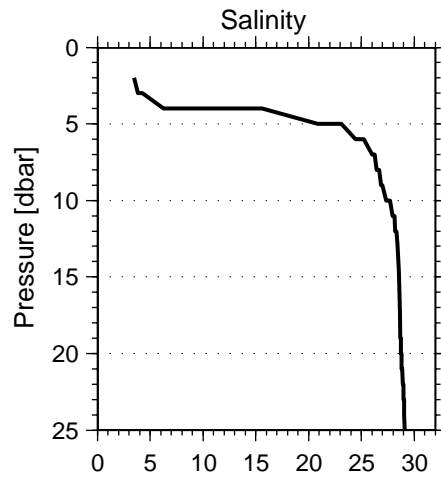
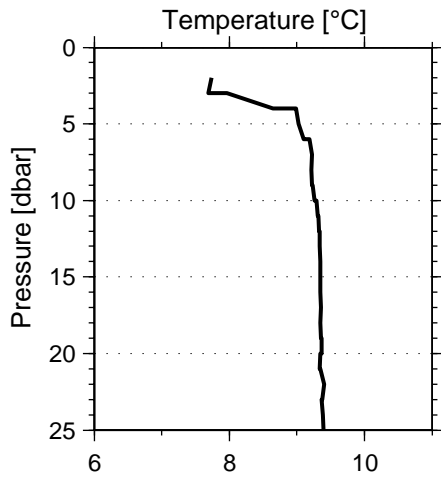
Aysen September 2009
Station CUS Cast 0



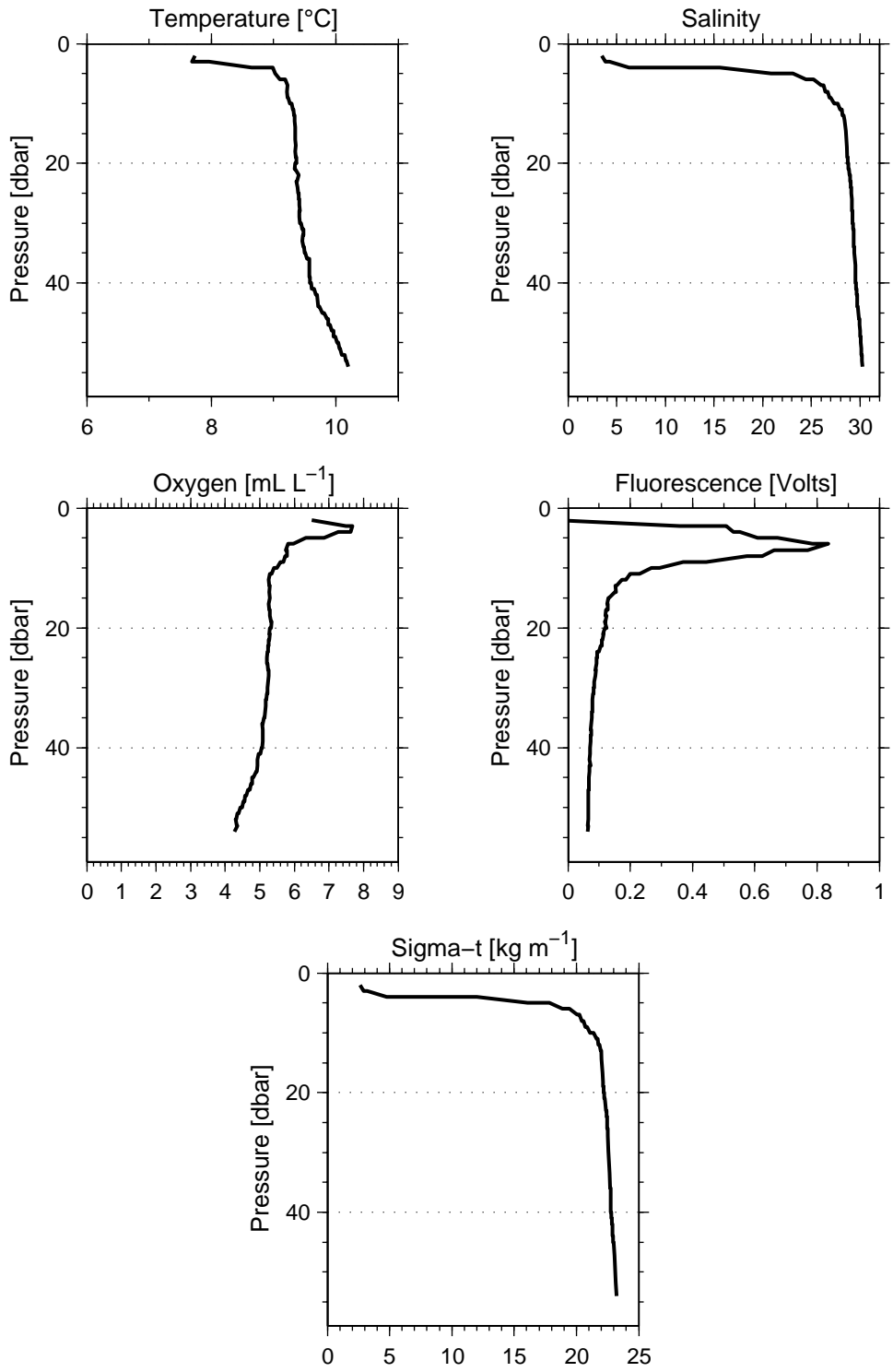
CRUISE	: Aysen September 2009	STATION	: CUC	CAST	: 1
DATE	: 2009-09-27	LAT	: 45°22.116	Z-CTD	: 53.0 m
TIME	: 17:40	LON	: 73°05.164	DEPTH	: 77 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.738	3.496	2.626	6.497	-0.036	-
3.0	7.966	4.267	3.215	7.677	0.508	-
4.0	8.985	15.628	11.996	7.274	0.552	-
6.0	9.183	25.216	19.443	5.814	0.836	-
8.0	9.219	26.684	20.584	5.739	0.574	-
10.0	9.295	27.715	21.377	5.409	0.268	-
12.0	9.337	28.327	21.849	5.252	0.173	-
14.0	9.343	28.541	22.015	5.276	0.150	-
16.0	9.344	28.629	22.083	5.264	0.128	-
18.0	9.351	28.704	22.141	5.297	0.123	-
20.0	9.346	28.817	22.230	5.290	0.119	-
22.0	9.408	28.975	22.344	5.266	0.109	-
24.0	9.387	29.116	22.457	5.218	0.095	-
26.0	9.409	29.167	22.493	5.227	0.091	-
28.0	9.414	29.220	22.534	5.257	0.087	-
30.0	9.445	29.279	22.575	5.224	0.082	-
35.0	9.507	29.434	22.687	5.114	0.076	-
40.0	9.604	29.591	22.795	5.060	0.071	-
45.0	9.814	29.877	22.984	4.788	0.067	-
50.0	10.042	30.114	23.133	4.441	0.065	-
53.0	10.174	30.222	23.196	4.351	0.065	-

