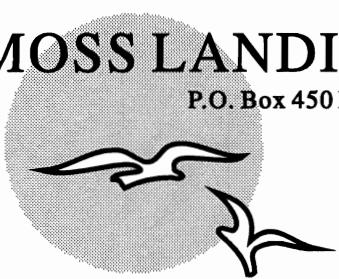


# MOSS LANDING MARINE LABORATORIES

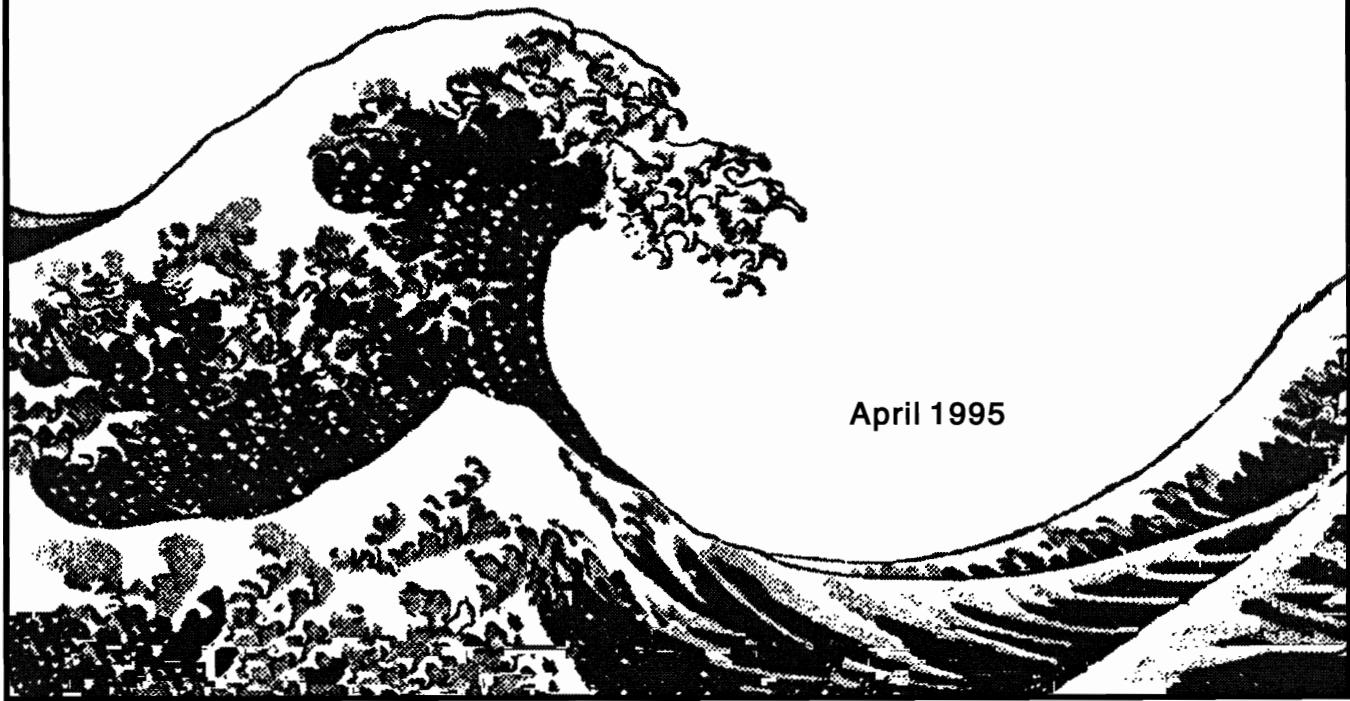
P.O. Box 450 Moss Landing, CA USA 95039-0450 (408) 755-8650



## Oceanographic Profiling and Spectroradiometer Observations from the MOCE-2 Cruise: 28 March to 14 April 1993

Michael E. Feinholz and Stephanie J. Flora

Moss Landing Marine Laboratories Technical Publication 95-1



**Oceanographic Profiling and Spectroradiometer  
Observations from the MOCE-2 Cruise:  
28 March to 14 April 1993**

Michael E. Feinholz and Stephanie Flora

Moss Landing Marine Laboratories

Moss Landing Marine Laboratories Technical Publication 95-1  
Moss Landing, CA 95039

April 1995

**Oceanographic Profiling and Spectroradiometer Observations  
from the MOCE-2 Cruise: 28 March to 14 April 1993**

**Table of Contents**

---

	page
Abstract .....	1
Introduction .....	1
Cruise Personnel .....	1
Methods .....	5
Data Management .....	6
Acknowledgements .....	7
References .....	8
Appendix 1. MOS Radiometry Data: Spectral plots and data listings .....	9
Appendix 2. CTD Profiling Results: Vertical profiles and data listings .....	58
Appendix 3. Total Suspended Material and Particulate Organic Carbon and Nitrogen .....	85

---

**List of Tables**

---

Table 1. Marine Optical Characterization Experiment MOCE-2 Station Summary .....	2
Table 2. Marine Optical Characterization Experiment file naming conventions .....	3

---

**List of Figures**

---

Figure 1. Station locations for MOCE-2 .....	2
Figure 2. Tetrahedron surface floatation for MOS radiometer profiling .....	3
Figure 3. Prototype Marine Optical System (MOS) .....	4

---

# Oceanographic Profiling and Spectroradiometer Observations from the MOCE-2 Cruise: 28 March to 14 April 1993

Michael E. Feinholz and Stephanie J. Flora  
Moss Landing Marine Laboratories

## Abstract

This report contains results from the second cruise of the Modis Optical Characterization Experiment (MOCE). Data presented here were obtained on the Mexican Research Vessel El Puma between 29 March and 13 April along the Pacific coast of Baja California and in the Gulf of California. Three types of data are reported: high spectral resolution radiometry at three depths for 13 stations; salinity, temperature beam attenuation and chlorophyll-a fluorescence, profiles at the same stations; and total suspended matter and suspended organic carbon and nitrogen.

## Introduction

The purpose of the Marine Optical Characterization Experiment (MOCE) is to obtain *in situ* ocean data characterizing the upper ocean bio-optical properties. The purposes of these data are twofold: 1) providing surface truth for the SeaWiFS ocean color satellite which will be launched in 1995, and 2) developing bio-optical algorithms relating water-leaving radiance to dissolved and particulate suspended material concentrations in surface waters.

Data included in this report were obtained from the NOAA/MLML high spectral resolution Marine Optics System (MOS) and a Seabird SBE 19 SEACAT self-contained CTD profiler. The first instrument was used to characterize the subsurface light field by measurements of upwelled radiance ( $L_u$ ) at three depths, the downwelled irradiance ( $E_d$ ) at those same depths and surface irradiance ( $E_s$ ) is measured above the surface by the Surface Incident Spectrometer (SIS). Oceanographic

profiling data from the CTD optics profiler characterize the density stratification from salinity, temperature profiles, the biological state from, chlorophyll fluorescence profiles, and the distribution of suspended particulates by beam attenuation. Water samples were obtained by 5-liter Niskin bottles for the determination of total suspended materials (TSM), particulate organic carbon (POC) particulate organic nitrogen (PON), and phytoplankton pigments.

Station locations (Fig. 1, Table 1) were chosen to sample a variety of coastal water types.

## Cruise Personnel

Chief scientists for the El Puma cruise were Dennis Clark NOAA/NESDIS and Saul Alvarez-Borrego CICESE. Scientific personnel included Mark Yarbrough, Michael Feinholz, Nancy Green and Yong Sung Kim all from MLML, Edward King NOAA/NESDIS, Dr. Charles Trees and Daniel Sullivan from CHORS, Dr. Sranley Hooker and L. Rexrode from NASA, James Brown from U. of Miami/RSMAS, Dave Phinney from Bigelow, and Dr. Helmut Maske, Rafael Cervantes-Duarte, Jose Valdez-Holguin, Alma Giles-Guzman, Eduardo Millan-Nunez, Roberto Millan-Nunez, Carmen Bazan-Guzman, Ramon Cajal-Medrano, Cecilia Diaz-Hernandez, Gilberto Gaxiola-Castro all from CICESE.

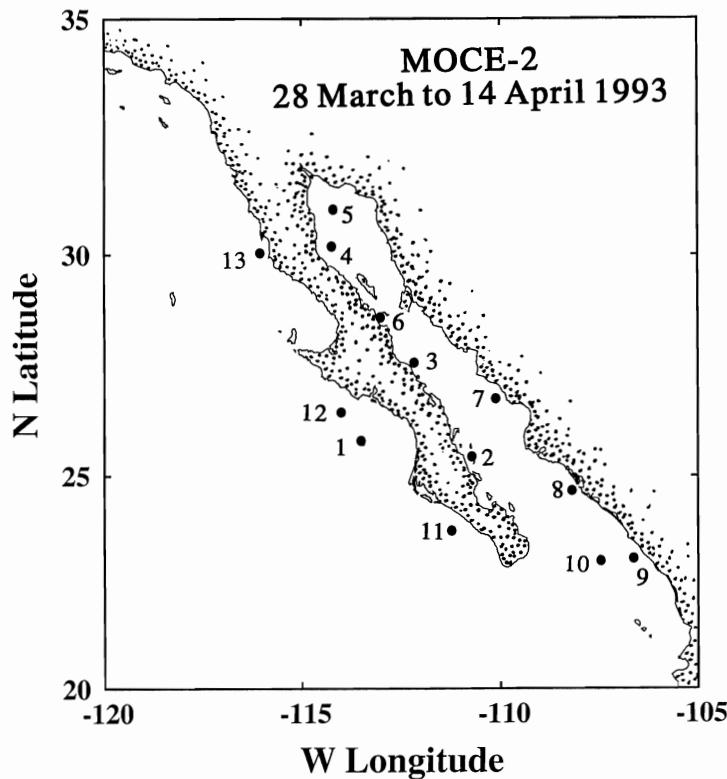


Figure 1. Station locations for MOCE-2.

Table 1. Marine Optical Characterization Experiment MOCE-2 Station Summary

Station:		Latitude:	Longitude:	Date:
Stn 01	Test	25° 51.5' N	113° 30.0' W	29 Mar 1993
Stn 02	Isla Santa Cruz	25° 14.7' N	110° 42.7' W	31 Mar 1993
Stn 03	Santa Rosalia	27° 38.6' N	112° 10.6' W	01 Apr 1993
Stn 04	Puertocitos (Cuenca Delfin)	30° 13.9' N	114° 14.6' W	02 Apr 1993
Stn 05	Wagner Basin	31° 01.5' N	114° 12.6' W	03 Apr 1993
Stn 06	Canal de Salsipuedes	28° 40.0' N	113° 01.0' W	04 Apr 1993
Stn 07	Punta Santa Lugarda	26° 50.5' N	110° 07.6' W	05 Apr 1993
Stn 08	Isla Altamura	24° 42.8' N	108° 11.2' W	06 Apr 1993
Stn 09	Mazatlan	23° 10.3' N	106° 39.8' W	07 Apr 1993
Stn 10	Mouth of Gulf	23° 04.9' N	107° 28.1' W	10 Apr 1993
Stn 11	Punta Marquez	23° 46.6' N	111° 13.7' W	11 Apr 1993
Stn 12	Punta Abreojos	26° 30.6' N	114° 00.3' W	12 Apr 1993
Stn 13	Bahia de San Quintin	30° 05.3' N	116° 03.5' W	13 Apr 1993



Figure 2. Tetrahedron surface floatation used in MOS radiometer profiling.

Table 2. MLML Marine Optical Characterization Experiment file naming conventions.

---

Raw SeaBird SBE 19 files	HHhDDMMY.HEX
SeaBird calibration files	SEASOFT.CON
Station Profiling data	CTD_STNnn_sss.MLDAT
Radiometer scan files	MOS_LU_STNnn_zzM_sss.MLDAT
"	MOS_ED "
"	MOS_ES "
Station profiling data	MOS_LU_STNnn_PRF_sss.MLDAT
Calibration	MOS_LU_CALIB_yyjjj_sss.MLDAT
Surface irradiance scan files	SIS_ES_STNnn_zzM_sss.MLDAT
Calibration files	SIS_ES_CALIB_yyjjj_sss.MLDAT
Trackline files	SIS_ES_TRKLN_yyjjj_sss.MLDAT
Merged radiometer files	MOCE2_STNnn_RADIOM.MLDAT
Corrected CTD profile files	MOCE2_STNnn_CTD.MLDAT

---

## Marine Optical System - Dual Spectrographs

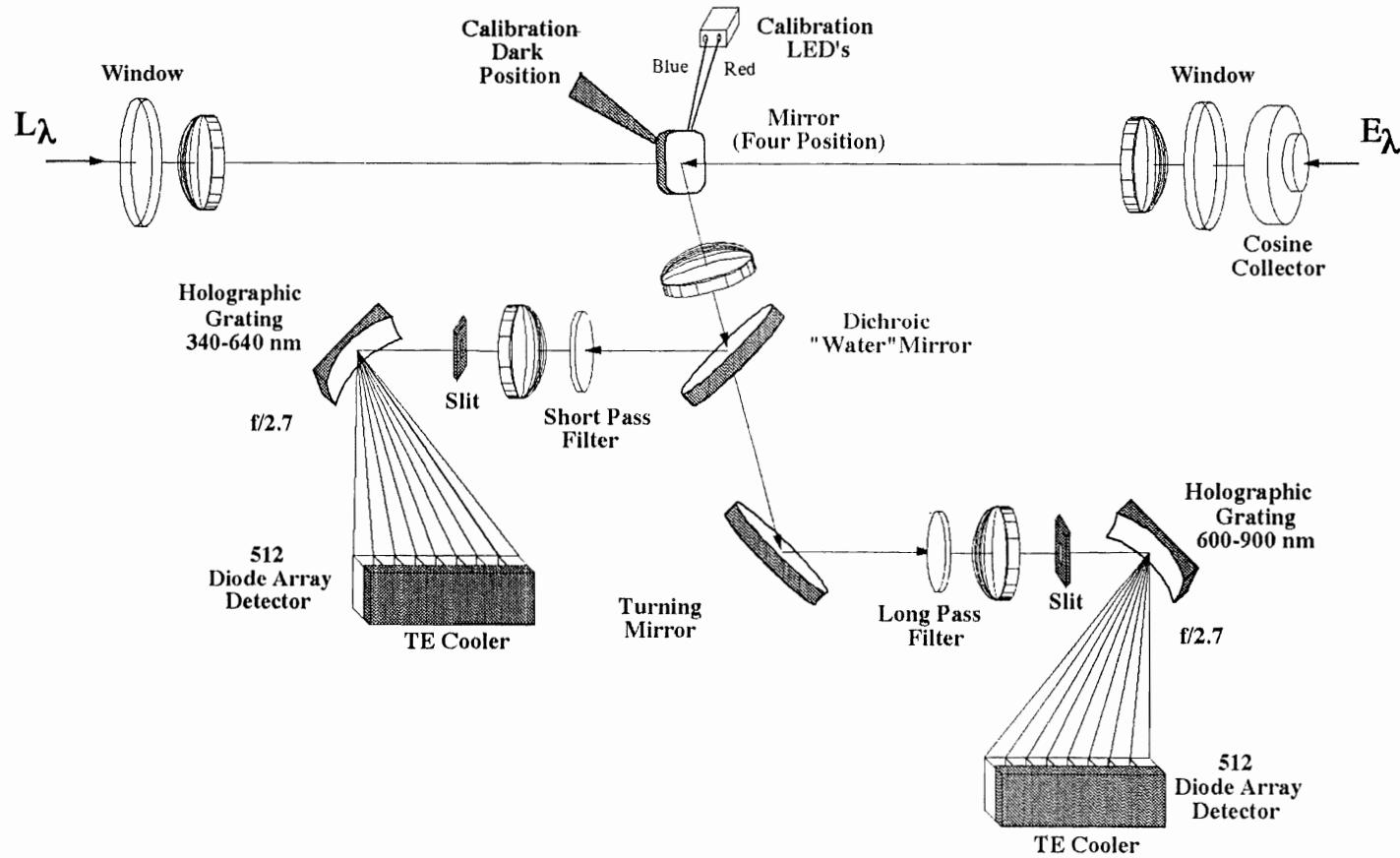


Figure 3. Prototype Marine Optical System (MOS).

## Methods

The work plan at each of the bio-optical stations is generally similar to that used during Dennis Clark's CZCS optical characterization work (Clark 1981; Gordon, *et al.* 1983). When SeaWiFS is launched, the objective will be to observe in-water light fields concomitant with the SeaWiFS overpass near local apparent noon. During MOCE-2 a similar routine was followed. The R/V El Pume stopped on station about three hours before local noon, and the spectroradiometer tetrahedron equipped with wave dampening barriers (Fig. 2) was deployed by allowing it to drift away from the ship. MOS was attached to a electric winch at the apex of the tetrahedron and was lowered to successive depths where it made repeated spectral scans.

The prototype MOS (Fig. 3) uses two 512-element silicon-diode arrays: the blue (340 to 640 nm) detects light passed through a "water mirror" dichroic filter, while the red (600 to 900 nm) detects that reflected off the dichroic. This novel design allows the measurement in the near infra-red (above 700 nm) where water absorption and effects of instrument self-shading (Gordon and Ding 1992) are large. With the 250  $\mu\text{m}$  slit, the effective spectral resolution of the MOS prototype is 2.5 nm.

Downwelled irradiance ( $E_d$ ) is measured via a BioSpherical Instruments cosine collector on the top of the instrument housing. Upwelled radiance ( $L_u$ ) is measured either with a 5° field of view radiance collector on the bottom of the housing or through mechanically multiplexed fiber-optics collectors. The bare fiber-optics collectors have a field of view of about 5°. Their 5 mm diameter reduces self-shading to a minimum and allows the infra-red measurements. On this cruise the fiber optics collectors were not used. The MOS prototype used an American Holographics Chemspec 100 spectrograph with Hamamatsu 512-element silicon diode detectors.