Aysen September 2009
Station CUC Cast 1



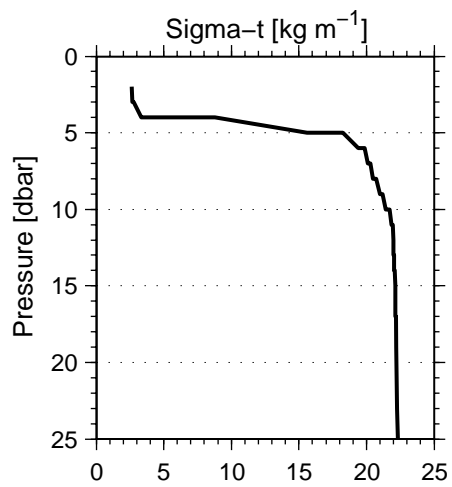
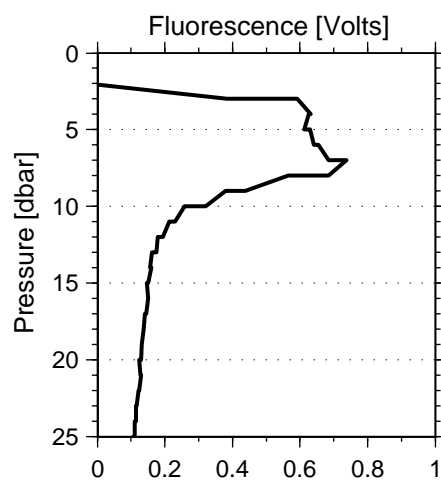
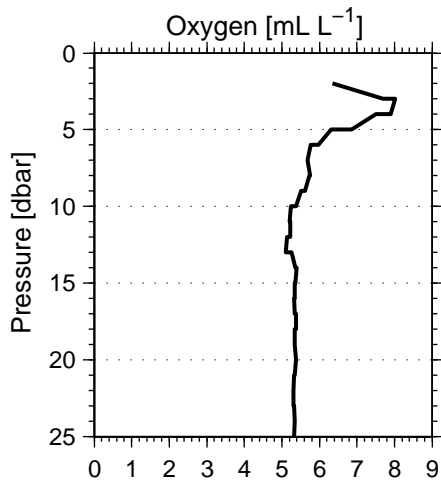
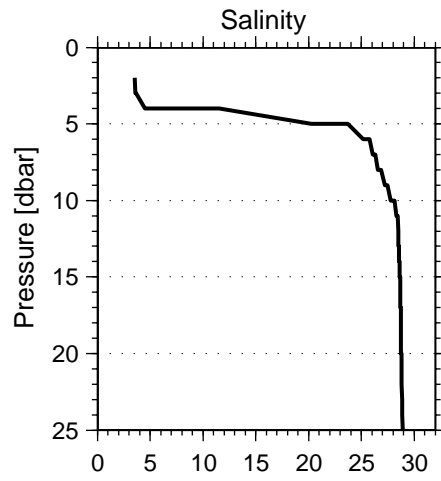
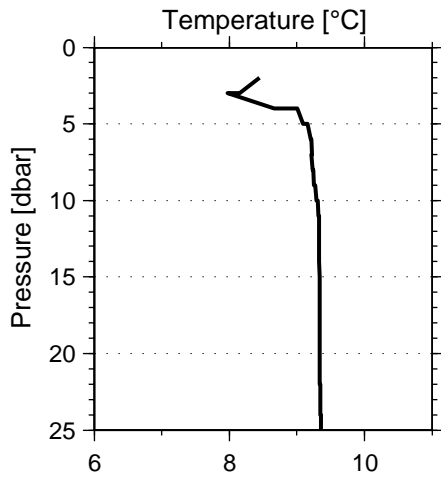
Aysen September 2009
Station CUC Cast 1