During MOS scans, a separate instrument, the surface incident spectrometer (SIS) runs in background to measure surface incident irradiance ( $E_s$ ). SIS uses an American Holographic 38-channel Hamamatsu diode array and a 0.1 m American holographic MS-10 spectrograph. Its spectral range is 370 to 725 nm giving a spectral resolution of 9 nm. The irradiance collector, based on the Scripps Visibility Laboratory design, was constructed of 0.5 inch thick UV transmitting acrylic.

Upwelled radiance and downwelled irradiance data were obtained sequentially as a group of 2 dark scans, 5 radiance or irradiance scans followed by 2 dark scans and constitute a *scan set*. During this shipboard work using MOS and SIS, we ran SIS as an independent instrument taking  $E_s$  scans as MOS made  $E_d$  and  $L_u$  scans. Depending upon atmospheric conditions and wave roughness, between 3 and 10 *scan sets* (each taking about two minutes to complete) were collected at each of three depths (nominally 1, 6, and 11 m). During the cruise over 200 radiometric *scan sets* were obtained.

While the radiometer work was in progress, vertical profiles were made using a Seabird SBE 19 SEACAT self-contained conductivity temperature depth profiler (CTD) with a SeaTech 25-cm path length 625 nm transmissometer and a SeaTech 680 nm fluorometer. This instrument was supplied by Dr. Helmut Maske from CICESE. A suitable A-frame was not available to use the MLML CTD/Rosette. Water samples were collected by 5-liter Niskin samplers hung on Kevlar cable from the CHORS winch and tripped inflection points observed from the vertical profiles.

Near local apparent noon, Secchi depth measurements were made with a 30 cm, all white, Secchi disk, carefully avoiding surface glint. The depth estimates were made both by lowering the disk until it faded from view and

raising it again until it was again viewed. The reported Secchi depths are the mean of the two readings. Ocean color as sensed by the human eye was estimated by Munsell color chips (Munsell Color Company, Baltimore Md.) selected by R.W. Austin (Scripps Visibility Laboratory). Two or more observers compared the color of the Secchi disk suspended at half its disappearance depth.

Based upon inflection points indicated by the transmission, fluorescence and temperature profiles, water samples were collected by pump. These samples were analyzed for total and organic suspended particulate materials, scattering cross-section, fluorescence and HPLC chlorophyll pigment analyses. Results from the scattering and pigment analyses are reported elsewhere.

Total suspended particulates were determined by filtering 1 to 5 liters of water through 47 mm diameter, 0.45  $\mu\text{m}$  pore-size Millipore HP/EP mixed-ester cellulose filters. These filters were desiccated and tared to a constant ( $\pm 20 \mu\text{g}$ ) weight and stored in separate Petri dishes. Water was vacuum filtered aboard ship using a pressure differential of 0.5 to 0.7 atmospheres. Sea salts were removed by two 20 ml rinses with deionized (Milli-Q) water. These filters have a 6 mm hydrophobic edge which eliminates the need to rinse sea salts from the filter rim. After sample collection, the filters were folded, gently creased and returned to the Petri dish. The filters were dried at 60° C. Suspended sediment weights were determined by weighing each filter on a Mettler H54-AR balance. Weighing was repeated three times or more until the difference between weights as less than 40  $\mu\text{g}$ .

Separate samples were filtered for particulate organic carbon and nitrogen analyses. Approximately 0.5 l of water was pressure filtered through 25 mm Whatman glass fiber GF/F filters having a nominal pore size of 0.7  $\mu\text{m}$ . These filters were pretreated

by ashing in a muffle furnace at 500° C for two hours. Each filter was stored in an ashed aluminum-line Petri dish. Following filtration, the filters were dried and stored until analysis ashore. Organic carbon and nitrogen were determined by combustion analysis with a Leeman Labs Model 440 Element Analyzer. Acetanilide standards were analyzed every 15th sample, and the maximum deviation of these standards never exceeded the 5% limits, which are the accepted precision of the method (University of Maryland, 1992). The limits of detection are 1  $\mu\text{g C mg}^{-1}$  sample for carbon and 0.1  $\mu\text{g N mg}^{-1}$  for nitrogen.

## Data Management

The MLML group manages data from five instrument systems: the MLML CTD/Rosette; Fastie, an 80-channel photomultiplier scanning radiometer; SIS, the surface incident irradiance spectrometer; MOS, the high resolution spectroradiometer; and MOBY which uses MOS in the Marine Optical Buoy System. Data obtained from these instruments are similar in form, but each has its own idiosyncrasies. Each data set is obtained with a high level program written in C and FORTRAN for VAXstations. Data acquisition and processing procedures are explained in detail by Feinholz and Broenkow (1993) and processing steps are illustrated in a tutorial (Broenkow, *et al.*, 1993). Data from all instruments are kept in an MLML\_DBASE format which can be displayed, edited and processed with a single suite of programs (Broenkow and Reaves, 1993).

Because of the complexity of these diverse data sets, data files have been organized into a hierarchical directory structure. An advantage of VMS is its robust file naming capabilities. Each data type is identified by the instrument name (MOS or SIS or CTD), a two digit station number (STNnn), a two digit sampling depth (zzM), and by a sequential index (sss). CTD sequential file numbers have been used

from the beginning of CTD work at MLML in 1974. MOS data may be obtained in a variety of sampling modes, which are reflected by file names. Each *scan set* is identified by data type: LU for upwelled radiance, ED for downwelled irradiance and ES in the unlikely event that MOS would be used to measure surface irradiance. MOS may be used in the vertical profiling mode, in which case the depth, zzM, is replaced by PRF. SIS is used mainly to take surface irradiance scans, but it could be used in other modes as well. Fastie is a general purpose instrument, and its use is similar to MOS. When an instrument is calibrated, the station designator is changed to CALIB. Any of these instruments could be used to take ship track-line data, in which case the STNnn designator is changed to TRKLN. Trackline and calibration files are identified by the year (yy) and Julian day (jjj) as well as a sequential index (sss). Each data type is identified also with a code that follows the data throughout processing. This is important because several files are merged to produce a single file containing all MOS/SIS observations at a single optics station.

To keep file naming conventions straight, the data acquisition programs (CTD, MOS, SIS, FASTIE) generate the file names with minimal user input. Files from the Marine Optical Buoy (MOBY) contain upwelled radiance, downwelled irradiance and surface irradiance scans from three depths. MOBY files are named according to instrument serial number (SNnn), year, Julian day and GMT time (hhmm). Because multiple instruments may be used, MOS, SIS and MOBY files include a serial number in the database.

Because each data set may be taken by different workstations, it is important to consolidate all data in one location. This will be the MLML VAX 4000, whose Internet domain name is NSF.MLML.CALSTATE.EDU. All current raw and processed files are located in a directory structure as follows:

[DATA.NOAA.CRUISE.INSTRUMENT.RAW]  
 [DATA.NOAA.CRUISE.INSTRUMENT.PRC]  
 [DATA.NOAA.CRUISE.INSTRUMENT.CAL]

Thus each data type is located in its associated directory for a given cruise. Sub-directories for the raw observations, the processed files and the calibration files are grouped together. We anticipate that data may be requested by any of the MOCE investigators. Upon receipt of requests, we will make read-only ASCII files available in a top level directory, NSF:[MOCE] to Internet users who login as MOCE. The file naming convention in Table 2 will be maintained, but ASCII files will have the file extension .DAT rather than .MLDAT used for the MLML\_DBASE binary files. It is unlikely that the preliminary files will be requested by MOCE investigators, but those may be requested also. The merged corrected files will be named according to cruise, station number and data type, such as MOCE01-STN14-RADIOM.MLDAT or MOCE01-STN14-CTD.MLDAT or their ASCII equivalents.

## Acknowledgements

We appreciate the efforts of the captain and crew of R/V El Puma. Craig Hunter performed the TSM, POC and PON analyses. Richard Reaves reduced the CTD optics profile data. This work was supported by National Oceanic and Atmospheric, National Environmental Satellite Data Information Service Grant No. NA17ECO428 to William Broenkow.

## References

- Broenkow, W.W. and R.E. Reaves. 1993. Introduction to MLML\_DBASE Programs. Moss Landing Marine Laboratories, Tech. Pub. 93-1. Moss Landing CA 95039
- Broenkow, W.W., N.T. Green and M.E. Feinholz. 1993. Processing NOAA Spectroradiometer Data. Moss Landing Marine Laboratories Tech. Pub. 93-4. Moss Landing, CA 95039
- Clark, D.K. 1981. Phytoplankton pigment algorithms for the Nimbus-7 CZCS. *in* Oceanography from Space, J.F.R. Gower (ed.) Plenum, New York. pp 227-237.
- Gordon, H.R., D.K. Clark, J.W. Brown, O.B. Brown, R.H. Evans and W.W. Broenkow. 1983. Phytoplankton pigment concentrations in the Middle Atlantic Bight: comparison of ship determinations and CZCS estimates. 1983 Applied Optics 22:1-36.
- Gordon, H.R. and K. Ding. 1992. Self-shading of in-water optical instruments. Limnol. Oceanogr. 37:491-500.
- Feinholz, M.E. and W.W. Broenkow. 1993. NOAA/MLML Radiometric Data Acquisition and Processing Programs. Moss Landing Marine Laboratories Tech. Pub. 93-3. Moss Landing CA 95039.
- Univ. of Maryland 1992. The analysis of carbon and nitrogen from sediments and the particulate fraction of water from estuarine/coastal systems using elemental analysis. University of Maryland Center for Environmental and Estuarine Studies, Chesapeake Biological Laboratory, Solomons, MD.

## Appendix 1.MOS Radiometry Data: Spectral plots and data listings.

### Explanation of Data Tables:

Four pages are presented for each optics station. The first two page are graphs of corrected observed data at up to three depths: Ed is downwelled irradiance ( $\mu\text{W cm}^{-2} \text{ nm}^{-1}$ ).

Lu is upwelled radiance in ( $\mu\text{W cm}^{-2} \text{ sr}^{-1} \text{ nm}^{-1}$ ).

Es is surface irradiance ( $\mu\text{W cm}^{-2} \text{ nm}^{-1}$ ).

Ed and Lu are measured at about 0.6 nm intervals. Es is measured at about 9 nm intervals.

All data have been used in the plots, but the spectra have been interpolated to 10 nm intervals for tables presented here.

The second page presents derived data. Ke(1,2,3) and Kl(1,2,3) are the diffuse irradiance and radiance attenuation coefficients ( $\text{m}^{-1}$ ) computed between all combinations of Ed and Lu at the three depths. Sampling depth is shown above each column. Top refers to the upper depth, Mid to the second depth and Bot to the bottom or deepest most depth. K\_1 is between Top and Mid; K\_2 between Top and Bot; K\_3 between Mid and Bot.

R is the ratio between the spectral mean surface irradiances and indicates the variability in surface irradiance.

Four water-leaving radiance spectra are presented by combinations of observed Lu (at the Top, Mid and Bot depths termed Lu\_1, Lu\_2 and Lu\_3 respectively) and Kls between those three depths as indicated above the columns.

The last column is the solar-normalized water-leaving radiance based only on the Top Lu

spectra and Kl between the Top and Mid depths.

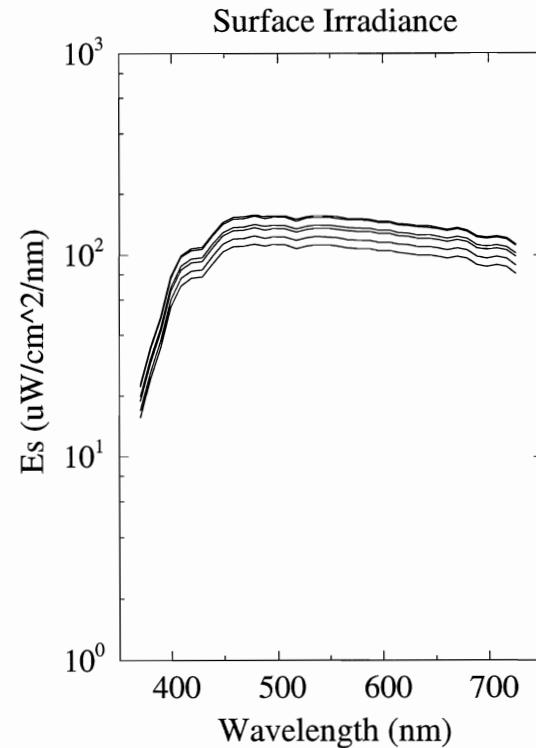
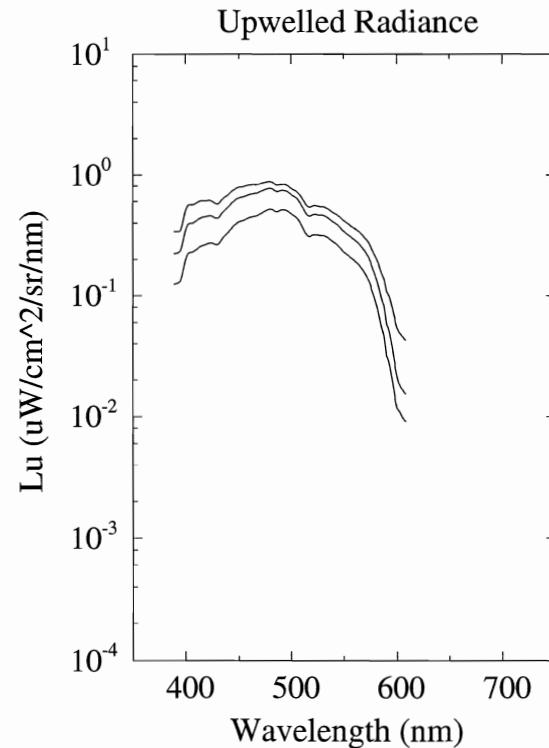
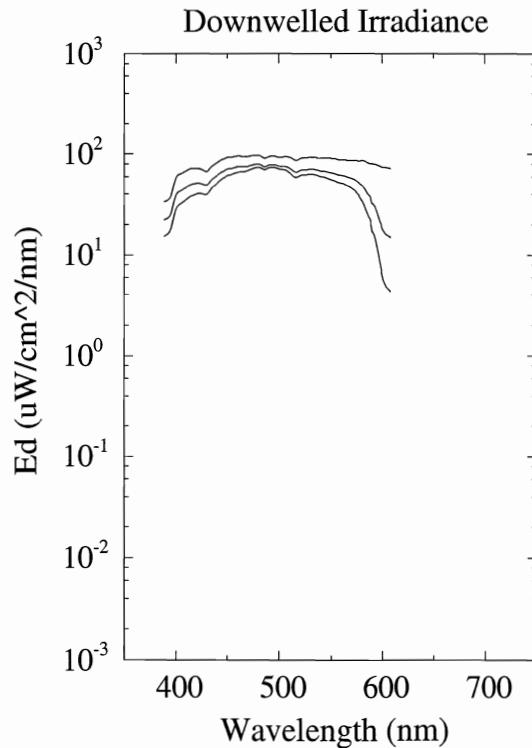
SeaWiFS-weighted, solar-normalized water-leaving radiances are listed above the spectral values.

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
 STATION: 02 - Isla Santa Cruz

Top = 1 m  
 Mid = 6 m  
 Bot = 11 m

POSITION: 25°13.0 N 110°43.5 W  
 DATE: 21:27 (GMT) 31 Mar 1993

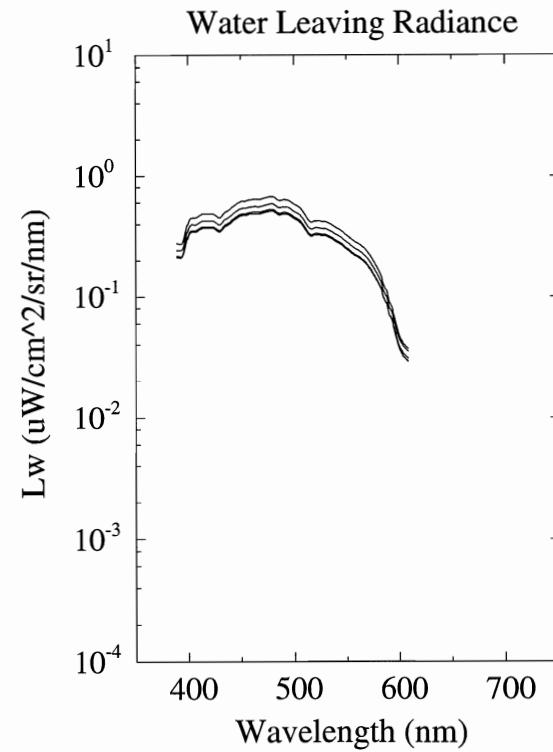
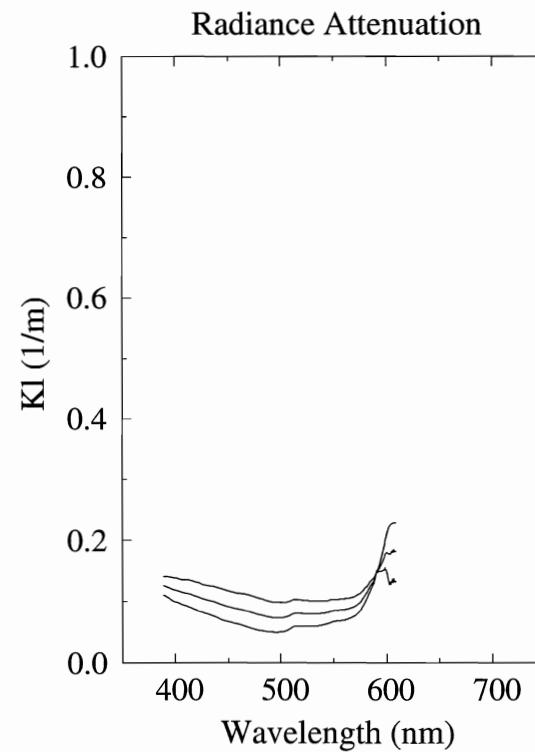
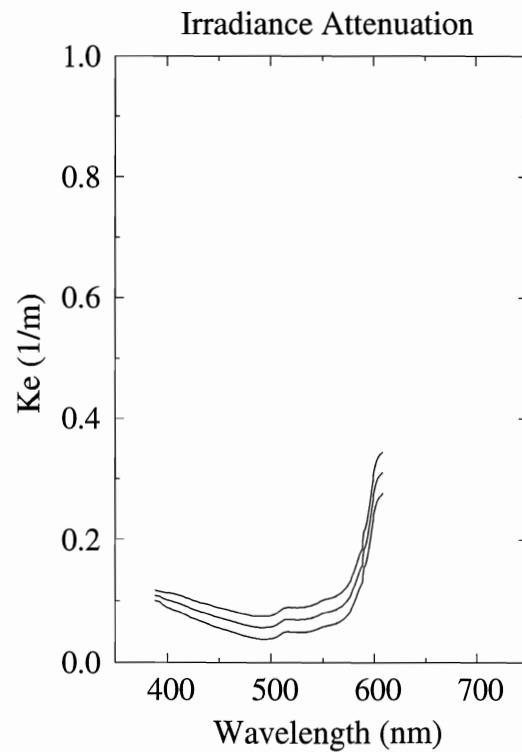


## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
 STATION: 02 - Isla Santa Cruz

Top = 1 to 6 m  
 Mid = 1 to 11 m  
 Bot = 6 to 11 m

POSITION: 25°13.0 N 110°43.5 W  
 DATE: 21:27 (GMT) 31 Mar 1993



File: MOCE2:[MOS.PRC]STN02\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 21:27 (GMT) 31 Mar 1993STATION: 02 - Isla Santa Cruz  
POSITION: 25°13.0 N 110°43.5 W

## SeaWiFS-weighted water-leaving radiance:

Wavelength (nm)	412	443	490	510	555	670	765	865
Lw' ( $\mu\text{W}/\text{cm}^2/\text{sr}$ )	7.02E+0	8.26E+0	1.01E+1	8.65E+0	4.38E+0	nil	nil	nil

Depth (m)	Top		Top		Mid		Mid		Bot		Bot	
	0.6	1.2	5.7	6.3	21:40	21:25			10.7	20:40		11.1
Time (GMT)	22:13		22:09									20:30
Lambda	Ed_1	Es_1	Lu_1	Es_1	Ed_2	Es_2	Lu_2	Es_2	Ed_3	Es_3	Lu_3	Es_3
400	5.75E+1	5.53E+1	5.17E-1	5.99E+1	3.88E+1	6.63E+1	3.59E-1	6.92E+1	2.83E+1	7.66E+1	2.05E-1	7.82E+1
405	6.36E+1	7.05E+1	5.64E-1	7.64E+1	4.31E+1	8.44E+1	3.96E-1	8.79E+1	3.20E+1	9.72E+1	2.29E-1	9.92E+1
410	6.81E+1	7.05E+1	5.79E-1	7.64E+1	4.67E+1	8.44E+1	4.14E-1	8.79E+1	3.51E+1	9.72E+1	2.40E-1	9.92E+1
415	7.18E+1	7.65E+1	6.09E-1	8.30E+1	4.99E+1	9.16E+1	4.43E-1	9.53E+1	3.82E+1	1.05E+2	2.58E-1	1.07E+2
420	7.25E+1	7.65E+1	6.10E-1	8.30E+1	5.11E+1	9.16E+1	4.52E-1	9.53E+1	3.99E+1	1.05E+2	2.67E-1	1.07E+2
425	7.08E+1	7.76E+1	6.04E-1	8.44E+1	5.09E+1	9.30E+1	4.55E-1	9.67E+1	4.05E+1	1.07E+2	2.73E-1	1.09E+2
430	6.74E+1	7.76E+1	5.72E-1	8.44E+1	4.91E+1	9.30E+1	4.38E-1	9.67E+1	3.98E+1	1.07E+2	2.65E-1	1.09E+2
435	7.55E+1	9.02E+1	6.32E-1	9.82E+1	5.56E+1	1.08E+2	4.91E-1	1.12E+2	4.57E+1	1.24E+2	2.99E-1	1.26E+2
440	8.17E+1	9.02E+1	6.81E-1	9.82E+1	6.08E+1	1.08E+2	5.37E-1	1.12E+2	5.08E+1	1.24E+2	3.31E-1	1.26E+2
445	8.77E+1	1.03E+2	7.41E-1	1.13E+2	6.62E+1	1.24E+2	5.97E-1	1.29E+2	5.63E+1	1.42E+2	3.72E-1	1.45E+2
450	9.29E+1	1.03E+2	7.89E-1	1.13E+2	7.10E+1	1.24E+2	6.42E-1	1.29E+2	6.12E+1	1.42E+2	4.06E-1	1.45E+2
455	9.39E+1	1.09E+2	8.00E-1	1.19E+2	7.24E+1	1.31E+2	6.60E-1	1.36E+2	6.32E+1	1.50E+2	4.22E-1	1.53E+2
460	9.58E+1	1.09E+2	8.22E-1	1.19E+2	7.47E+1	1.31E+2	6.84E-1	1.36E+2	6.59E+1	1.50E+2	4.41E-1	1.53E+2
465	9.50E+1	1.10E+2	8.29E-1	1.20E+2	7.49E+1	1.32E+2	7.00E-1	1.37E+2	6.70E+1	1.51E+2	4.53E-1	1.54E+2
470	9.48E+1	1.10E+2	8.39E-1	1.20E+2	7.56E+1	1.32E+2	7.18E-1	1.37E+2	6.86E+1	1.51E+2	4.69E-1	1.54E+2
475	9.73E+1	1.13E+2	8.67E-1	1.24E+2	7.85E+1	1.36E+2	7.52E-1	1.41E+2	7.22E+1	1.55E+2	4.99E-1	1.58E+2
480	9.81E+1	1.13E+2	8.81E-1	1.24E+2	7.99E+1	1.36E+2	7.72E-1	1.41E+2	7.42E+1	1.55E+2	5.19E-1	1.58E+2
485	9.21E+1	1.10E+2	8.27E-1	1.21E+2	7.55E+1	1.33E+2	7.31E-1	1.38E+2	7.06E+1	1.51E+2	4.97E-1	1.54E+2
490	9.46E+1	1.10E+2	8.35E-1	1.21E+2	7.77E+1	1.33E+2	7.41E-1	1.38E+2	7.31E+1	1.51E+2	5.10E-1	1.54E+2
495	9.62E+1	1.13E+2	8.26E-1	1.23E+2	7.88E+1	1.36E+2	7.35E-1	1.41E+2	7.42E+1	1.54E+2	5.09E-1	1.57E+2
500	9.34E+1	1.13E+2	7.73E-1	1.23E+2	7.62E+1	1.36E+2	6.86E-1	1.41E+2	7.15E+1	1.54E+2	4.76E-1	1.57E+2
505	9.46E+1	1.12E+2	7.24E-1	1.22E+2	7.58E+1	1.34E+2	6.36E-1	1.39E+2	7.02E+1	1.53E+2	4.40E-1	1.55E+2
510	9.35E+1	1.12E+2	6.38E-1	1.22E+2	7.27E+1	1.34E+2	5.48E-1	1.39E+2	6.56E+1	1.53E+2	3.74E-1	1.55E+2
515	8.78E+1	1.07E+2	5.53E-1	1.17E+2	6.69E+1	1.29E+2	4.66E-1	1.34E+2	5.94E+1	1.47E+2	3.16E-1	1.49E+2
520	8.96E+1	1.07E+2	5.50E-1	1.17E+2	6.83E+1	1.29E+2	4.65E-1	1.34E+2	6.07E+1	1.47E+2	3.16E-1	1.49E+2
525	9.16E+1	1.11E+2	5.50E-1	1.21E+2	6.98E+1	1.33E+2	4.66E-1	1.38E+2	6.23E+1	1.52E+2	3.18E-1	1.54E+2
530	9.37E+1	1.11E+2	5.46E-1	1.21E+2	7.12E+1	1.33E+2	4.62E-1	1.38E+2	6.35E+1	1.52E+2	3.16E-1	1.54E+2
535	9.33E+1	1.12E+2	5.22E-1	1.23E+2	7.04E+1	1.35E+2	4.41E-1	1.40E+2	6.25E+1	1.54E+2	3.02E-1	1.56E+2
540	9.14E+1	1.12E+2	4.86E-1	1.23E+2	6.82E+1	1.35E+2	4.07E-1	1.40E+2	6.00E+1	1.54E+2	2.78E-1	1.56E+2
545	9.20E+1	1.12E+2	4.57E-1	1.22E+2	6.75E+1	1.35E+2	3.78E-1	1.40E+2	5.87E+1	1.53E+2	2.58E-1	1.56E+2
550	9.16E+1	1.12E+2	4.19E-1	1.22E+2	6.57E+1	1.35E+2	3.42E-1	1.40E+2	5.61E+1	1.53E+2	2.31E-1	1.56E+2
555	8.99E+1	1.10E+2	3.87E-1	1.21E+2	6.36E+1	1.33E+2	3.13E-1	1.38E+2	5.36E+1	1.51E+2	2.12E-1	1.54E+2
560	8.84E+1	1.10E+2	3.62E-1	1.21E+2	6.18E+1	1.33E+2	2.91E-1	1.38E+2	5.17E+1	1.51E+2	1.96E-1	1.54E+2
565	8.79E+1	1.08E+2	3.35E-1	1.19E+2	6.02E+1	1.31E+2	2.65E-1	1.36E+2	4.96E+1	1.49E+2	1.78E-1	1.51E+2
570	8.69E+1	1.08E+2	3.02E-1	1.19E+2	5.78E+1	1.31E+2	2.35E-1	1.36E+2	4.65E+1	1.49E+2	1.55E-1	1.51E+2
575	8.65E+1	1.07E+2	2.58E-1	1.18E+2	5.42E+1	1.30E+2	1.92E-1	1.35E+2	4.16E+1	1.48E+2	1.24E-1	1.51E+2
580	8.65E+1	1.07E+2	2.09E-1	1.18E+2	4.93E+1	1.30E+2	1.43E-1	1.35E+2	3.49E+1	1.48E+2	8.84E-2	1.51E+2
585	8.39E+1	1.07E+2	1.60E-1	1.18E+2	4.23E+1	1.30E+2	1.00E-1	1.35E+2	2.69E+1	1.48E+2	5.86E-2	1.50E+2
590	8.05E+1	1.07E+2	1.15E-1	1.18E+2	3.38E+1	1.30E+2	6.32E-2	1.35E+2	1.85E+1	1.48E+2	3.51E-2	1.50E+2
595	7.84E+1	1.05E+2	8.26E-2	1.15E+2	2.64E+1	1.27E+2	3.94E-2	1.32E+2	1.20E+1	1.45E+2	2.13E-2	1.47E+2
600	7.45E+1	1.05E+2	5.46E-2	1.15E+2	1.83E+1	1.27E+2	2.16E-2	1.32E+2	6.25E+0	1.45E+2	1.18E-2	1.47E+2
605	7.37E+1	1.05E+2	4.66E-2	1.15E+2	1.58E+1	1.28E+2	1.69E-2	1.32E+2	4.73E+0	1.45E+2	1.00E-2	1.47E+2

File: MOCE2:[MOS.PRC]STN02\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 21:27 (GMT) 31 Mar 1993STATION: 02 - Isla Santa Cruz  
POSITION: 25°13.0 N 110°43.5 W

## SeaWiFS-weighted normalized water-leaving radiance:

Wavelength (nm):	412	443	490	510	555	670	765	865
Lwn' (uW/cm^2/sr):	1.07E+1	1.20E+1	1.40E+1	1.20E+1	6.07E+0	nil	nil	nil

Depth (m)	1-6	1-6	1-11	1-11	6-11	6-11	Top Kl_1	Top Kl_2	Mid Kl_1	Bot Kl_2	Lw_1
R_Es	0.828	0.873	0.728	0.785	0.879	0.898					
Lambda	Ke_1	Kl_1	Ke_2	Kl_2	Ke_3	Kl_3	Lw_1	Lw_2	Lw_3	Lw_4	Lwn
400	1.14E-1	9.94E-2	1.02E-1	1.19E-1	8.97E-2	1.39E-1	3.18E-1	3.25E-1	3.64E-1	4.15E-1	4.98E-1
405	1.13E-1	9.67E-2	1.00E-1	1.16E-1	8.68E-2	1.37E-1	3.45E-1	3.54E-1	3.95E-1	4.51E-1	5.36E-1
410	1.11E-1	9.33E-2	9.74E-2	1.14E-1	8.35E-2	1.36E-1	3.53E-1	3.62E-1	4.04E-1	4.61E-1	5.42E-1
415	1.08E-1	8.97E-2	9.42E-2	1.12E-1	7.98E-2	1.35E-1	3.69E-1	3.80E-1	4.23E-1	4.83E-1	5.61E-1
420	1.05E-1	8.60E-2	9.08E-2	1.08E-1	7.61E-2	1.32E-1	3.69E-1	3.79E-1	4.22E-1	4.83E-1	5.55E-1
425	1.02E-1	8.31E-2	8.71E-2	1.05E-1	7.19E-2	1.29E-1	3.64E-1	3.74E-1	4.16E-1	4.76E-1	5.43E-1
430	9.85E-2	7.99E-2	8.39E-2	1.03E-1	6.88E-2	1.26E-1	3.43E-1	3.53E-1	3.93E-1	4.50E-1	5.08E-1
435	9.67E-2	7.71E-2	8.14E-2	1.01E-1	6.56E-2	1.25E-1	3.78E-1	3.89E-1	4.32E-1	4.96E-1	5.56E-1
440	9.49E-2	7.36E-2	7.89E-2	9.77E-2	6.23E-2	1.23E-1	4.05E-1	4.17E-1	4.63E-1	5.31E-1	5.91E-1
445	9.19E-2	6.96E-2	7.56E-2	9.44E-2	5.88E-2	1.20E-1	4.39E-1	4.52E-1	5.02E-1	5.76E-1	6.36E-1
450	8.94E-2	6.74E-2	7.31E-2	9.19E-2	5.62E-2	1.18E-1	4.66E-1	4.80E-1	5.33E-1	6.11E-1	6.71E-1
455	8.76E-2	6.50E-2	7.08E-2	8.95E-2	5.35E-2	1.15E-1	4.71E-1	4.85E-1	5.39E-1	6.18E-1	6.75E-1
460	8.54E-2	6.31E-2	6.87E-2	8.77E-2	5.14E-2	1.14E-1	4.83E-1	4.98E-1	5.52E-1	6.34E-1	6.89E-1
465	8.32E-2	6.04E-2	6.62E-2	6.58E-2	4.87E-2	1.13E-1	4.85E-1	5.01E-1	5.55E-1	6.38E-1	6.89E-1
470	8.10E-2	5.76E-2	6.38E-2	8.36E-2	4.59E-2	1.11E-1	4.89E-1	5.05E-1	5.60E-1	6.43E-1	6.91E-1
475	7.88E-2	5.48E-2	6.12E-2	8.07E-2	4.31E-2	1.08E-1	5.04E-1	5.20E-1	5.76E-1	6.63E-1	7.09E-1
480	7.70E-2	5.28E-2	5.93E-2	7.83E-2	4.10E-2	1.05E-1	5.11E-1	5.27E-1	5.84E-1	6.71E-1	7.17E-1
485	7.58E-2	5.13E-2	5.80E-2	7.62E-2	3.95E-2	1.02E-1	4.78E-1	4.93E-1	5.48E-1	6.29E-1	6.70E-1
490	7.56E-2	5.03E-2	5.73E-2	7.46E-2	3.83E-2	1.00E-1	4.83E-1	4.97E-1	5.52E-1	6.33E-1	6.72E-1
495	7.59E-2	4.99E-2	5.74E-2	7.37E-2	3.82E-2	9.87E-2	4.77E-1	4.92E-1	5.46E-1	6.26E-1	6.63E-1
500	7.67E-2	5.03E-2	5.82E-2	7.38E-2	3.91E-2	9.85E-2	4.47E-1	4.60E-1	5.11E-1	5.86E-1	6.20E-1
505	8.02E-2	5.23E-2	6.12E-2	7.52E-2	4.15E-2	9.93E-2	4.19E-1	4.31E-1	4.80E-1	5.50E-1	5.83E-1
510	8.61E-2	5.70E-2	6.68E-2	7.88E-2	4.68E-2	1.02E-1	3.72E-1	3.82E-1	4.26E-1	4.87E-1	5.15E-1
515	9.01E-2	6.03E-2	7.05E-2	8.13E-2	5.02E-2	1.03E-1	3.23E-1	3.32E-1	3.70E-1	4.23E-1	4.46E-1
520	9.01E-2	6.00E-2	7.02E-2	8.08E-2	4.97E-2	1.03E-1	3.22E-1	3.30E-1	3.68E-1	4.21E-1	4.44E-1
525	9.00E-2	5.96E-2	6.99E-2	8.02E-2	4.91E-2	1.02E-1	3.22E-1	3.30E-1	3.68E-1	4.20E-1	4.45E-1
530	9.06E-2	5.97E-2	7.03E-2	7.99E-2	4.93E-2	1.01E-1	3.19E-1	3.27E-1	3.65E-1	4.17E-1	4.42E-1
535	9.18E-2	6.04E-2	7.13E-2	8.02E-2	5.01E-2	1.01E-1	3.06E-1	3.13E-1	3.50E-1	3.99E-1	4.23E-1
540	9.40E-2	6.20E-2	7.33E-2	8.12E-2	5.19E-2	1.01E-1	2.85E-1	2.92E-1	3.26E-1	3.72E-1	3.94E-1
545	9.74E-2	6.42E-2	7.63E-2	8.26E-2	5.44E-2	1.02E-1	2.69E-1	2.75E-1	3.07E-1	3.50E-1	3.71E-1
550	1.02E-1	6.72E-2	8.03E-2	8.50E-2	5.80E-2	1.04E-1	2.47E-1	2.53E-1	2.83E-1	3.22E-1	3.42E-1
555	1.05E-1	6.87E-2	8.29E-2	8.58E-2	6.04E-2	1.04E-1	2.29E-1	2.34E-1	2.62E-1	2.98E-1	3.17E-1
560	1.07E-1	6.98E-2	8.49E-2	8.68E-2	6.21E-2	1.05E-1	2.14E-1	2.19E-1	2.45E-1	2.79E-1	2.97E-1
565	1.11E-1	7.26E-2	8.85E-2	8.88E-2	6.53E-2	1.06E-1	1.99E-1	2.03E-1	2.27E-1	2.58E-1	2.76E-1
570	1.17E-1	7.68E-2	9.38E-2	9.22E-2	7.02E-2	1.08E-1	1.80E-1	1.84E-1	2.06E-1	2.34E-1	2.51E-1
575	1.28E-1	8.52E-2	1.04E-1	9.91E-2	7.95E-2	1.14E-1	1.56E-1	1.58E-1	1.78E-1	2.02E-1	2.17E-1
580	1.47E-1	1.01E-1	1.22E-1	1.12E-1	9.62E-2	1.23E-1	1.28E-1	1.30E-1	1.47E-1	1.66E-1	1.78E-1
585	1.71E-1	1.20E-1	1.45E-1	1.27E-1	1.17E-1	1.34E-1	1.01E-1	1.02E-1	1.16E-1	1.30E-1	1.39E-1
590	2.07E-1	1.46E-1	1.78E-1	1.45E-1	1.49E-1	1.45E-1	7.46E-2	7.45E-2	8.53E-2	9.50E-2	1.03E-1
595	2.50E-1	1.74E-1	2.19E-1	1.62E-1	1.87E-1	1.50E-1	5.56E-2	5.48E-2	6.36E-2	6.98E-2	7.67E-2
600	3.12E-1	2.11E-1	2.78E-1	1.80E-1	2.44E-1	1.48E-1	3.85E-2	3.71E-2	4.40E-2	4.72E-2	5.32E-2
605	3.38E-1	2.27E-1	3.05E-1	1.81E-1	2.70E-1	1.31E-1	3.35E-2	3.16E-2	3.84E-2	4.03E-2	4.63E-2