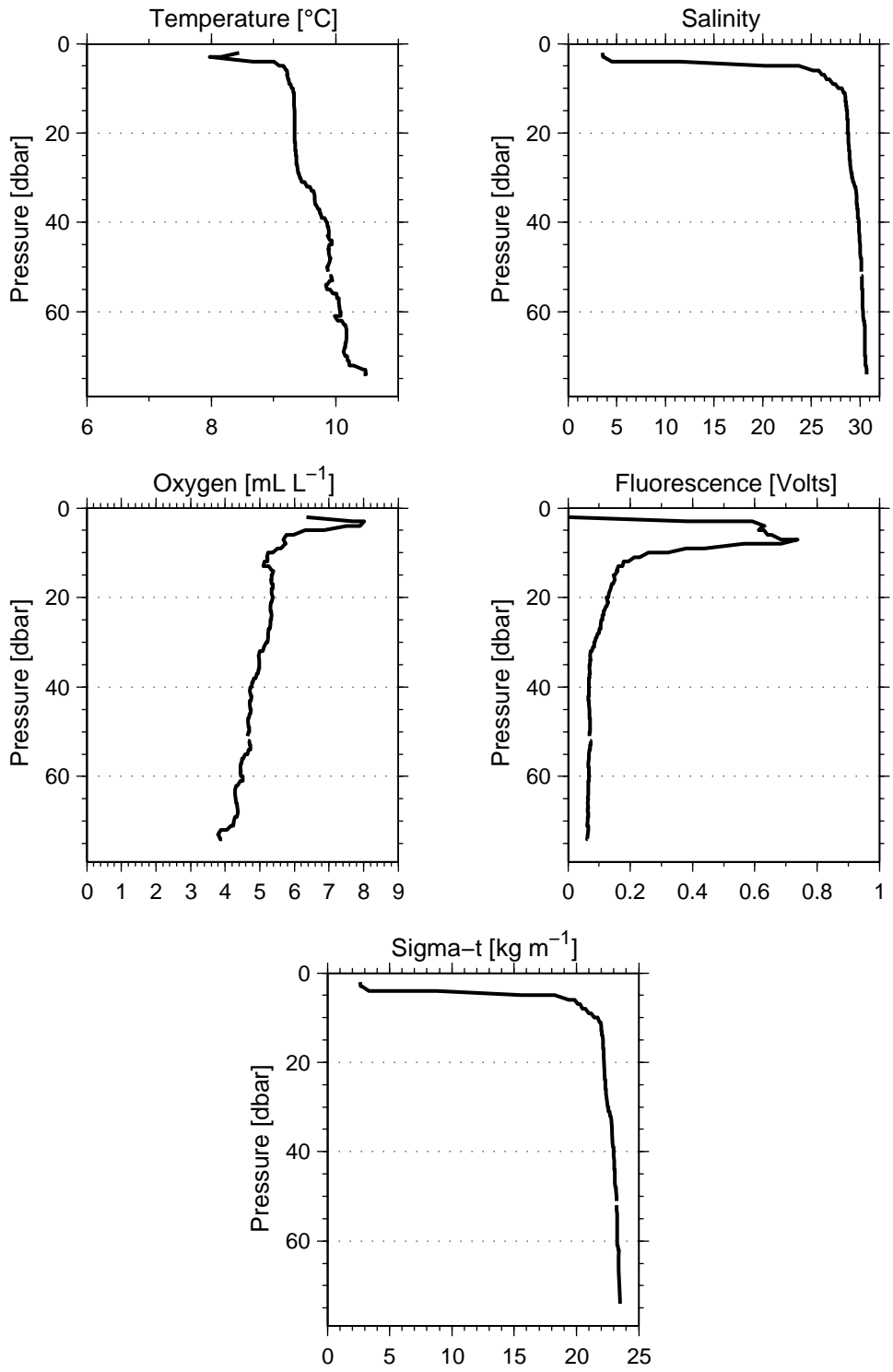
CRUISE	: Aysen September 2009	STATION	: CUN	CAST	: 2
DATE	: 2009-09-27	LAT	: 45°22.212	Z-CTD	: 73.5 m
TIME	: 18:23	LON	: 73°03.675	DEPTH	: 150 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	8.444	3.560	2.625	6.357	-0.025	-
3.0	7.979	3.677	2.751	8.016	0.593	-
4.0	9.006	11.525	8.795	7.508	0.626	-
6.0	9.217	25.758	19.861	5.775	0.655	-
8.0	9.240	26.865	20.722	5.741	0.566	-
10.0	9.314	28.126	21.695	5.249	0.258	-
12.0	9.329	28.528	22.007	5.144	0.179	-
14.0	9.331	28.634	22.089	5.398	0.160	-
16.0	9.335	28.709	22.147	5.333	0.150	-
18.0	9.336	28.749	22.178	5.347	0.138	-
20.0	9.338	28.789	22.209	5.371	0.124	-
22.0	9.344	28.839	22.247	5.307	0.122	-
24.0	9.355	28.923	22.311	5.335	0.111	-
26.0	9.365	28.975	22.350	5.314	0.104	-
28.0	9.389	29.087	22.434	5.234	0.097	-
30.0	9.431	29.235	22.543	5.184	0.084	-
35.0	9.663	29.672	22.848	4.990	0.070	-
40.0	9.861	29.906	23.000	4.731	0.067	-
45.0	9.901	30.013	23.076	4.740	0.070	-
50.0	9.858	30.172	23.208	4.682	0.070	-
60.0	10.076	30.314	23.283	4.516	0.067	-
70.0	10.182	30.553	23.452	4.248	0.064	-
73.5	10.486	30.705	23.520	3.855	0.062	-

Aysen September 2009
Station CUN Cast 2



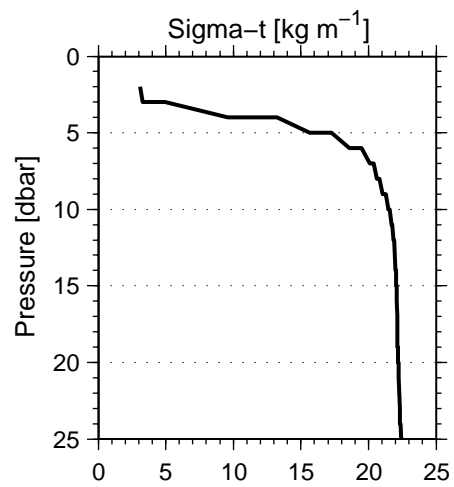
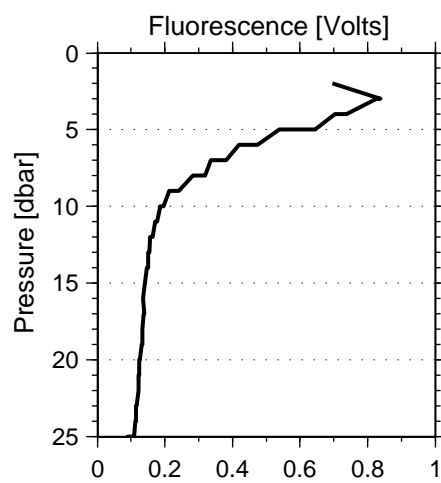
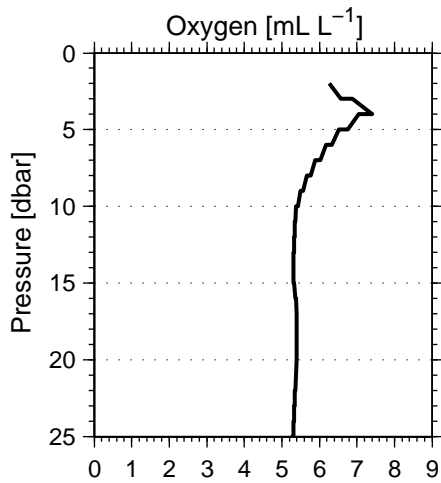
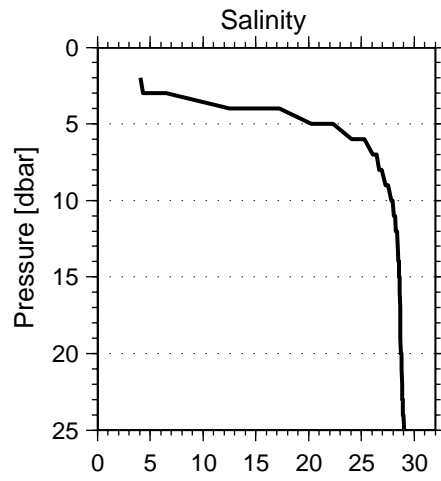
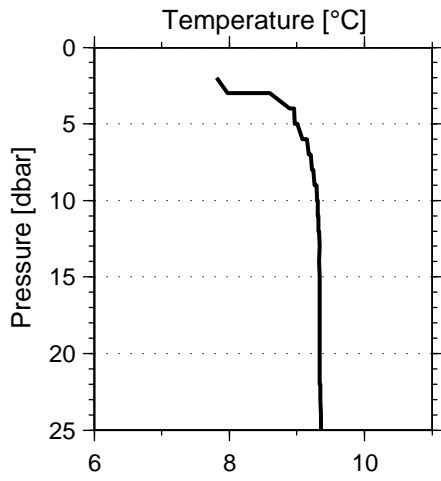
Aysen September 2009
Station CUN Cast 2