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

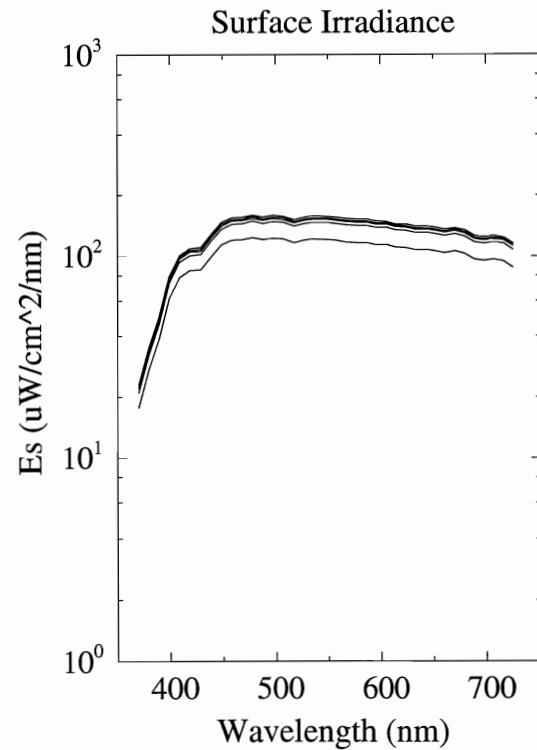
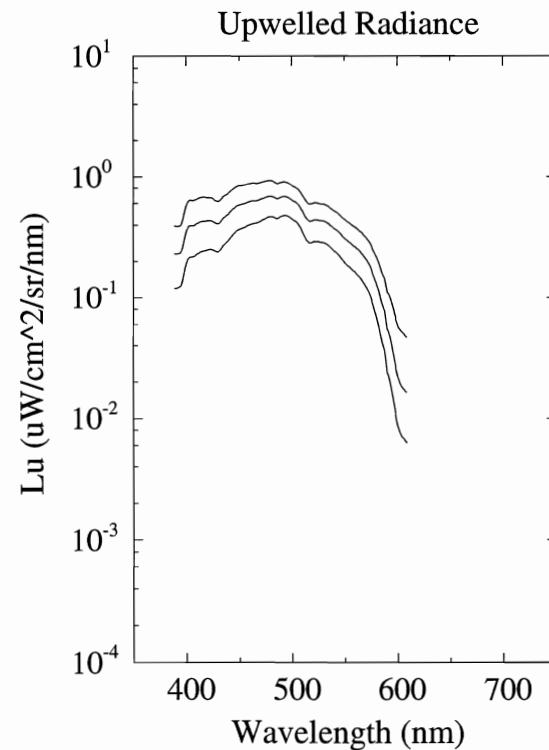
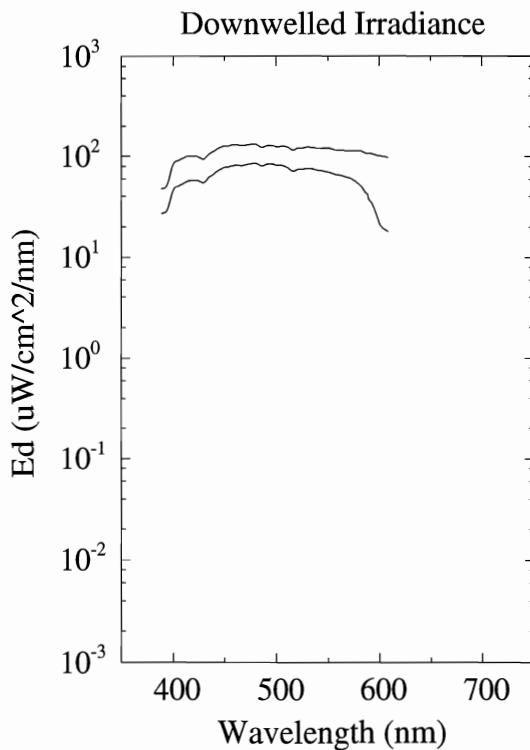
CRUISE: MOCE-2 SHIP: El Puma

STATION: 03 - Santa Rosalia

Top = 1 m  
 Mid = 6 m  
 Bot = 11 m

POSITION: 27°38.0 N 112°10.3 W

DATE: 20:43 (GMT) 01 Apr 1993



April 1995

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

STATION: 03 - Santa Rosalia

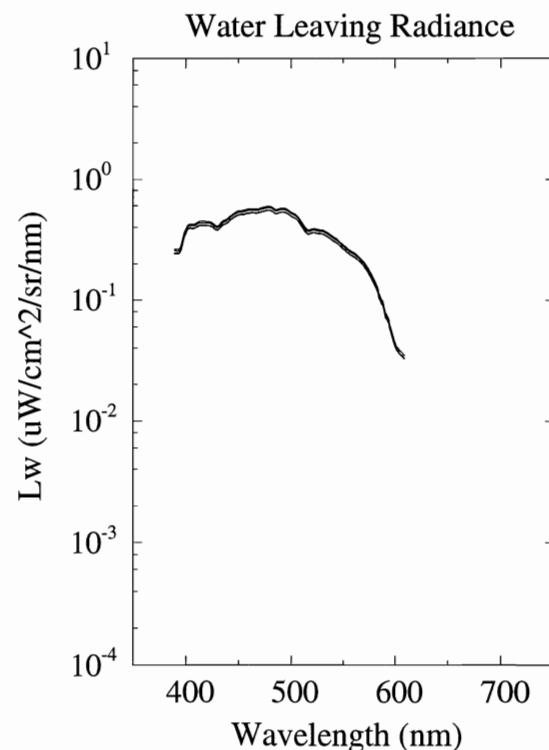
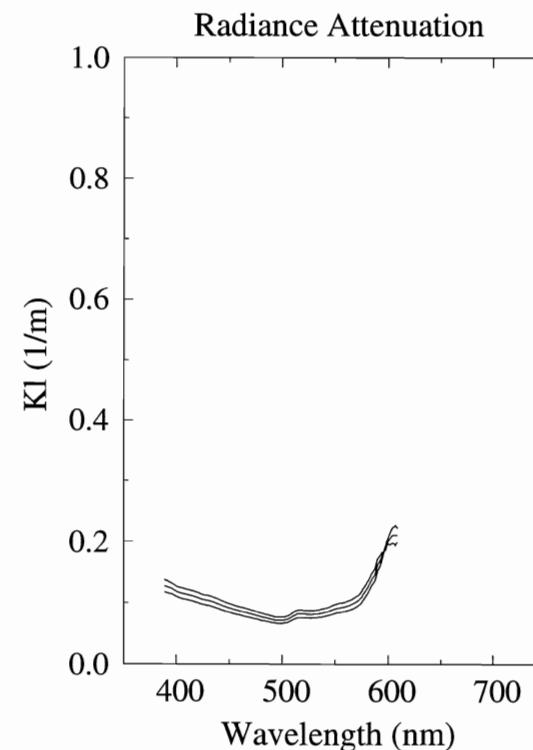
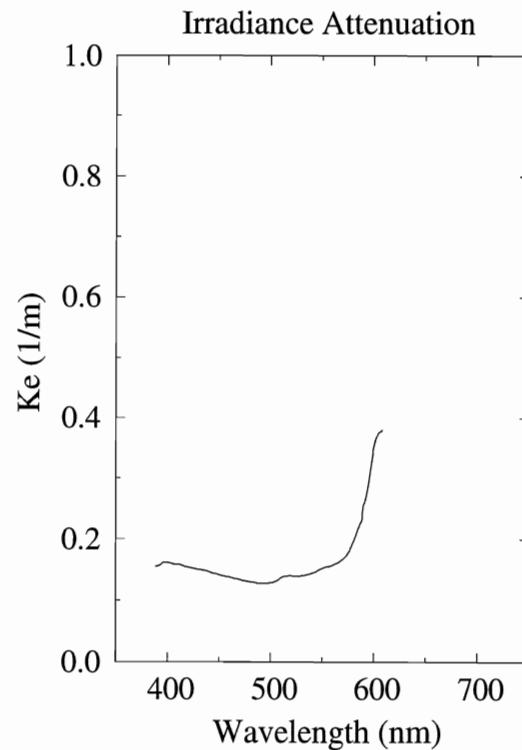
Top = 1 to 6 m

Mid = 1 to 11 m

Bot = 6 to 11 m

POSITION: 27°38.0 N 112°10.3 W

DATE: 20:43 (GMT) 01 Apr 1993



File: MOCE2:[MOS.PRC]STN03\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 20:43 (GMT) 01 Apr 1993STATION: 03 - Santa Rosalia  
POSITION: 27°38.0 N 112°10.3 W

## SeaWiFS-weighted water-leaving radiance:

Wavelength (nm):	412	443	490	510	555	670	765	865
Lw' ( $\mu\text{W}/\text{cm}^2/\text{sr}$ ):	1.34E+1	4.47E+1	1.55E+2	2.07E+2	2.33E+2	nil	nil	nil

Depth (m)	Top	Top	Mid	Mid	Bot	Bot
	0.5	1.2	5.6	6.1	11.0	20:10
Time (GMT)	21:15	21:01	20:40	20:26		

Lambda	Ed_1	Es_1	Lu_1	Es_1	Ed_2	Es_2	Lu_2	Es_2	Ed_3	Es_3	Lu_3	Es_3
400	8.32E+1	6.18E+1	5.90E-1	7.32E+1	4.61E+1	7.60E+1	3.61E-1	7.76E+1		1.97E-1	7.92E+1	
405	9.03E+1	7.83E+1	6.36E-1	9.30E+1	5.05E+1	9.65E+1	3.94E-1	9.84E+1		2.18E-1	1.00E+2	
410	9.62E+1	7.83E+1	6.50E-1	9.30E+1	5.39E+1	9.65E+1	4.06E-1	9.84E+1		2.27E-1	1.00E+2	
415	1.01E+2	8.46E+1	6.76E-1	1.01E+2	5.71E+1	1.04E+2	4.28E-1	1.06E+2		2.42E-1	1.09E+2	
420	1.01E+2	8.46E+1	6.74E-1	1.01E+2	5.80E+1	1.04E+2	4.32E-1	1.06E+2		2.47E-1	1.09E+2	
425	9.86E+1	8.56E+1	6.58E-1	1.02E+2	5.72E+1	1.06E+2	4.28E-1	1.08E+2		2.49E-1	1.10E+2	
430	9.40E+1	8.56E+1	6.23E-1	1.02E+2	5.51E+1	1.06E+2	4.08E-1	1.08E+2		2.40E-1	1.10E+2	
435	1.05E+2	9.92E+1	6.83E-1	1.19E+2	6.20E+1	1.23E+2	4.53E-1	1.25E+2		2.70E-1	1.28E+2	
440	1.13E+2	9.92E+1	7.29E-1	1.19E+2	6.71E+1	1.23E+2	4.91E-1	1.25E+2		2.97E-1	1.28E+2	
445	1.21E+2	1.13E+2	7.94E-1	1.36E+2	7.31E+1	1.41E+2	5.43E-1	1.43E+2		3.34E-1	1.46E+2	
450	1.27E+2	1.13E+2	8.40E-1	1.36E+2	7.79E+1	1.41E+2	5.83E-1	1.43E+2		3.65E-1	1.46E+2	
455	1.28E+2	1.20E+2	8.52E-1	1.43E+2	7.93E+1	1.49E+2	5.98E-1	1.51E+2		3.81E-1	1.54E+2	
460	1.31E+2	1.20E+2	8.76E-1	1.43E+2	8.15E+1	1.49E+2	6.21E-1	1.51E+2		4.00E-1	1.54E+2	
465	1.29E+2	1.20E+2	8.82E-1	1.45E+2	8.16E+1	1.50E+2	6.32E-1	1.52E+2		4.11E-1	1.55E+2	
470	1.29E+2	1.20E+2	8.90E-1	1.45E+2	8.20E+1	1.50E+2	6.44E-1	1.52E+2		4.24E-1	1.55E+2	
475	1.32E+2	1.23E+2	9.18E-1	1.48E+2	8.48E+1	1.54E+2	6.72E-1	1.56E+2		4.49E-1	1.59E+2	
480	1.32E+2	1.23E+2	9.31E-1	1.48E+2	8.58E+1	1.54E+2	6.89E-1	1.56E+2		4.67E-1	1.59E+2	
485	1.24E+2	1.20E+2	8.82E-1	1.45E+2	8.09E+1	1.50E+2	6.58E-1	1.53E+2		4.51E-1	1.55E+2	
490	1.27E+2	1.20E+2	9.00E-1	1.45E+2	8.33E+1	1.50E+2	6.78E-1	1.53E+2		4.70E-1	1.55E+2	
495	1.29E+2	1.22E+2	8.98E-1	1.48E+2	8.47E+1	1.53E+2	6.80E-1	1.55E+2		4.75E-1	1.58E+2	
500	1.25E+2	1.22E+2	8.44E-1	1.48E+2	8.20E+1	1.53E+2	6.40E-1	1.55E+2		4.47E-1	1.58E+2	
505	1.27E+2	1.21E+2	7.91E-1	1.46E+2	8.17E+1	1.51E+2	5.94E-1	1.54E+2		4.11E-1	1.57E+2	
510	1.25E+2	1.21E+2	6.94E-1	1.46E+2	7.84E+1	1.51E+2	5.12E-1	1.54E+2		3.45E-1	1.57E+2	
515	1.17E+2	1.16E+2	6.03E-1	1.41E+2	7.24E+1	1.46E+2	4.37E-1	1.48E+2		2.89E-1	1.51E+2	
520	1.20E+2	1.16E+2	6.01E-1	1.41E+2	7.39E+1	1.46E+2	4.35E-1	1.48E+2		2.88E-1	1.51E+2	
525	1.22E+2	1.20E+2	5.99E-1	1.45E+2	7.54E+1	1.50E+2	4.35E-1	1.53E+2		2.88E-1	1.55E+2	
530	1.25E+2	1.20E+2	5.91E-1	1.45E+2	7.67E+1	1.50E+2	4.28E-1	1.53E+2		2.84E-1	1.55E+2	
535	1.24E+2	1.21E+2	5.62E-1	1.47E+2	7.57E+1	1.52E+2	4.06E-1	1.55E+2		2.67E-1	1.57E+2	
540	1.21E+2	1.21E+2	5.19E-1	1.47E+2	7.33E+1	1.52E+2	3.72E-1	1.55E+2		2.43E-1	1.57E+2	
545	1.22E+2	1.21E+2	4.85E-1	1.46E+2	7.24E+1	1.52E+2	3.44E-1	1.54E+2		2.21E-1	1.57E+2	
550	1.21E+2	1.21E+2	4.42E-1	1.46E+2	7.05E+1	1.52E+2	3.09E-1	1.54E+2		1.95E-1	1.57E+2	
555	1.19E+2	1.19E+2	4.07E-1	1.45E+2	6.78E+1	1.50E+2	2.82E-1	1.52E+2		1.76E-1	1.55E+2	
560	1.17E+2	1.19E+2	3.81E-1	1.45E+2	6.60E+1	1.50E+2	2.62E-1	1.52E+2		1.62E-1	1.55E+2	
565	1.16E+2	1.17E+2	3.50E-1	1.42E+2	6.43E+1	1.48E+2	2.38E-1	1.50E+2		1.45E-1	1.53E+2	
570	1.15E+2	1.17E+2	3.16E-1	1.42E+2	6.20E+1	1.48E+2	2.10E-1	1.50E+2		1.25E-1	1.53E+2	
575	1.14E+2	1.16E+2	2.70E-1	1.41E+2	5.85E+1	1.47E+2	1.73E-1	1.49E+2		9.82E-2	1.52E+2	
580	1.15E+2	1.16E+2	2.16E-1	1.41E+2	5.38E+1	1.47E+2	1.30E-1	1.49E+2		6.89E-2	1.52E+2	
585	1.11E+2	1.16E+2	1.65E-1	1.41E+2	4.66E+1	1.46E+2	9.18E-2	1.49E+2		4.50E-2	1.52E+2	
590	1.08E+2	1.16E+2	1.18E-1	1.41E+2	3.81E+1	1.46E+2	5.95E-2	1.49E+2		2.64E-2	1.52E+2	
595	1.06E+2	1.14E+2	8.66E-2	1.38E+2	3.03E+1	1.43E+2	3.79E-2	1.46E+2		1.57E-2	1.48E+2	
600	1.02E+2	1.14E+2	5.90E-2	1.38E+2	2.17E+1	1.43E+2	2.25E-2	1.46E+2		8.71E-3	1.48E+2	
605	1.01E+2	1.14E+2	5.13E-2	1.38E+2	1.90E+1	1.43E+2	1.78E-2	1.45E+2		6.87E-3	1.48E+2	