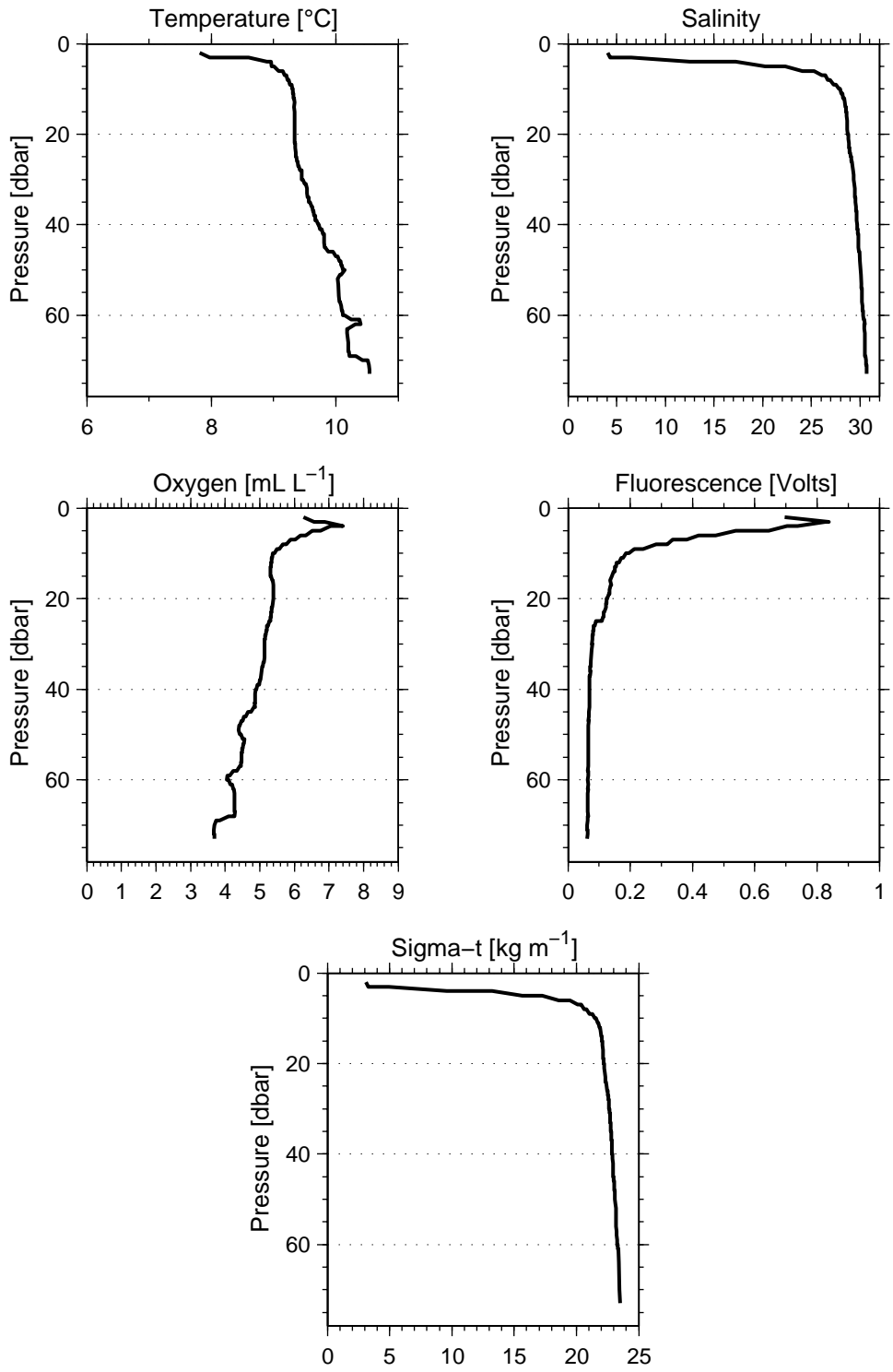
CRUISE	: Aysen September 2009	STATION	: CUS	CAST	: 3
DATE	: 2009-09-27	LAT	: 45°22.977	Z-CTD	: 72.0 m
TIME	: 19:00	LON	: 73°06.337	DEPTH	: 140 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	7.810	4.093	3.090	6.263	0.696	-
3.0	8.599	6.537	4.941	6.878	0.827	-
4.0	8.956	17.239	13.255	7.045	0.703	-
6.0	9.146	25.276	19.496	6.177	0.419	-
8.0	9.244	26.962	20.797	5.671	0.283	-
10.0	9.306	27.986	21.587	5.386	0.187	-
12.0	9.327	28.376	21.889	5.332	0.157	-
14.0	9.333	28.556	22.028	5.306	0.147	-
16.0	9.337	28.655	22.105	5.378	0.136	-
18.0	9.338	28.709	22.147	5.395	0.134	-
20.0	9.340	28.792	22.211	5.397	0.124	-
22.0	9.344	28.875	22.275	5.350	0.122	-
24.0	9.354	28.979	22.355	5.316	0.113	-
26.0	9.389	29.198	22.521	5.216	0.083	-
28.0	9.450	29.317	22.604	5.161	0.079	-
30.0	9.475	29.374	22.645	5.139	0.078	-
35.0	9.583	29.564	22.777	5.075	0.071	-
40.0	9.727	29.722	22.877	4.875	0.068	-
45.0	9.829	29.861	22.970	4.668	0.067	-
50.0	10.139	30.090	23.099	4.459	0.065	-
60.0	10.141	30.353	23.303	4.099	0.064	-
70.0	10.511	30.640	23.465	3.684	0.062	-
72.0	10.543	30.696	23.504	3.685	0.064	-