File: MOCE2:[MOS.PRC]STN03\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 20:43 (GMT) 01 Apr 1993STATION: 03 - Santa Rosalia  
POSITION: 27°38.0 N 112°10.3 W

## SeaWiFS-weighted normalized water-leaving radiance:

Wavelength (nm):	412	443	490	510	555	670	765	865
Lwn' (uW/cm^2/sr):	2.18E+1	6.78E+1	2.19E+2	2.87E+2	3.10E+2	nil	nil	nil

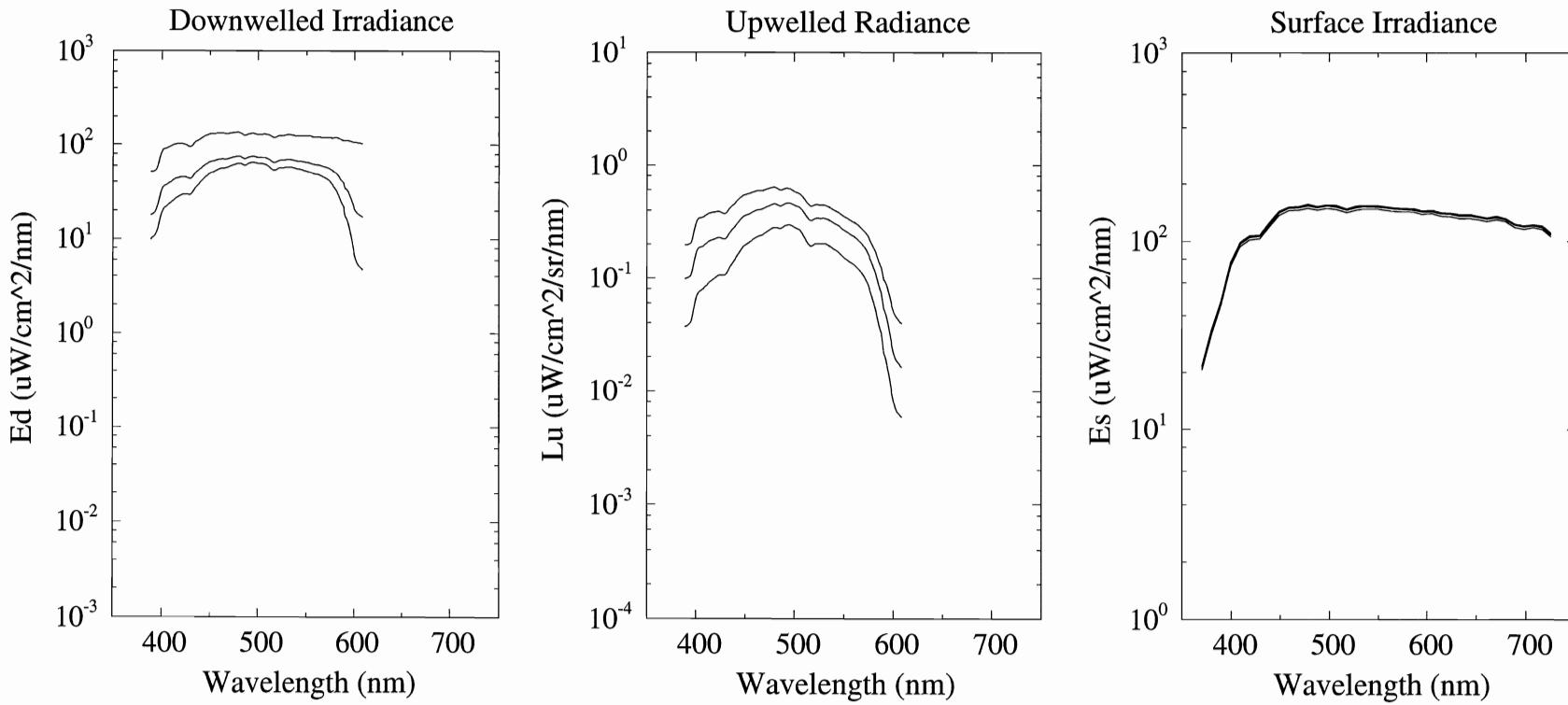
Depth (m)	1-6	1-6	1-11	6-11	Top	Top	Mid	Bot	Lw_1		
R_Es	0.797	0.949	0.931	0.981	Kl_1	Kl_2	Kl_1	Kl_2			
Lambda	Ke_1	Kl_1	Ke_2	Kl_2	Ke_3	Kl_3	Lw_1	Lw_2	Lw_3	Lw_4	Lwn
400	1.62E-1	1.10E-1	1.19E-1	1.27E-1	3.64E-1	3.67E-1	3.83E-1	3.95E-1	5.18E-1		
405	1.60E-1	1.08E-1	1.16E-1	1.25E-1	3.91E-1	3.95E-1	4.12E-1	4.24E-1	5.52E-1		
410	1.59E-1	1.05E-1	1.14E-1	1.22E-1	3.98E-1	4.02E-1	4.20E-1	4.32E-1	5.57E-1		
415	1.57E-1	1.03E-1	1.11E-1	1.20E-1	4.13E-1	4.17E-1	4.35E-1	4.48E-1	5.73E-1		
420	1.54E-1	1.01E-1	1.09E-1	1.17E-1	4.11E-1	4.15E-1	4.33E-1	4.46E-1	5.65E-1		
425	1.53E-1	9.79E-2	1.06E-1	1.14E-1	4.00E-1	4.04E-1	4.22E-1	4.34E-1	5.45E-1		
430	1.51E-1	9.60E-2	1.04E-1	1.12E-1	3.78E-1	3.81E-1	3.98E-1	4.10E-1	5.11E-1		
435	1.50E-1	9.36E-2	1.01E-1	1.09E-1	4.13E-1	4.17E-1	4.35E-1	4.48E-1	5.55E-1		
440	1.47E-1	9.05E-2	9.83E-2	1.06E-1	4.40E-1	4.44E-1	4.63E-1	4.76E-1	5.87E-1		
445	1.45E-1	8.74E-2	9.49E-2	1.02E-1	4.77E-1	4.81E-1	5.02E-1	5.16E-1	6.33E-1		
450	1.42E-1	8.46E-2	9.17E-2	9.89E-2	5.03E-1	5.07E-1	5.30E-1	5.45E-1	6.64E-1		
455	1.40E-1	8.21E-2	8.90E-2	9.59E-2	5.08E-1	5.12E-1	5.36E-1	5.50E-1	6.67E-1		
460	1.39E-1	8.01E-2	8.68E-2	9.34E-2	5.22E-1	5.26E-1	5.50E-1	5.65E-1	6.82E-1		
465	1.36E-1	7.79E-2	8.47E-2	9.15E-2	5.24E-1	5.28E-1	5.52E-1	5.67E-1	6.82E-1		
470	1.35E-1	7.60E-2	8.24E-2	8.88E-2	5.27E-1	5.31E-1	5.56E-1	5.71E-1	6.83E-1		
475	1.32E-1	7.37E-2	7.98E-2	8.60E-2	5.43E-1	5.47E-1	5.72E-1	5.87E-1	7.01E-1		
480	1.31E-1	7.14E-2	7.72E-2	8.31E-2	5.49E-1	5.53E-1	5.79E-1	5.94E-1	7.07E-1		
485	1.30E-1	6.97E-2	7.53E-2	8.09E-2	5.19E-1	5.23E-1	5.47E-1	5.61E-1	6.67E-1		
490	1.29E-1	6.78E-2	7.32E-2	7.86E-2	5.28E-1	5.32E-1	5.57E-1	5.71E-1	6.75E-1		
495	1.29E-1	6.68E-2	7.18E-2	7.69E-2	5.27E-1	5.30E-1	5.55E-1	5.69E-1	6.72E-1		
500	1.29E-1	6.67E-2	7.18E-2	7.70E-2	4.95E-1	4.98E-1	5.22E-1	5.35E-1	6.31E-1		
505	1.32E-1	6.83E-2	7.35E-2	7.88E-2	4.64E-1	4.67E-1	4.89E-1	5.02E-1	5.92E-1		
510	1.37E-1	7.24E-2	7.82E-2	8.41E-2	4.10E-1	4.13E-1	4.32E-1	4.43E-1	5.22E-1		
515	1.40E-1	7.58E-2	8.19E-2	8.80E-2	3.57E-1	3.60E-1	3.76E-1	3.86E-1	4.53E-1		
520	1.41E-1	7.59E-2	8.19E-2	8.79E-2	3.57E-1	3.59E-1	3.76E-1	3.86E-1	4.52E-1		
525	1.40E-1	7.53E-2	8.14E-2	8.75E-2	3.55E-1	3.57E-1	3.74E-1	3.84E-1	4.50E-1		
530	1.41E-1	7.58E-2	8.17E-2	8.77E-2	3.50E-1	3.53E-1	3.69E-1	3.79E-1	4.45E-1		
535	1.42E-1	7.65E-2	8.26E-2	8.88E-2	3.33E-1	3.36E-1	3.51E-1	3.61E-1	4.24E-1		
540	1.45E-1	7.80E-2	8.45E-2	9.10E-2	3.08E-1	3.11E-1	3.25E-1	3.34E-1	3.92E-1		
545	1.48E-1	8.02E-2	8.70E-2	9.38E-2	2.89E-1	2.91E-1	3.04E-1	3.13E-1	3.67E-1		
550	1.52E-1	8.30E-2	9.01E-2	9.74E-2	2.64E-1	2.67E-1	2.79E-1	2.86E-1	3.36E-1		
555	1.56E-1	8.46E-2	9.22E-2	9.99E-2	2.44E-1	2.46E-1	2.57E-1	2.64E-1	3.10E-1		
560	1.58E-1	8.68E-2	9.42E-2	1.02E-1	2.29E-1	2.31E-1	2.41E-1	2.48E-1	2.91E-1		
565	1.62E-1	8.92E-2	9.71E-2	1.05E-1	2.11E-1	2.13E-1	2.22E-1	2.29E-1	2.69E-1		
570	1.67E-1	9.31E-2	1.02E-1	1.10E-1	1.91E-1	1.93E-1	2.01E-1	2.07E-1	2.44E-1		
575	1.77E-1	1.01E-1	1.10E-1	1.19E-1	1.64E-1	1.66E-1	1.73E-1	1.79E-1	2.10E-1		
580	1.95E-1	1.14E-1	1.23E-1	1.33E-1	1.34E-1	1.35E-1	1.41E-1	1.45E-1	1.70E-1		
585	2.17E-1	1.29E-1	1.39E-1	1.49E-1	1.04E-1	1.05E-1	1.10E-1	1.13E-1	1.32E-1		
590	2.51E-1	1.50E-1	1.60E-1	1.70E-1	7.59E-2	7.69E-2	8.00E-2	8.26E-2	9.61E-2		
595	2.92E-1	1.78E-1	1.81E-1	1.83E-1	5.78E-2	5.80E-2	6.09E-2	6.22E-2	7.32E-2		
600	3.51E-1	2.06E-1	2.02E-1	1.97E-1	4.07E-2	4.05E-2	4.29E-2	4.35E-2	5.16E-2		
605	3.75E-1	2.24E-1	2.11E-1	1.98E-1	3.61E-2	3.55E-2	3.80E-2	3.81E-2	4.57E-2		

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
 STATION: 04 - Puertocitos

Top = 0.5 m  
 Mid = 6 m  
 Bot = 11 m

POSITION: 30°13.6 N 114°14.9 W  
 DATE: 19:52 (GMT) 02 Apr 1993



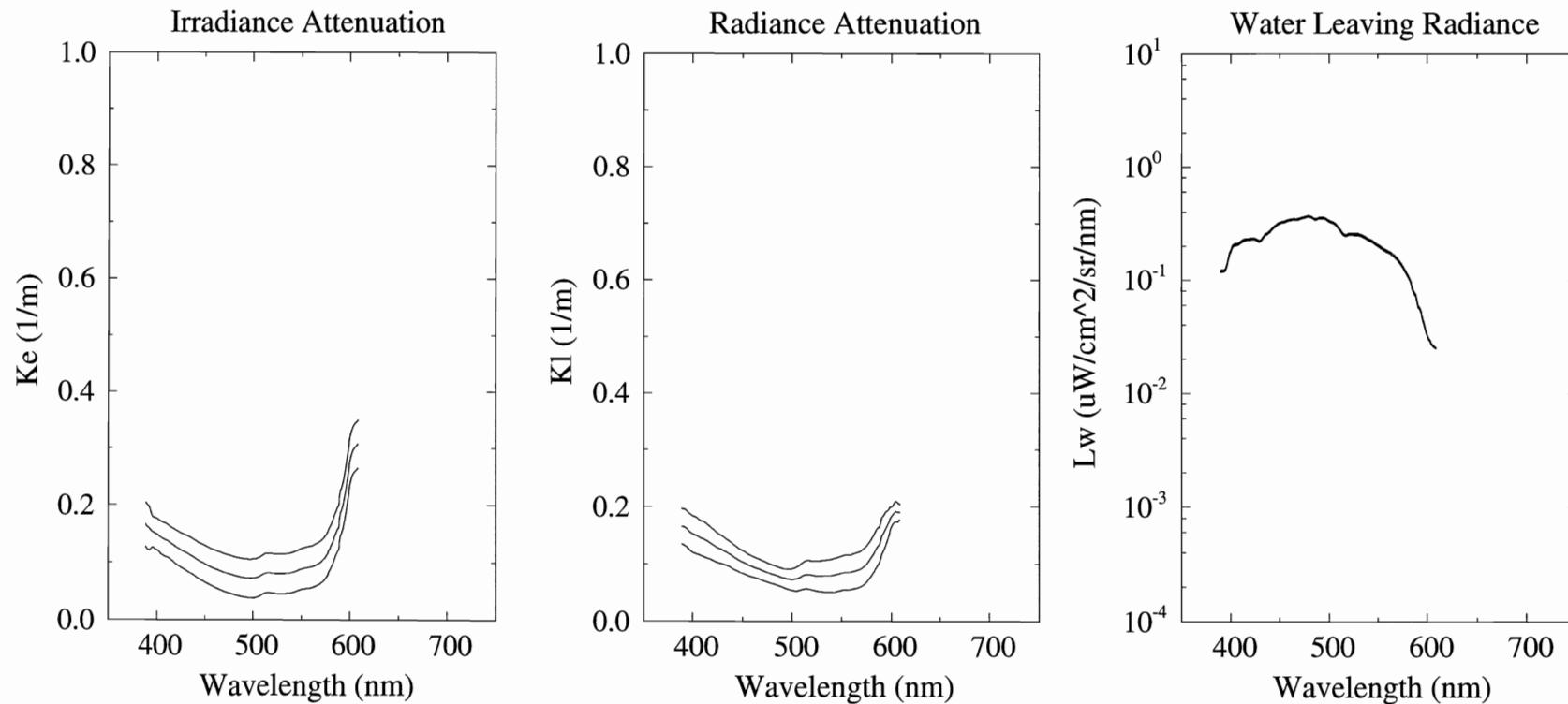
April 1995

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
 STATION: 04 - Puertocitos

Top = 0.5 to 6 m  
 Mid = 0.5 to 11 m  
 Bot = 6 to 11 m

POSITION: 30°13.6 N 114°14.9 W  
 DATE: 19:52 (GMT) 02 Apr 1993



File: MOCE2:[MOS.PRC]STN04\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 19:52 (GMT) 02 Apr 1993STATION: 04 - PuertoCitos  
POSITION: 30°13.6 N 114°14.9 W

## SeaWiFS-weighted water-leaving radiance:

Wavelength (nm):	412	443	490	510	555	670	765	865
Lw' (uW/cm^2/sr):	4.27E+0	5.54E+0	7.34E+0	6.59E+0	3.57E+0	nil	nil	nil

Depth (m)	Top			Mid			Bot		
	0.2	0.8	5.2	5.8	10.2	10.9			
Time (GMT)	19:03	19:19	20:48	20:23	19:55	19:41			
Lambda	Ed_1	Es_1	Lu_1	Es_1	Ed_2	Es_2	Lu_2	Es_2	Ed_3
400	8.39E+1	7.56E+1	3.10E-1	7.63E+1	3.34E+1	7.32E+1	1.68E-1	7.54E+1	1.91E+1
405	9.11E+1	9.61E+1	3.41E-1	9.70E+1	3.72E+1	9.32E+1	1.88E-1	9.59E+1	2.19E+1
410	9.67E+1	9.61E+1	3.56E-1	9.70E+1	4.04E+1	9.32E+1	1.99E-1	9.59E+1	2.44E+1
415	1.01E+2	1.04E+2	3.78E-1	1.05E+2	4.36E+1	1.01E+2	2.15E-1	1.04E+2	2.71E+1
420	1.02E+2	1.04E+2	3.85E-1	1.05E+2	4.49E+1	1.01E+2	2.23E-1	1.04E+2	2.89E+1
425	9.95E+1	1.06E+2	3.85E-1	1.07E+2	4.50E+1	1.03E+2	2.28E-1	1.05E+2	2.97E+1
430	9.49E+1	1.06E+2	3.72E-1	1.07E+2	4.37E+1	1.03E+2	2.23E-1	1.05E+2	2.97E+1
435	1.06E+2	1.23E+2	4.18E-1	1.24E+2	4.99E+1	1.19E+2	2.54E-1	1.22E+2	3.48E+1
440	1.14E+2	1.23E+2	4.56E-1	1.24E+2	5.50E+1	1.19E+2	2.84E-1	1.22E+2	3.95E+1
445	1.23E+2	1.40E+2	5.06E-1	1.42E+2	6.06E+1	1.36E+2	3.22E-1	1.40E+2	4.47E+1
450	1.30E+2	1.40E+2	5.45E-1	1.42E+2	6.56E+1	1.36E+2	3.55E-1	1.40E+2	4.95E+1
455	1.30E+2	1.49E+2	5.60E-1	1.50E+2	6.74E+1	1.44E+2	3.71E-1	1.48E+2	5.20E+1
460	1.33E+2	1.49E+2	5.83E-1	1.50E+2	6.98E+1	1.44E+2	3.92E-1	1.48E+2	5.50E+1
465	1.32E+2	1.50E+2	5.93E-1	1.51E+2	7.03E+1	1.45E+2	4.03E-1	1.49E+2	5.64E+1
470	1.31E+2	1.50E+2	6.01E-1	1.51E+2	7.11E+1	1.45E+2	4.15E-1	1.49E+2	5.81E+1
475	1.35E+2	1.54E+2	6.22E-1	1.55E+2	7.40E+1	1.49E+2	4.38E-1	1.53E+2	6.14E+1
480	1.35E+2	1.54E+2	6.35E-1	1.55E+2	7.53E+1	1.49E+2	4.53E-1	1.53E+2	6.34E+1
485	1.27E+2	1.50E+2	6.03E-1	1.51E+2	7.12E+1	1.46E+2	4.36E-1	1.50E+2	6.07E+1
490	1.30E+2	1.50E+2	6.16E-1	1.51E+2	7.36E+1	1.46E+2	4.53E-1	1.50E+2	6.33E+1
495	1.32E+2	1.53E+2	6.18E-1	1.54E+2	7.51E+1	1.49E+2	4.61E-1	1.53E+2	6.49E+1
500	1.28E+2	1.53E+2	5.85E-1	1.54E+2	7.30E+1	1.49E+2	4.42E-1	1.53E+2	6.31E+1
505	1.30E+2	1.51E+2	5.57E-1	1.53E+2	7.31E+1	1.47E+2	4.22E-1	1.51E+2	6.26E+1
510	1.28E+2	1.51E+2	5.01E-1	1.53E+2	7.06E+1	1.47E+2	3.76E-1	1.51E+2	5.92E+1
515	1.21E+2	1.46E+2	4.42E-1	1.47E+2	6.53E+1	1.42E+2	3.29E-1	1.45E+2	5.40E+1
520	1.23E+2	1.46E+2	4.42E-1	1.47E+2	6.68E+1	1.42E+2	3.33E-1	1.45E+2	5.54E+1
525	1.26E+2	1.50E+2	4.44E-1	1.52E+2	6.84E+1	1.46E+2	3.38E-1	1.50E+2	5.70E+1
530	1.28E+2	1.50E+2	4.42E-1	1.52E+2	6.99E+1	1.46E+2	3.39E-1	1.50E+2	5.83E+1
535	1.28E+2	1.52E+2	4.26E-1	1.54E+2	6.93E+1	1.48E+2	3.27E-1	1.52E+2	5.76E+1
540	1.25E+2	1.52E+2	3.99E-1	1.54E+2	6.72E+1	1.48E+2	3.06E-1	1.52E+2	5.56E+1
545	1.26E+2	1.52E+2	3.79E-1	1.53E+2	6.68E+1	1.47E+2	2.89E-1	1.51E+2	5.45E+1
550	1.26E+2	1.52E+2	3.52E-1	1.53E+2	6.52E+1	1.47E+2	2.66E-1	1.51E+2	5.24E+1
555	1.23E+2	1.50E+2	3.30E-1	1.51E+2	6.32E+1	1.46E+2	2.48E-1	1.50E+2	5.04E+1
560	1.22E+2	1.50E+2	3.12E-1	1.51E+2	6.16E+1	1.46E+2	2.34E-1	1.50E+2	4.88E+1
565	1.21E+2	1.47E+2	2.90E-1	1.49E+2	6.02E+1	1.43E+2	2.15E-1	1.47E+2	4.70E+1
570	1.20E+2	1.47E+2	2.64E-1	1.49E+2	5.81E+1	1.43E+2	1.92E-1	1.47E+2	4.43E+1
575	1.19E+2	1.46E+2	2.28E-1	1.48E+2	5.49E+1	1.42E+2	1.60E-1	1.46E+2	4.00E+1
580	1.19E+2	1.46E+2	1.85E-1	1.48E+2	5.05E+1	1.42E+2	1.23E-1	1.46E+2	3.39E+1
585	1.16E+2	1.46E+2	1.43E-1	1.47E+2	4.39E+1	1.42E+2	8.85E-2	1.46E+2	2.66E+1
590	1.12E+2	1.46E+2	1.03E-1	1.47E+2	3.57E+1	1.42E+2	5.78E-2	1.46E+2	1.85E+1
595	1.10E+2	1.42E+2	7.59E-2	1.44E+2	2.87E+1	1.39E+2	3.76E-2	1.42E+2	1.23E+1
600	1.06E+2	1.42E+2	5.09E-2	1.44E+2	2.06E+1	1.39E+2	2.20E-2	1.42E+2	6.70E+0
605	1.05E+2	1.43E+2	4.30E-2	1.44E+2	1.81E+1	1.39E+2	1.78E-2	1.43E+2	5.17E+0

File: MOCE2:[MOS.PRC]STN04\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 19:52 (GMT) 02 Apr 1993STATION: 04 - PuertoCitos  
POSITION: 30°13.6 N 114°14.9 W

## SeaWiFS-weighted normalized water-leaving radiance:

Wavelength (nm):	412	443	490	510	555	670	765	865
Lwn' (uW/cm^2/sr):	5.74E+0	7.14E+0	9.12E+0	8.14E+0	4.40E+0	nil	nil	nil

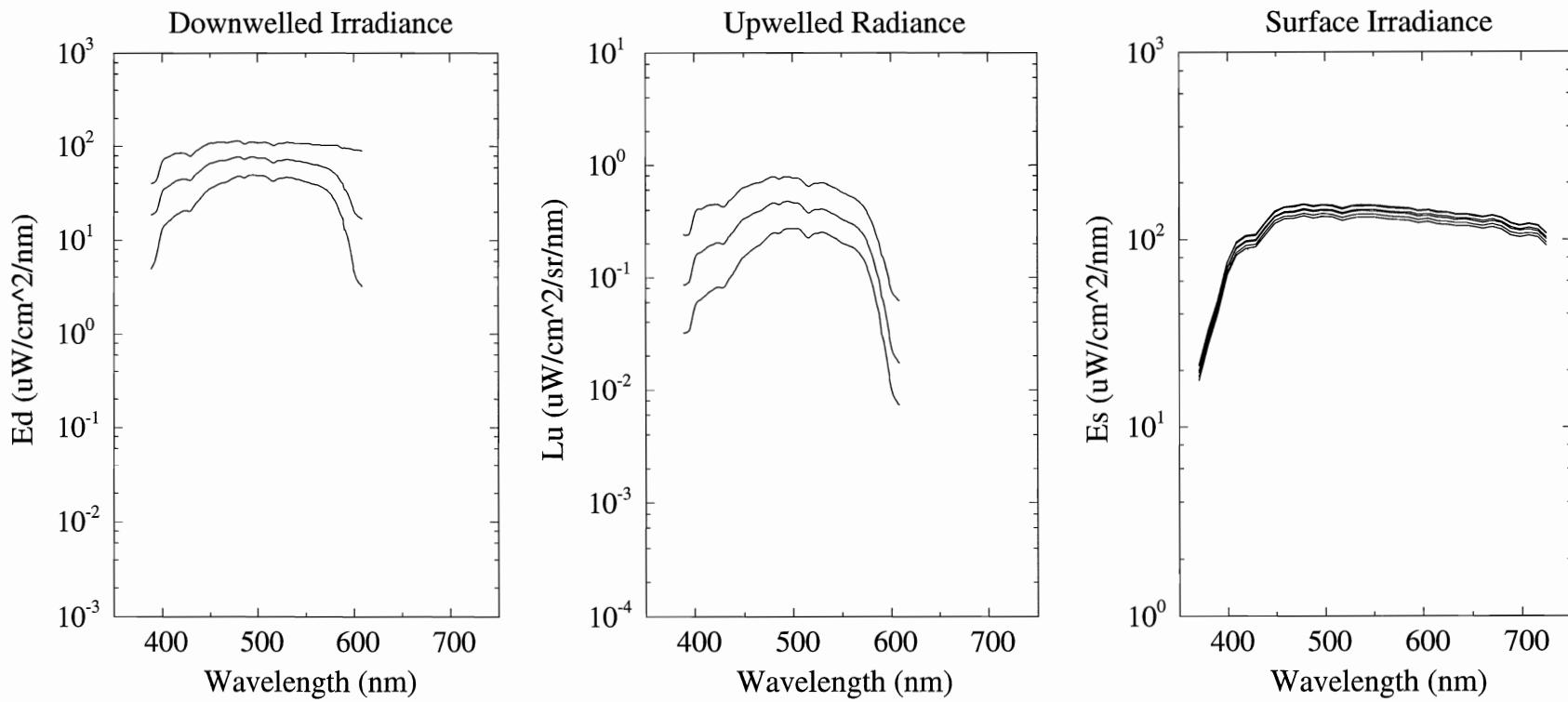
Depth (m)	0-5	1-6	0-10	1-11	5-10	6-11	Top Kl_1	Top Kl_2	Mid Kl_1	Bot Kl_2	Lw_1
R_Es	1.027	1.010	0.982	0.992	0.956	0.982					
Lambda	Ke_1	Kl_1	Ke_2	Kl_2	Ke_3	Kl_3	Lw_1	Lw_2	Lw_3	Lw_4	Lwn
400	1.76E-1	1.20E-1	1.49E-1	1.52E-1	1.21E-1	1.84E-1	1.86E-1	1.91E-1	1.84E-1	1.92E-1	2.56E-1
405	1.72E-1	1.17E-1	1.43E-1	1.49E-1	1.14E-1	1.80E-1	2.04E-1	2.10E-1	2.02E-1	2.11E-1	2.79E-1
410	1.67E-1	1.14E-1	1.39E-1	1.44E-1	1.10E-1	1.75E-1	2.13E-1	2.18E-1	2.10E-1	2.20E-1	2.88E-1
415	1.61E-1	1.10E-1	1.33E-1	1.40E-1	1.04E-1	1.69E-1	2.25E-1	2.30E-1	2.23E-1	2.32E-1	3.02E-1
420	1.56E-1	1.07E-1	1.27E-1	1.34E-1	9.74E-2	1.62E-1	2.28E-1	2.33E-1	2.26E-1	2.35E-1	3.04E-1
425	1.52E-1	1.03E-1	1.22E-1	1.29E-1	9.19E-2	1.54E-1	2.28E-1	2.33E-1	2.25E-1	2.34E-1	3.01E-1
430	1.48E-1	1.00E-1	1.17E-1	1.24E-1	8.64E-2	1.48E-1	2.20E-1	2.24E-1	2.17E-1	2.26E-1	2.88E-1
435	1.44E-1	9.71E-2	1.13E-1	1.20E-1	8.12E-2	1.42E-1	2.46E-1	2.51E-1	2.44E-1	2.53E-1	3.21E-1
440	1.39E-1	9.24E-2	1.07E-1	1.14E-1	7.56E-2	1.36E-1	2.68E-1	2.72E-1	2.65E-1	2.75E-1	3.46E-1
445	1.34E-1	8.80E-2	1.02E-1	1.09E-1	7.02E-2	1.29E-1	2.95E-1	3.01E-1	2.92E-1	3.03E-1	3.80E-1
450	1.29E-1	8.33E-2	9.75E-2	1.04E-1	6.53E-2	1.24E-1	3.17E-1	3.22E-1	3.14E-1	3.25E-1	4.06E-1
455	1.25E-1	8.00E-2	9.31E-2	9.91E-2	6.07E-2	1.18E-1	3.25E-1	3.30E-1	3.22E-1	3.33E-1	4.14E-1
460	1.22E-1	7.71E-2	8.95E-2	9.54E-2	5.66E-2	1.14E-1	3.37E-1	3.43E-1	3.34E-1	3.45E-1	4.28E-1
465	1.19E-1	7.46E-2	8.61E-2	9.24E-2	5.30E-2	1.10E-1	3.42E-1	3.47E-1	3.39E-1	3.50E-1	4.32E-1
470	1.16E-1	7.14E-2	8.28E-2	8.90E-2	4.94E-2	1.06E-1	3.46E-1	3.51E-1	3.42E-1	3.54E-1	4.34E-1
475	1.13E-1	6.81E-2	7.98E-2	8.51E-2	4.64E-2	1.02E-1	3.58E-1	3.63E-1	3.54E-1	3.66E-1	4.48E-1
480	1.10E-1	6.54E-2	7.70E-2	8.20E-2	4.35E-2	9.84E-2	3.64E-1	3.69E-1	3.60E-1	3.72E-1	4.55E-1
485	1.08E-1	6.26E-2	7.49E-2	7.89E-2	4.12E-2	9.52E-2	3.45E-1	3.49E-1	3.41E-1	3.52E-1	4.29E-1
490	1.07E-1	5.94E-2	7.33E-2	7.60E-2	3.94E-2	9.25E-2	3.51E-1	3.56E-1	3.48E-1	3.59E-1	4.36E-1
495	1.06E-1	5.62E-2	7.23E-2	7.39E-2	3.83E-2	9.15E-2	3.51E-1	3.57E-1	3.48E-1	3.59E-1	4.35E-1
500	1.06E-1	5.39E-2	7.23E-2	7.31E-2	3.81E-2	9.22E-2	3.32E-1	3.38E-1	3.29E-1	3.40E-1	4.11E-1
505	1.08E-1	5.31E-2	7.43E-2	7.43E-2	4.01E-2	9.54E-2	3.16E-1	3.22E-1	3.13E-1	3.24E-1	3.91E-1
510	1.13E-1	5.53E-2	7.88E-2	7.86E-2	4.44E-2	1.02E-1	2.85E-1	2.91E-1	2.82E-1	2.93E-1	3.52E-1
515	1.16E-1	5.65E-2	8.19E-2	8.14E-2	4.73E-2	1.06E-1	2.51E-1	2.56E-1	2.49E-1	2.59E-1	3.09E-1
520	1.16E-1	5.46E-2	8.13E-2	8.02E-2	4.65E-2	1.06E-1	2.51E-1	2.57E-1	2.49E-1	2.59E-1	3.09E-1
525	1.15E-1	5.24E-2	8.04E-2	7.92E-2	4.55E-2	1.06E-1	2.52E-1	2.58E-1	2.49E-1	2.60E-1	3.10E-1
530	1.15E-1	5.13E-2	8.04E-2	7.87E-2	4.54E-2	1.06E-1	2.51E-1	2.56E-1	2.48E-1	2.58E-1	3.09E-1
535	1.16E-1	5.05E-2	8.10E-2	7.89E-2	4.60E-2	1.07E-1	2.41E-1	2.47E-1	2.39E-1	2.49E-1	2.97E-1
540	1.17E-1	5.05E-2	8.24E-2	7.97E-2	4.71E-2	1.09E-1	2.26E-1	2.31E-1	2.23E-1	2.33E-1	2.78E-1
545	1.20E-1	5.17E-2	8.51E-2	8.15E-2	4.96E-2	1.11E-1	2.15E-1	2.20E-1	2.12E-1	2.22E-1	2.64E-1
550	1.24E-1	5.39E-2	8.87E-2	8.40E-2	5.27E-2	1.14E-1	2.00E-1	2.05E-1	1.98E-1	2.07E-1	2.47E-1
555	1.27E-1	5.47E-2	9.08E-2	8.54E-2	5.44E-2	1.16E-1	1.88E-1	1.92E-1	1.86E-1	1.94E-1	2.31E-1
560	1.29E-1	5.55E-2	9.25E-2	8.64E-2	5.57E-2	1.17E-1	1.77E-1	1.82E-1	1.75E-1	1.83E-1	2.19E-1
565	1.32E-1	5.76E-2	9.58E-2	8.88E-2	5.88E-2	1.20E-1	1.65E-1	1.70E-1	1.64E-1	1.71E-1	2.05E-1
570	1.37E-1	6.09E-2	1.01E-1	9.23E-2	6.32E-2	1.24E-1	1.51E-1	1.55E-1	1.49E-1	1.56E-1	1.87E-1
575	1.47E-1	6.80E-2	1.10E-1	9.98E-2	7.27E-2	1.31E-1	1.31E-1	1.34E-1	1.30E-1	1.36E-1	1.62E-1
580	1.64E-1	7.99E-2	1.27E-1	1.12E-1	8.93E-2	1.45E-1	1.08E-1	1.10E-1	1.06E-1	1.11E-1	1.33E-1
585	1.86E-1	9.40E-2	1.48E-1	1.27E-1	1.10E-1	1.60E-1	8.40E-2	8.64E-2	8.32E-2	8.71E-2	1.03E-1
590	2.20E-1	1.14E-1	1.81E-1	1.46E-1	1.41E-1	1.77E-1	6.15E-2	6.31E-2	6.08E-2	6.36E-2	7.55E-2
595	2.60E-1	1.38E-1	2.20E-1	1.65E-1	1.79E-1	1.92E-1	4.62E-2	4.72E-2	4.57E-2	4.76E-2	5.68E-2
600	3.18E-1	1.66E-1	2.77E-1	1.83E-1	2.35E-1	2.01E-1	3.17E-2	3.22E-2	3.14E-2	3.24E-2	3.91E-2
605	3.43E-1	1.74E-1	3.01E-1	1.91E-1	2.60E-1	2.09E-1	2.70E-2	2.73E-2	2.67E-2	2.76E-2	3.32E-2