Aysen September 2009
Station CUS Cast 3



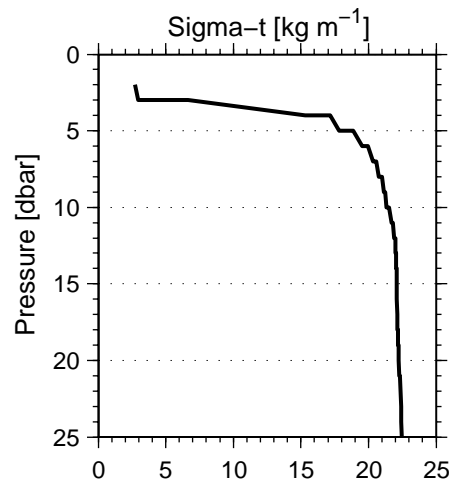
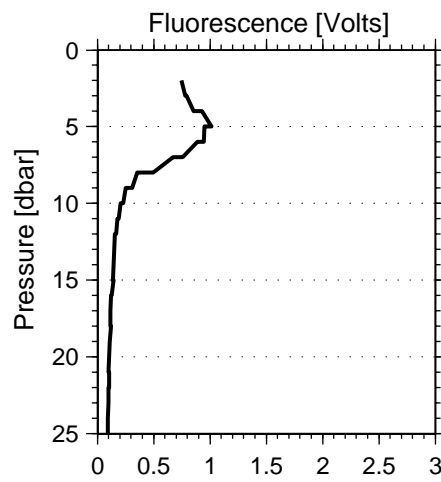
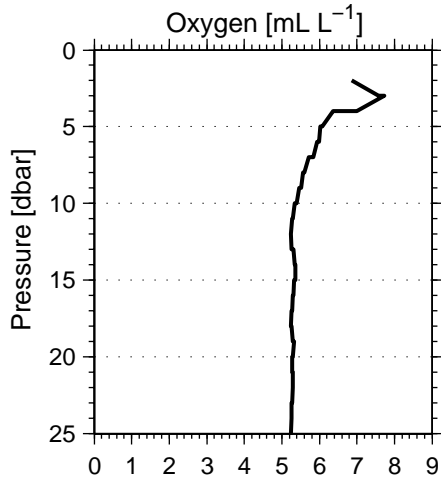
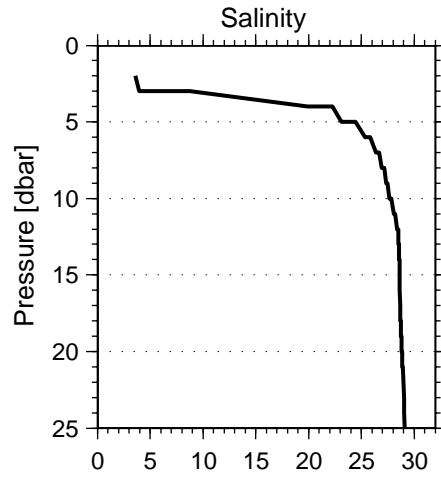
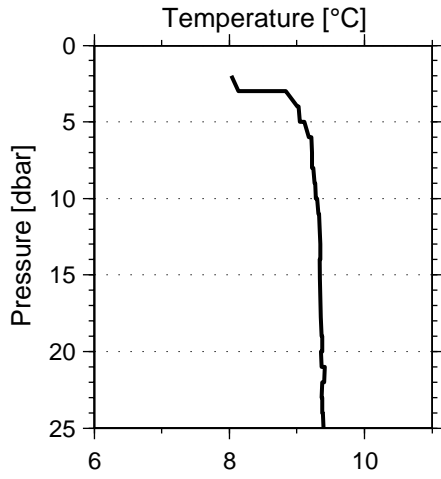
Aysen September 2009
Station CUS Cast 3