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
 STATION: 05 - Wagner Basin

Top = 0.7 m  
 Mid = 6 m  
 Bot = 11 m

POSITION: 31°01.4 N 114°13.6 W  
 DATE: 20:53 (GMT) 03 Apr 1993



April 1995

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

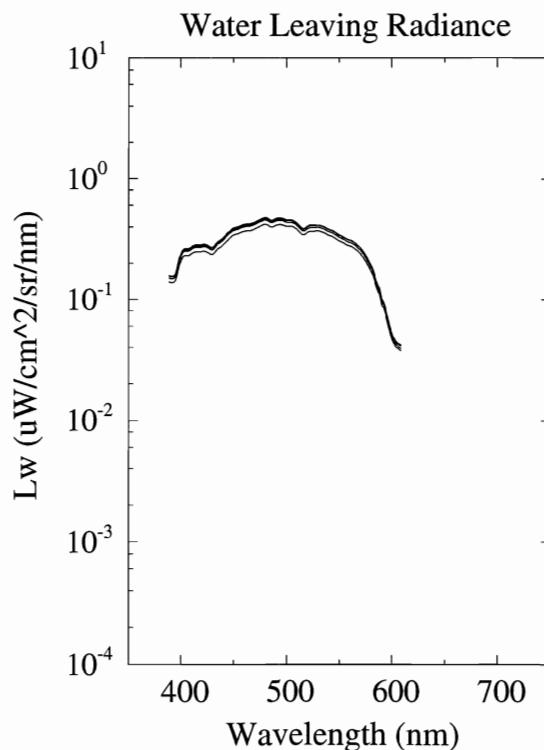
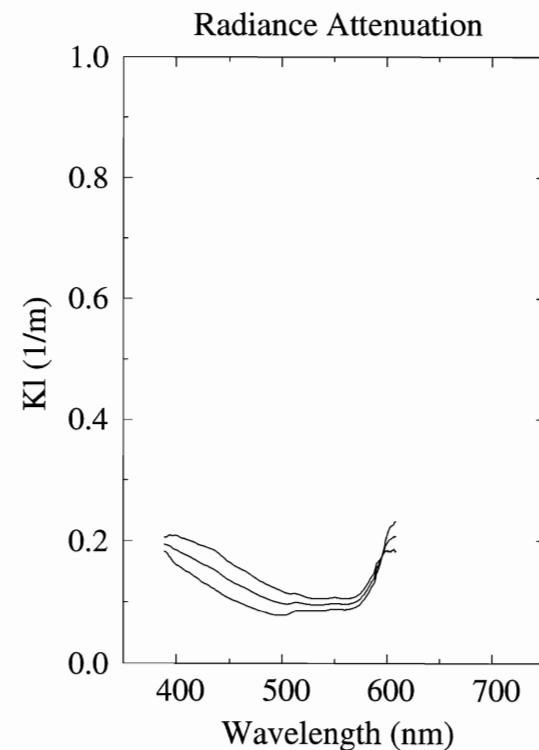
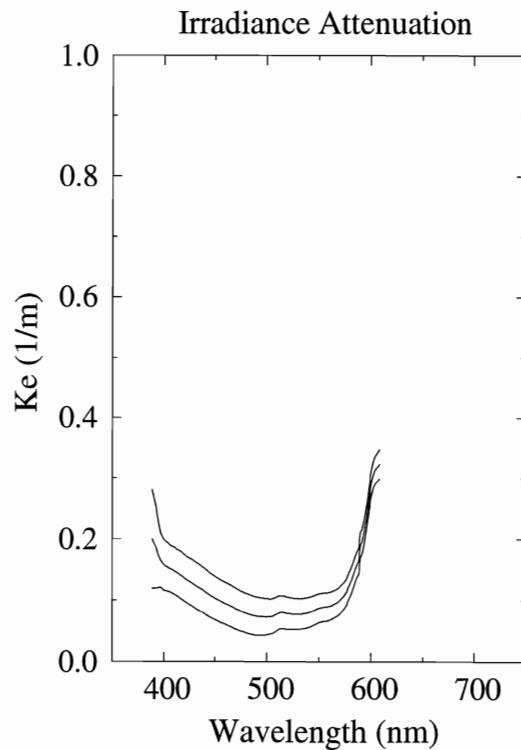
CRUISE: MOCE-2 SHIP: El Puma

STATION: 05 - Wagner Basin

Top = 0.7 to 6 m  
 Mid = 0.7 to 11 m  
 Bot = 6 to 11 m

POSITION: 31°01.4 N 114°13.6 W

DATE: 20:53 (GMT) 03 Apr 1993



File: MOCE2:[MOS.PRC]STN05\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 20:53 (GMT) 03 Apr 1993STATION: 05 - Wagner Basin  
POSITION: 31°01.4 N 114°13.6 W

SeaWiFS-weighted water-leaving radiance:

Wavelength (nm): 412 443 490 510 555 670 765 865  
Lw' (uW/cm^2/sr): 5.25E+0 6.57E+0 9.61E+0 9.62E+0 6.10E+0 nil nil nil

Depth (m)	Top		Top		Mid		Mid		Bot		Bot	
	0.3	1.0	5.4	6.0	10.4	11.0						
Time (GMT)	19:54	20:06	21:48	21:30	21:10	20:48						
Lambda	Ed_1	Es_1	Lu_1	Es_1	Ed_2	Es_2	Lu_2	Es_2	Ed_3	Es_3	Lu_3	Es_3
400	6.88E+1	7.58E+1	3.71E-1	7.49E+1	3.27E+1	6.44E+1	1.48E-1	6.66E+1	1.30E+1	7.00E+1	5.49E-2	7.09E+1
405	7.55E+1	9.66E+1	4.07E-1	9.55E+1	3.63E+1	8.24E+1	1.66E-1	8.52E+1	1.49E+1	8.93E+1	6.27E-2	9.05E+1
410	8.04E+1	9.66E+1	4.20E-1	9.55E+1	3.96E+1	8.24E+1	1.77E-1	8.52E+1	1.68E+1	8.93E+1	6.76E-2	9.05E+1
415	8.46E+1	1.05E+2	4.42E-1	1.04E+2	4.27E+1	8.96E+1	1.91E-1	9.26E+1	1.86E+1	9.70E+1	7.44E-2	9.83E+1
420	8.52E+1	1.05E+2	4.47E-1	1.04E+2	4.43E+1	8.96E+1	1.99E-1	9.26E+1	1.99E+1	9.70E+1	7.90E-2	9.83E+1
425	8.34E+1	1.06E+2	4.44E-1	1.05E+2	4.46E+1	9.11E+1	2.05E-1	9.41E+1	2.06E+1	9.85E+1	8.25E-2	9.98E+1
430	7.91E+1	1.06E+2	4.26E-1	1.05E+2	4.36E+1	9.11E+1	2.01E-1	9.41E+1	2.07E+1	9.85E+1	8.23E-2	9.98E+1
435	8.86E+1	1.23E+2	4.75E-1	1.22E+2	5.00E+1	1.06E+2	2.31E-1	1.09E+2	2.44E+1	1.14E+2	9.62E-2	1.16E+2
440	9.52E+1	1.23E+2	5.18E-1	1.22E+2	5.51E+1	1.06E+2	2.58E-1	1.09E+2	2.77E+1	1.14E+2	1.11E-1	1.16E+2
445	1.03E+2	1.41E+2	5.77E-1	1.40E+2	6.09E+1	1.21E+2	2.96E-1	1.25E+2	3.17E+1	1.31E+2	1.32E-1	1.33E+2
450	1.09E+2	1.41E+2	6.30E-1	1.40E+2	6.59E+1	1.21E+2	3.31E-1	1.25E+2	3.54E+1	1.31E+2	1.53E-1	1.33E+2
455	1.09E+2	1.49E+2	6.51E-1	1.48E+2	6.78E+1	1.28E+2	3.49E-1	1.33E+2	3.74E+1	1.39E+2	1.66E-1	1.40E+2
460	1.12E+2	1.49E+2	6.80E-1	1.48E+2	7.05E+1	1.28E+2	3.71E-1	1.33E+2	3.98E+1	1.39E+2	1.80E-1	1.40E+2
465	1.11E+2	1.50E+2	6.94E-1	1.49E+2	7.13E+1	1.30E+2	3.86E-1	1.34E+2	4.10E+1	1.40E+2	1.91E-1	1.42E+2
470	1.11E+2	1.50E+2	7.15E-1	1.49E+2	7.25E+1	1.30E+2	4.03E-1	1.34E+2	4.28E+1	1.40E+2	2.06E-1	1.42E+2
475	1.14E+2	1.54E+2	7.59E-1	1.53E+2	7.59E+1	1.33E+2	4.36E-1	1.37E+2	4.60E+1	1.43E+2	2.30E-1	1.45E+2
480	1.14E+2	1.54E+2	7.89E-1	1.53E+2	7.77E+1	1.33E+2	4.60E-1	1.37E+2	4.80E+1	1.43E+2	2.49E-1	1.45E+2
485	1.07E+2	1.51E+2	7.54E-1	1.49E+2	7.36E+1	1.30E+2	4.46E-1	1.34E+2	4.62E+1	1.40E+2	2.47E-1	1.42E+2
490	1.10E+2	1.51E+2	7.77E-1	1.49E+2	7.61E+1	1.30E+2	4.66E-1	1.34E+2	4.84E+1	1.40E+2	2.63E-1	1.42E+2
495	1.12E+2	1.54E+2	7.89E-1	1.52E+2	7.75E+1	1.32E+2	4.77E-1	1.37E+2	4.97E+1	1.43E+2	2.74E-1	1.45E+2
500	1.09E+2	1.54E+2	7.67E-1	1.52E+2	7.52E+1	1.32E+2	4.64E-1	1.37E+2	4.85E+1	1.43E+2	2.72E-1	1.45E+2
505	1.11E+2	1.52E+2	7.62E-1	1.50E+2	7.54E+1	1.31E+2	4.58E-1	1.35E+2	4.86E+1	1.41E+2	2.73E-1	1.43E+2
510	1.10E+2	1.52E+2	7.15E-1	1.50E+2	7.30E+1	1.31E+2	4.21E-1	1.35E+2	4.64E+1	1.41E+2	2.51E-1	1.43E+2
515	1.04E+2	1.47E+2	6.51E-1	1.45E+2	6.78E+1	1.26E+2	3.79E-1	1.31E+2	4.27E+1	1.36E+2	2.27E-1	1.38E+2
520	1.06E+2	1.47E+2	6.72E-1	1.45E+2	6.96E+1	1.26E+2	3.91E-1	1.31E+2	4.43E+1	1.36E+2	2.38E-1	1.38E+2
525	1.08E+2	1.51E+2	6.90E-1	1.49E+2	7.13E+1	1.30E+2	4.02E-1	1.34E+2	4.57E+1	1.40E+2	2.48E-1	1.42E+2
530	1.11E+2	1.51E+2	6.97E-1	1.49E+2	7.28E+1	1.30E+2	4.06E-1	1.34E+2	4.69E+1	1.40E+2	2.53E-1	1.42E+2
535	1.10E+2	1.53E+2	6.77E-1	1.51E+2	7.22E+1	1.32E+2	3.94E-1	1.36E+2	4.64E+1	1.42E+2	2.46E-1	1.44E+2
540	1.08E+2	1.53E+2	6.40E-1	1.51E+2	7.00E+1	1.32E+2	3.72E-1	1.36E+2	4.47E+1	1.42E+2	2.31E-1	1.44E+2
545	1.09E+2	1.52E+2	6.13E-1	1.51E+2	6.94E+1	1.31E+2	3.54E-1	1.36E+2	4.38E+1	1.42E+2	2.19E-1	1.44E+2
550	1.09E+2	1.52E+2	5.74E-1	1.51E+2	6.78E+1	1.31E+2	3.31E-1	1.36E+2	4.20E+1	1.42E+2	2.04E-1	1.44E+2
555	1.07E+2	1.51E+2	5.46E-1	1.49E+2	6.58E+1	1.30E+2	3.14E-1	1.34E+2	4.04E+1	1.40E+2	1.95E-1	1.42E+2
560	1.05E+2	1.51E+2	5.22E-1	1.49E+2	6.42E+1	1.30E+2	3.01E-1	1.34E+2	3.93E+1	1.40E+2	1.87E-1	1.42E+2
565	1.05E+2	1.48E+2	4.91E-1	1.47E+2	6.26E+1	1.28E+2	2.81E-1	1.32E+2	3.77E+1	1.38E+2	1.75E-1	1.40E+2
570	1.04E+2	1.48E+2	4.49E-1	1.47E+2	6.03E+1	1.28E+2	2.54E-1	1.32E+2	3.55E+1	1.38E+2	1.56E-1	1.40E+2
575	1.03E+2	1.47E+2	3.89E-1	1.46E+2	5.70E+1	1.26E+2	2.14E-1	1.31E+2	3.19E+1	1.37E+2	1.27E-1	1.39E+2
580	1.04E+2	1.47E+2	3.14E-1	1.46E+2	5.22E+1	1.26E+2	1.63E-1	1.31E+2	2.68E+1	1.37E+2	9.20E-2	1.39E+2
585	1.01E+2	1.47E+2	2.39E-1	1.45E+2	4.50E+1	1.26E+2	1.16E-1	1.31E+2	2.07E+1	1.36E+2	6.06E-2	1.39E+2
590	9.68E+1	1.47E+2	1.68E-1	1.45E+2	3.62E+1	1.26E+2	7.34E-2	1.31E+2	1.41E+1	1.36E+2	3.49E-2	1.39E+2
595	9.59E+1	1.43E+2	1.20E-1	1.41E+2	2.88E+1	1.23E+2	4.49E-2	1.27E+2	9.12E+0	1.32E+2	1.99E-2	1.35E+2
600	9.28E+1	1.43E+2	7.81E-2	1.41E+2	2.04E+1	1.23E+2	2.45E-2	1.27E+2	4.71E+0	1.32E+2	1.03E-2	1.35E+2
605	9.22E+1	1.44E+2	6.67E-2	1.42E+2	1.79E+1	1.24E+2	1.92E-2	1.28E+2	3.55E+0	1.34E+2	8.08E-3	1.36E+2

File: MOCE2:[MOS.PRC]STN05\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 20:53 (GMT) 03 Apr 1993STATION: 05 - Wagner Basin  
POSITION: 31°01.4 N 114°13.6 W

## SeaWiFS-weighted normalized water-leaving radiance:

Wavelength (nm):	412	443	490	510	555	670	765	865
Lwn' ( $\mu\text{W}/\text{cm}^2/\text{sr}$ ):	7.50E+0	8.97E+0	1.26E+1	1.26E+1	7.96E+0	nil	nil	nil