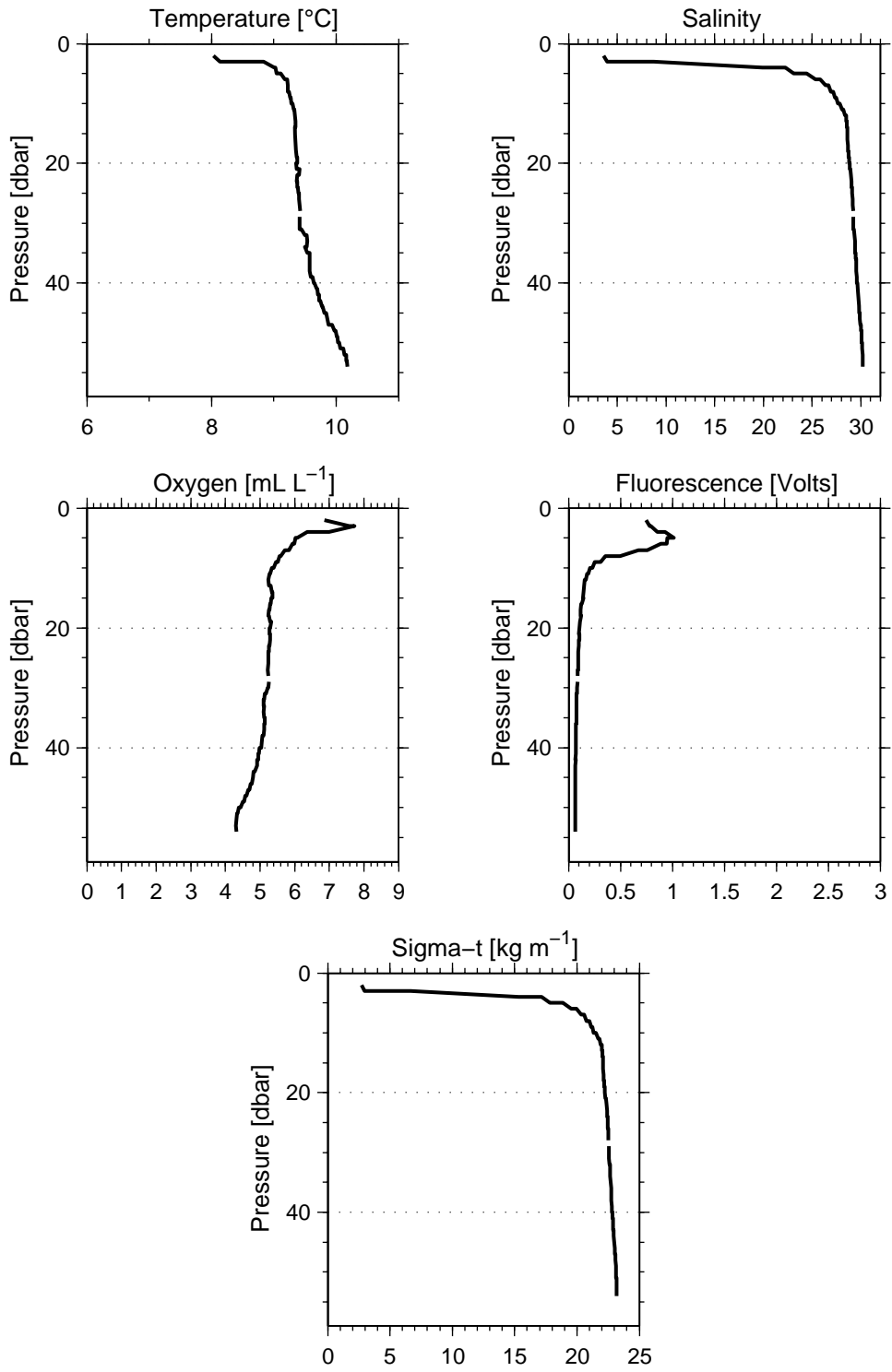
CRUISE	: Aysen September 2009	STATION	: CUC	CAST	: 4
DATE	: 2009-09-27	LAT	: 45°22.091	Z-CTD	: 53.0 m
TIME	: 19:29	LON	: 73°05.133	DEPTH	: 77 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	8.027	3.632	2.713	6.864	0.748	-
3.0	8.832	8.745	6.644	7.728	0.790	-
4.0	9.029	22.275	17.171	6.360	0.927	-
6.0	9.214	25.853	19.936	5.938	0.890	-
8.0	9.243	27.199	20.982	5.569	0.353	-
10.0	9.302	27.870	21.497	5.339	0.206	-
12.0	9.342	28.504	21.986	5.238	0.154	-
14.0	9.340	28.611	22.069	5.368	0.146	-
16.0	9.349	28.661	22.107	5.293	0.122	-
18.0	9.353	28.732	22.162	5.258	0.119	-
20.0	9.353	28.849	22.254	5.272	0.104	-
22.0	9.378	29.027	22.389	5.299	0.099	-
24.0	9.387	29.119	22.460	5.238	0.092	-
26.0	9.408	29.168	22.494	5.237	0.093	-
28.0	9.423	29.226	22.537	5.239	0.091	-
30.0	9.416	29.255	22.561	5.222	0.081	-
35.0	9.573	29.498	22.727	5.134	0.074	-
40.0	9.653	29.640	22.825	4.990	0.070	-
45.0	9.843	29.908	23.004	4.792	0.067	-
50.0	10.049	30.124	23.140	4.396	0.065	-
53.0	10.172	30.222	23.196	4.309	0.066	-

Aysen September 2009
Station CUC Cast 4



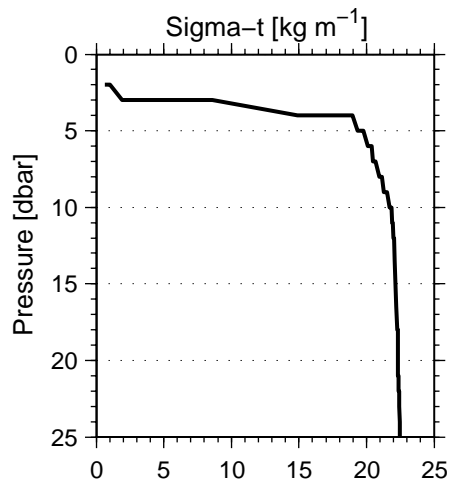
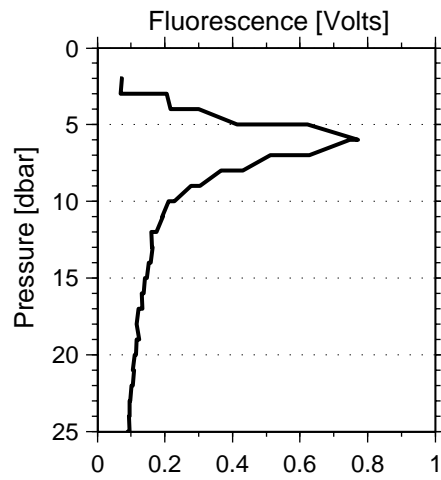
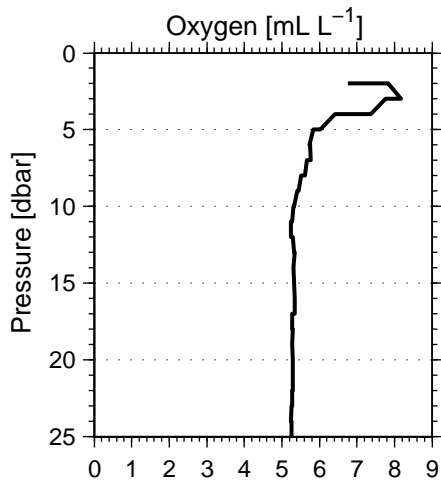
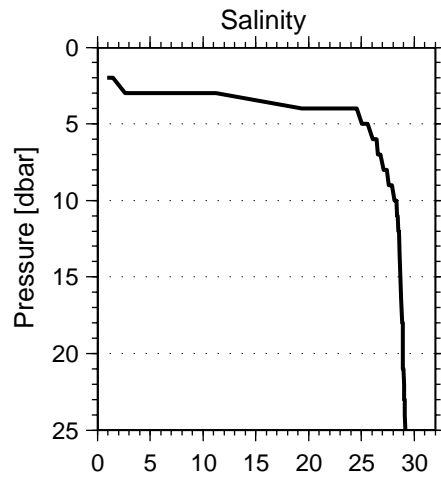
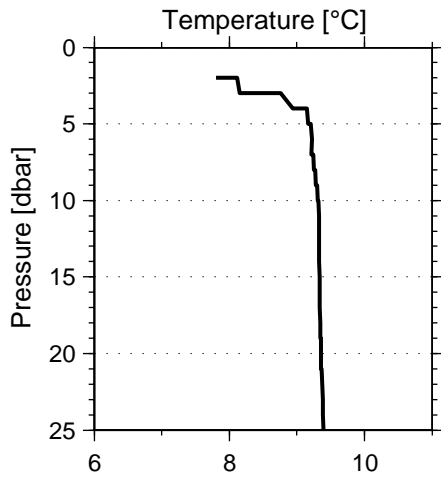
Aysen September 2009
Station CUC Cast 4



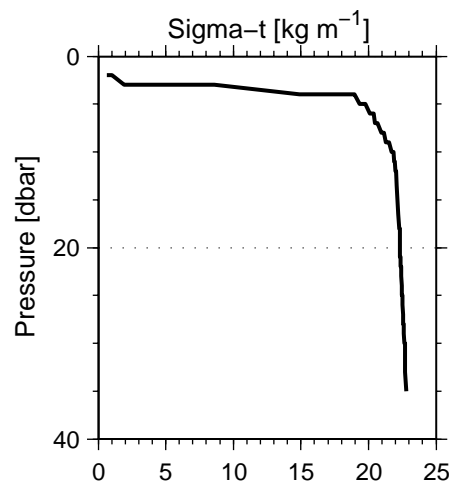
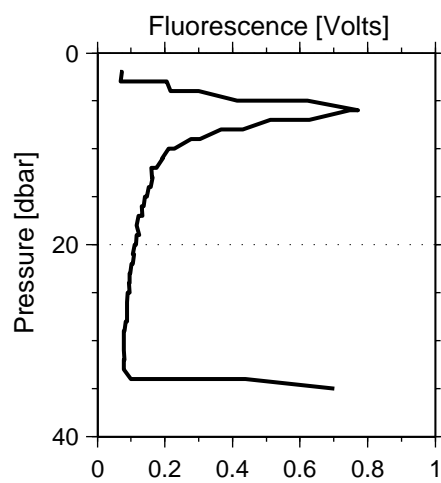
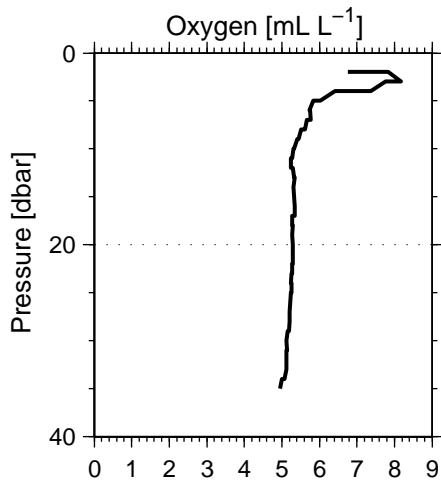
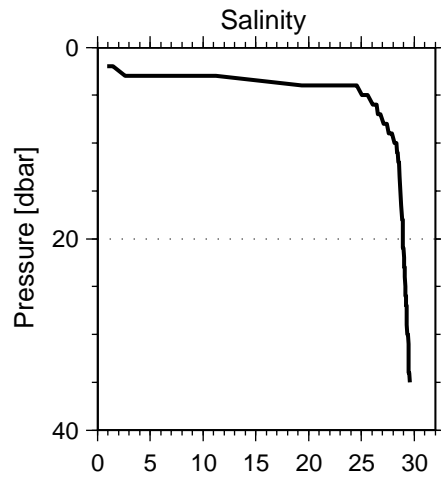
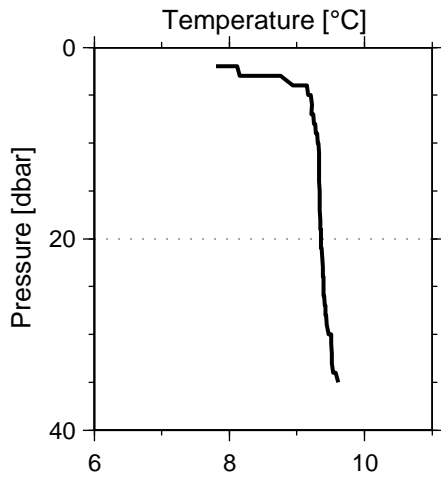
CRUISE	: Aysen September 2009	STATION	: CUN	CAST	: 5
DATE	: 2009-09-27	LAT	: 45°21.356	Z-CTD	: 34.0 m
TIME	: 20:30	LON	: 73°03.434	DEPTH	: 150 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	8.114	1.482	1.015	7.833	0.074	-
3.0	8.764	11.251	8.608	7.771	0.206	-
4.0	9.146	24.568	18.943	6.412	0.300	-
6.0	9.224	26.439	20.392	5.745	0.747	-
8.0	9.271	27.402	21.136	5.518	0.367	-
10.0	9.321	28.336	21.858	5.302	0.211	-
12.0	9.330	28.593	22.057	5.296	0.161	-
14.0	9.332	28.646	22.098	5.303	0.153	-
16.0	9.338	28.778	22.201	5.351	0.132	-
18.0	9.351	28.916	22.306	5.293	0.116	-
20.0	9.356	28.944	22.327	5.294	0.110	-
22.0	9.377	29.056	22.412	5.278	0.101	-
24.0	9.392	29.145	22.479	5.250	0.094	-
26.0	9.406	29.216	22.532	5.221	0.087	-
28.0	9.432	29.302	22.595	5.205	0.084	-
30.0	9.511	29.452	22.700	5.128	0.079	-
34.0	9.578	29.558	22.772	5.002	0.438	-

Aysen September 2009
Station CUN Cast 5



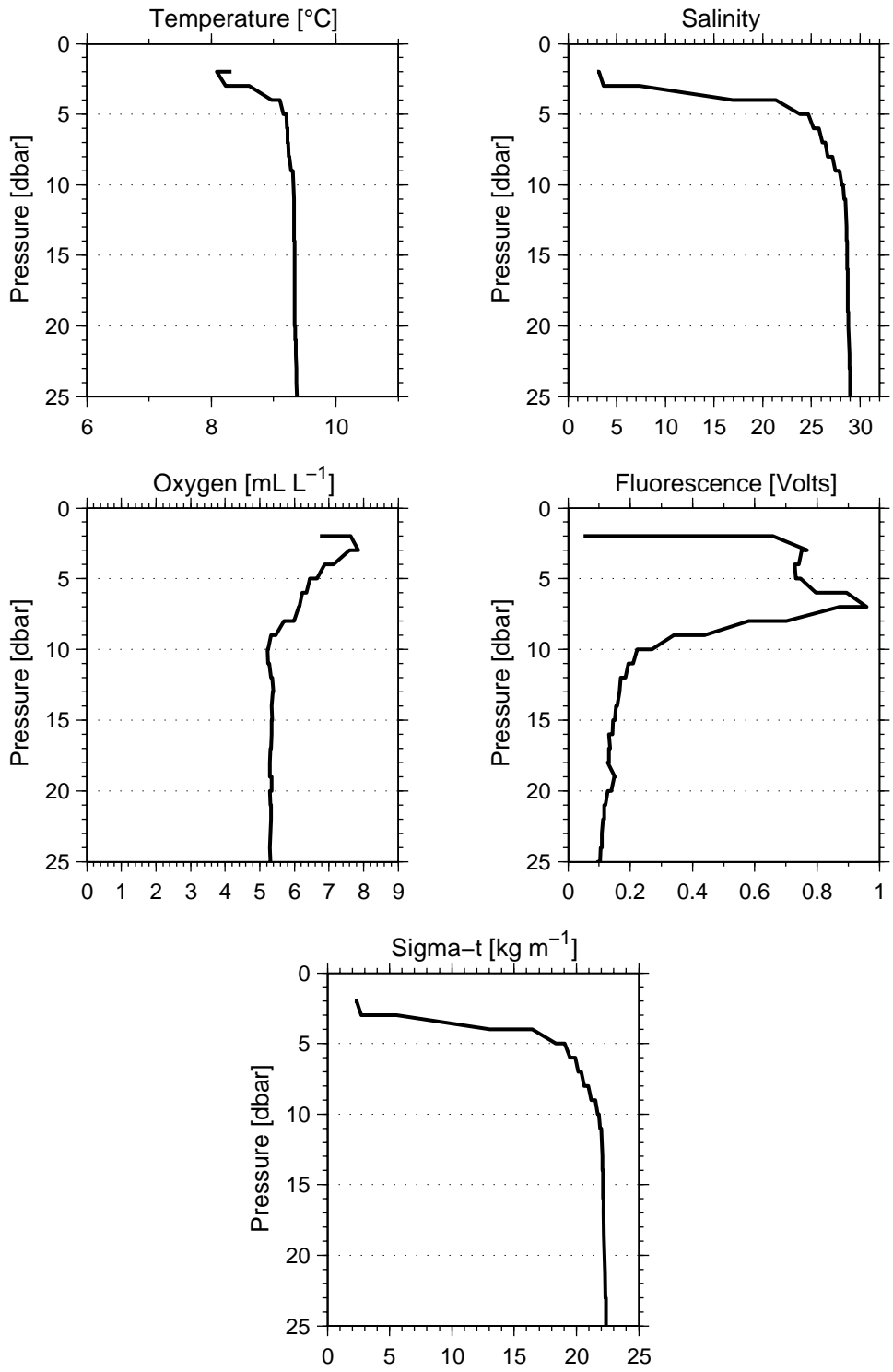
Aysen September 2009
Station CUN Cast 5



CRUISE	: Aysen September 2009	STATION	: CUN	CAST	: 6
DATE	: 2009-09-27	LAT	: 45°21.242	Z-CTD	: 73.0 m
TIME	: 20:40	LON	: 73°03.763	DEPTH	: 150 m

Pressure (dbar)	Temperature (°C)	Salinity (PSU)	Sigma-t (kg m ⁻³)	Oxygen (mL L ⁻¹)	Fluorescence (Volts)	PAR
1.0	-	-	-	-	-	-
2.0	8.090	3.187	2.358	7.633	0.658	-
3.0	8.613	7.364	5.585	7.588	0.750	-
4.0	9.100	21.375	16.459	6.876	0.728	-
6.0	9.223	25.805	19.898	6.226	0.895	-
8.0	9.257	27.156	20.947	5.706	0.581	-
10.0	9.321	28.269	21.806	5.228	0.223	-
12.0	9.329	28.584	22.050	5.359	0.170	-
14.0	9.334	28.668	22.116	5.343	0.154	-
16.0	9.336	28.738	22.170	5.337	0.131	-
18.0	9.338	28.783	22.204	5.287	0.127	-
20.0	9.344	28.839	22.247	5.301	0.129	-
22.0	9.360	28.943	22.326	5.319	0.113	-
24.0	9.372	29.009	22.375	5.288	0.105	-
26.0	9.395	29.114	22.454	5.214	0.089	-
28.0	9.461	29.316	22.602	5.145	0.081	-
30.0	9.592	29.559	22.771	5.018	0.075	-
35.0	9.693	29.707	22.871	4.954	0.070	-
40.0	9.878	29.922	23.009	4.694	0.067	-
45.0	9.899	30.084	23.133	4.780	0.072	-
50.0	9.993	30.240	23.239	4.597	0.069	-
60.0	9.787	30.364	23.369	4.847	0.072	-
70.0	-	-	-	-	-	-
73.0	10.345	30.683	23.527	4.131	0.063	-

Aysen September 2009
Station CUN Cast 6



Aysen September 2009
Station CUN Cast 6