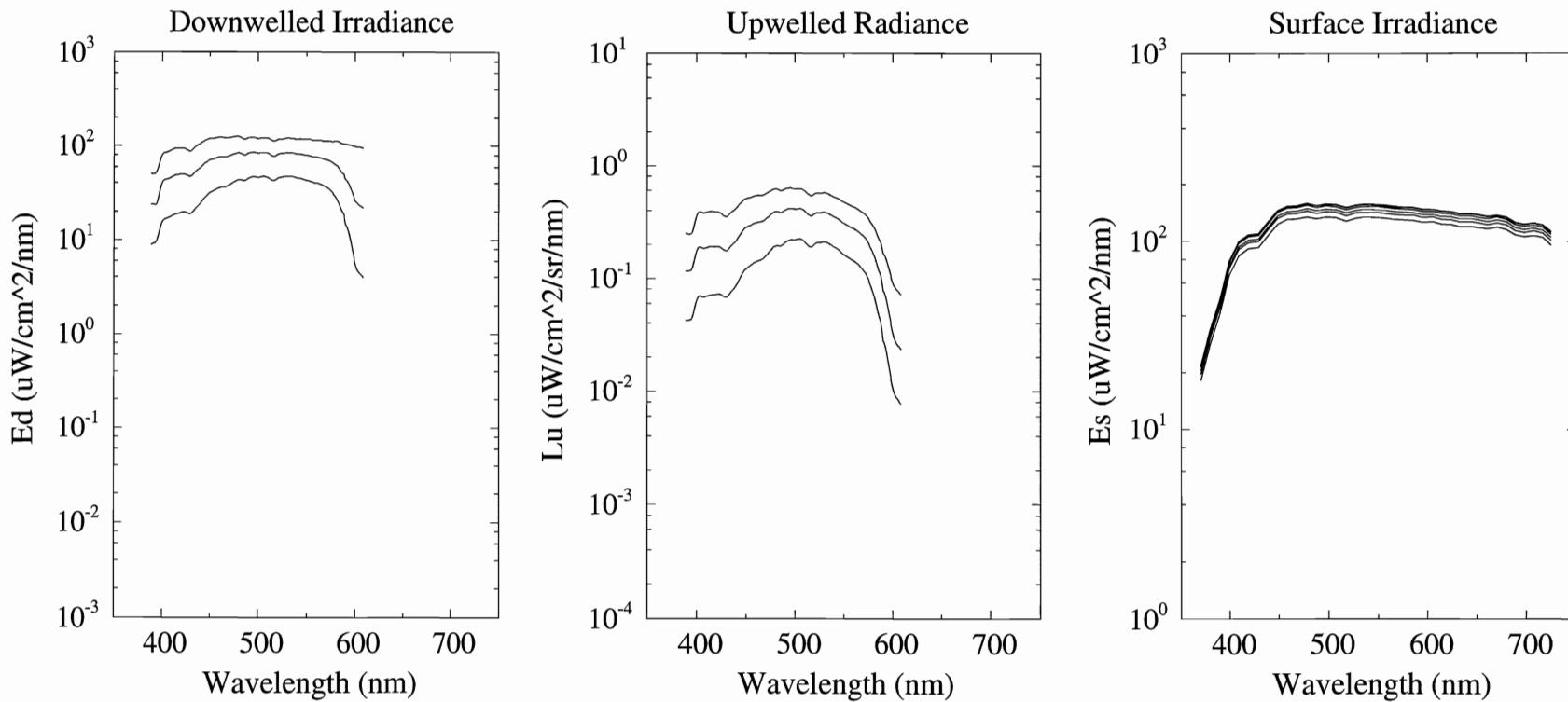
Depth (m)	0-5	1-6	0-10	1-11	5-10	6-11	Top KL_1	Top KL_2	Mid KL_1	Bot KL_2	Lw_1
R_Es	1.162	1.111	1.076	1.047	0.925	0.942					
Lambda	Ke_1	KL_1	Ke_2	KL_2	Ke_3	KL_3	Lw_1	Lw_2	Lw_3	Lw_4	Lwn
400	1.17E-1	1.61E-1	1.58E-1	1.85E-1	1.99E-1	2.09E-1	2.35E-1	2.40E-1	2.11E-1	2.30E-1	3.45E-1
405	1.15E-1	1.57E-1	1.53E-1	1.81E-1	1.93E-1	2.05E-1	2.57E-1	2.63E-1	2.31E-1	2.51E-1	3.73E-1
410	1.10E-1	1.51E-1	1.48E-1	1.77E-1	1.87E-1	2.03E-1	2.63E-1	2.70E-1	2.37E-1	2.58E-1	3.79E-1
415	1.05E-1	1.45E-1	1.43E-1	1.72E-1	1.81E-1	1.99E-1	2.76E-1	2.83E-1	2.48E-1	2.70E-1	3.93E-1
420	9.92E-2	1.39E-1	1.37E-1	1.67E-1	1.75E-1	1.95E-1	2.77E-1	2.85E-1	2.49E-1	2.72E-1	3.92E-1
425	9.37E-2	1.32E-1	1.31E-1	1.62E-1	1.69E-1	1.93E-1	2.74E-1	2.82E-1	2.46E-1	2.69E-1	3.84E-1
430	8.78E-2	1.28E-1	1.25E-1	1.58E-1	1.64E-1	1.89E-1	2.61E-1	2.69E-1	2.35E-1	2.57E-1	3.64E-1
435	8.30E-2	1.22E-1	1.20E-1	1.54E-1	1.58E-1	1.86E-1	2.90E-1	2.99E-1	2.61E-1	2.85E-1	4.01E-1
440	7.82E-2	1.17E-1	1.15E-1	1.48E-1	1.52E-1	1.80E-1	3.14E-1	3.24E-1	2.83E-1	3.09E-1	4.32E-1
445	7.30E-2	1.11E-1	1.09E-1	1.42E-1	1.46E-1	1.73E-1	3.49E-1	3.59E-1	3.14E-1	3.43E-1	4.76E-1
450	6.86E-2	1.07E-1	1.04E-1	1.36E-1	1.39E-1	1.66E-1	3.79E-1	3.89E-1	3.41E-1	3.72E-1	5.13E-1
455	6.45E-2	1.03E-1	9.92E-2	1.31E-1	1.34E-1	1.60E-1	3.90E-1	4.01E-1	3.51E-1	3.82E-1	5.26E-1
460	6.12E-2	9.93E-2	9.52E-2	1.27E-1	1.30E-1	1.55E-1	4.06E-1	4.17E-1	3.65E-1	3.98E-1	5.46E-1
465	5.75E-2	9.56E-2	9.13E-2	1.23E-1	1.26E-1	1.51E-1	4.13E-1	4.24E-1	3.71E-1	4.05E-1	5.52E-1
470	5.35E-2	9.24E-2	8.69E-2	1.19E-1	1.21E-1	1.46E-1	4.24E-1	4.35E-1	3.81E-1	4.15E-1	5.64E-1
475	4.98E-2	8.88E-2	8.23E-2	1.14E-1	1.15E-1	1.39E-1	4.49E-1	4.59E-1	4.03E-1	4.39E-1	5.95E-1
480	4.68E-2	8.57E-2	7.88E-2	1.10E-1	1.11E-1	1.34E-1	4.65E-1	4.76E-1	4.18E-1	4.54E-1	6.15E-1
485	4.46E-2	8.30E-2	7.62E-2	1.06E-1	1.08E-1	1.29E-1	4.43E-1	4.53E-1	3.99E-1	4.33E-1	5.85E-1
490	4.34E-2	8.03E-2	7.44E-2	1.03E-1	1.06E-1	1.26E-1	4.56E-1	4.66E-1	4.10E-1	4.44E-1	5.98E-1
495	4.33E-2	7.88E-2	7.35E-2	1.00E-1	1.04E-1	1.22E-1	4.62E-1	4.72E-1	4.16E-1	4.50E-1	6.05E-1
500	4.39E-2	7.87E-2	7.32E-2	9.84E-2	1.03E-1	1.18E-1	4.49E-1	4.57E-1	4.04E-1	4.37E-1	5.88E-1
505	4.58E-2	8.00E-2	7.42E-2	9.73E-2	1.03E-1	1.15E-1	4.47E-1	4.54E-1	4.02E-1	4.33E-1	5.85E-1
510	5.09E-2	8.39E-2	7.83E-2	9.91E-2	1.06E-1	1.14E-1	4.20E-1	4.27E-1	3.78E-1	4.07E-1	5.50E-1
515	5.40E-2	8.64E-2	8.06E-2	9.99E-2	1.08E-1	1.13E-1	3.84E-1	3.89E-1	3.45E-1	3.71E-1	5.00E-1
520	5.30E-2	8.62E-2	7.91E-2	9.82E-2	1.06E-1	1.10E-1	3.96E-1	4.01E-1	3.56E-1	3.82E-1	5.16E-1
525	5.26E-2	8.60E-2	7.80E-2	9.67E-2	1.04E-1	1.07E-1	4.07E-1	4.11E-1	3.66E-1	3.92E-1	5.30E-1
530	5.29E-2	8.60E-2	7.80E-2	9.60E-2	1.03E-1	1.06E-1	4.11E-1	4.15E-1	3.69E-1	3.96E-1	5.36E-1
535	5.39E-2	8.61E-2	7.86E-2	9.60E-2	1.04E-1	1.06E-1	3.99E-1	4.03E-1	3.59E-1	3.85E-1	5.21E-1
540	5.59E-2	8.66E-2	8.03E-2	9.65E-2	1.05E-1	1.06E-1	3.77E-1	3.81E-1	3.39E-1	3.64E-1	4.92E-1
545	5.91E-2	8.79E-2	8.32E-2	9.74E-2	1.08E-1	1.07E-1	3.62E-1	3.65E-1	3.26E-1	3.49E-1	4.72E-1
550	6.34E-2	8.83E-2	8.69E-2	9.82E-2	1.11E-1	1.08E-1	3.39E-1	3.42E-1	3.05E-1	3.27E-1	4.42E-1
555	6.62E-2	8.86E-2	8.91E-2	9.77E-2	1.12E-1	1.07E-1	3.23E-1	3.25E-1	2.90E-1	3.11E-1	4.21E-1
560	6.77E-2	8.78E-2	9.04E-2	9.70E-2	1.13E-1	1.06E-1	3.08E-1	3.11E-1	2.77E-1	2.97E-1	4.02E-1
565	7.17E-2	8.93E-2	9.39E-2	9.80E-2	1.16E-1	1.07E-1	2.90E-1	2.93E-1	2.61E-1	2.79E-1	3.80E-1
570	7.72E-2	9.17E-2	9.90E-2	1.00E-1	1.21E-1	1.09E-1	2.66E-1	2.68E-1	2.39E-1	2.56E-1	3.49E-1
575	8.77E-2	9.76E-2	1.09E-1	1.06E-1	1.31E-1	1.15E-1	2.32E-1	2.34E-1	2.08E-1	2.23E-1	3.04E-1
580	1.06E-1	1.09E-1	1.27E-1	1.17E-1	1.48E-1	1.26E-1	1.89E-1	1.91E-1	1.70E-1	1.82E-1	2.47E-1
585	1.29E-1	1.23E-1	1.50E-1	1.32E-1	1.71E-1	1.40E-1	1.46E-1	1.47E-1	1.31E-1	1.40E-1	1.90E-1
590	1.64E-1	1.44E-1	1.84E-1	1.52E-1	2.05E-1	1.60E-1	1.04E-1	1.05E-1	9.39E-2	1.00E-1	1.36E-1
595	2.08E-1	1.74E-1	2.26E-1	1.74E-1	2.45E-1	1.74E-1	7.68E-2	7.68E-2	6.91E-2	7.33E-2	9.99E-2
600	2.68E-1	2.09E-1	2.88E-1	1.96E-1	3.09E-1	1.83E-1	5.17E-2	5.11E-2	4.65E-2	4.88E-2	6.74E-2
605	2.93E-1	2.26E-1	3.16E-1	2.05E-1	3.38E-1	1.84E-1	4.49E-2	4.40E-2	4.04E-2	4.20E-2	5.84E-2

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
 STATION: 06 - Canal de Salsipuedes

Top = 1 m  
 Mid = 6 m  
 Bot = 11 m

POSITION: 28°39.8 N 113°00.6 W  
 DATE: 18:49 (GMT) 04 Apr 1993



April 1995

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

STATION: 06 - Canal de Salsipuedes

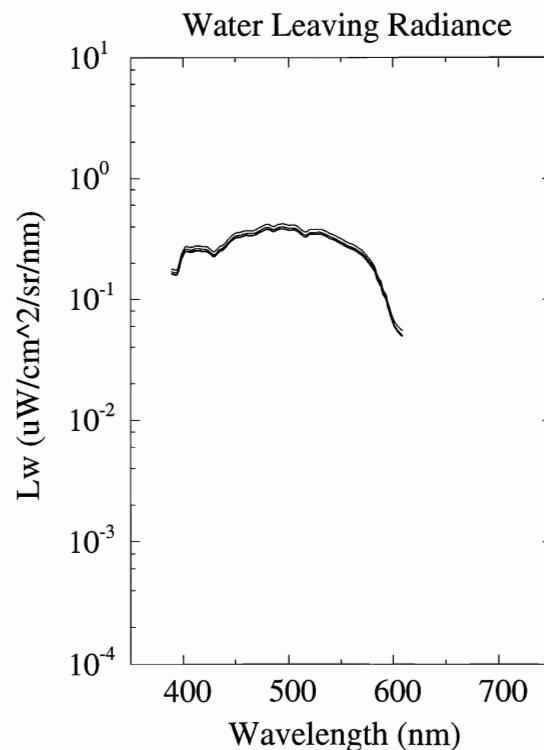
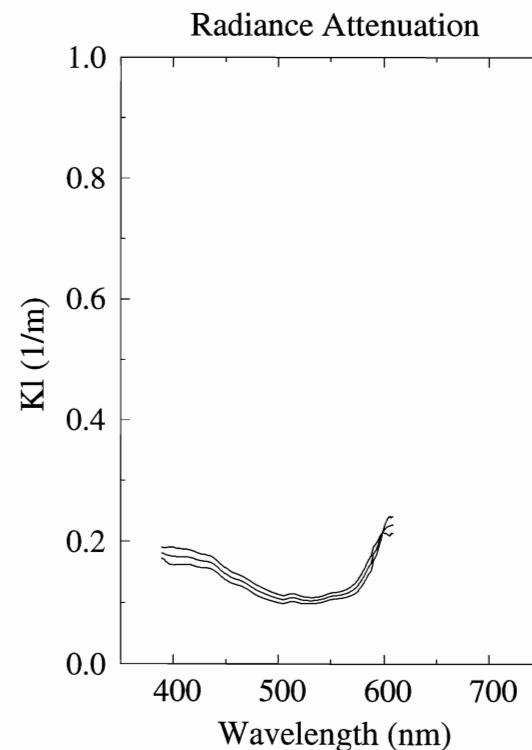
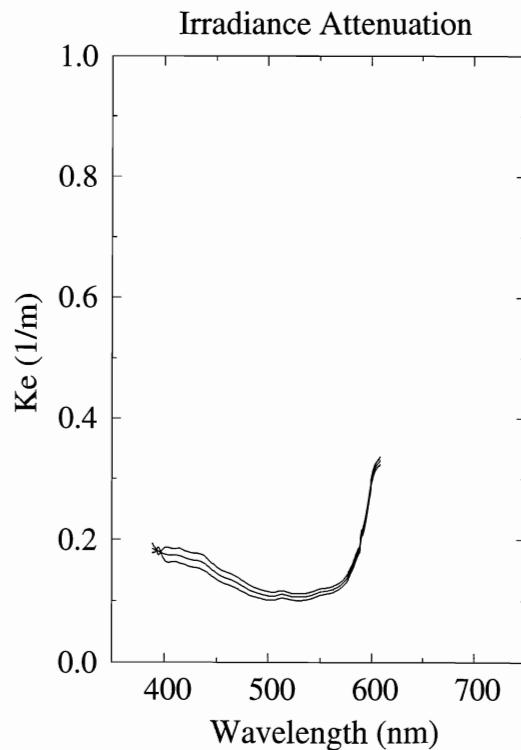
Top = 1 to 6 m

Mid = 1 to 11 m

Bot = 6 to 11 m

POSITION: 28°39.8 N 113°00.6 W

DATE: 18:49 (GMT) 04 Apr 1993



File: MOCE2:[MOS.PRC]STN06\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 18:49 (GMT) 04 Apr 1993STATION: 06 - Canal de Salsipuedes  
POSITION: 28°39.8 N 113°00.6 W

## SeaWiFS-weighted water-leaving radiance:

Wavelength (nm):	412	443	490	510	555	670	765	865
Lw' (uW/cm^2/sr):	4.83E+0	5.52E+0	7.93E+0	8.12E+0	5.16E+0	nil	nil	nil

Depth (m)	Top			Mid			Bot			Bot		
	0.4	1.0	5.4	6.0	10.4	11.0	17:56	18:10	20:01	19:24	18:50	18:32
Lambda	Ed_1	Es_1	Lu_1	Es_1	Ed_2	Es_2	Lu_2	Es_2	Ed_3	Es_3	Lu_3	Es_3
400	7.91E+1	6.60E+1	3.66E-1	7.11E+1	4.00E+1	7.74E+1	1.79E-1	7.81E+1	1.54E+1	7.69E+1	6.53E-2	7.35E+1
405	8.48E+1	8.39E+1	3.86E-1	9.04E+1	4.37E+1	9.86E+1	1.88E-1	9.93E+1	1.68E+1	9.76E+1	6.94E-2	9.33E+1
410	8.98E+1	8.39E+1	3.85E-1	9.04E+1	4.59E+1	9.86E+1	1.88E-1	9.93E+1	1.78E+1	9.76E+1	6.93E-2	9.33E+1
415	9.35E+1	9.10E+1	3.93E-1	9.79E+1	4.85E+1	1.07E+2	1.92E-1	1.08E+2	1.87E+1	1.06E+2	7.14E-2	1.01E+2
420	9.41E+1	9.10E+1	3.88E-1	9.79E+1	4.93E+1	1.07E+2	1.91E-1	1.08E+2	1.94E+1	1.06E+2	7.21E-2	1.01E+2
425	9.17E+1	9.24E+1	3.77E-1	9.94E+1	4.88E+1	1.09E+2	1.88E-1	1.09E+2	1.95E+1	1.07E+2	7.21E-2	1.03E+2
430	8.74E+1	9.24E+1	3.53E-1	9.94E+1	4.70E+1	1.09E+2	1.77E-1	1.09E+2	1.89E+1	1.07E+2	6.83E-2	1.03E+2
435	9.78E+1	1.07E+2	3.86E-1	1.15E+2	5.31E+1	1.26E+2	1.94E-1	1.27E+2	2.15E+1	1.24E+2	7.60E-2	1.19E+2
440	1.05E+2	1.07E+2	4.16E-1	1.15E+2	5.82E+1	1.26E+2	2.14E-1	1.27E+2	2.42E+1	1.24E+2	8.59E-2	1.19E+2
445	1.13E+2	1.23E+2	4.66E-1	1.32E+2	6.47E+1	1.44E+2	2.49E-1	1.45E+2	2.80E+1	1.42E+2	1.04E-1	1.36E+2
450	1.20E+2	1.23E+2	5.10E-1	1.32E+2	7.07E+1	1.44E+2	2.82E-1	1.45E+2	3.17E+1	1.42E+2	1.21E-1	1.36E+2
455	1.20E+2	1.30E+2	5.24E-1	1.39E+2	7.29E+1	1.52E+2	2.97E-1	1.53E+2	3.37E+1	1.50E+2	1.32E-1	1.44E+2
460	1.23E+2	1.30E+2	5.41E-1	1.39E+2	7.56E+1	1.52E+2	3.11E-1	1.53E+2	3.55E+1	1.50E+2	1.40E-1	1.44E+2
465	1.22E+2	1.31E+2	5.46E-1	1.41E+2	7.61E+1	1.54E+2	3.18E-1	1.54E+2	3.63E+1	1.51E+2	1.46E-1	1.45E+2
470	1.22E+2	1.31E+2	5.59E-1	1.41E+2	7.74E+1	1.54E+2	3.32E-1	1.54E+2	3.77E+1	1.51E+2	1.56E-1	1.45E+2
475	1.25E+2	1.35E+2	5.95E-1	1.44E+2	8.15E+1	1.58E+2	3.65E-1	1.58E+2	4.10E+1	1.55E+2	1.76E-1	1.49E+2
480	1.26E+2	1.35E+2	6.22E-1	1.44E+2	8.40E+1	1.58E+2	3.91E-1	1.58E+2	4.34E+1	1.55E+2	1.94E-1	1.49E+2
485	1.18E+2	1.32E+2	6.00E-1	1.41E+2	8.01E+1	1.54E+2	3.85E-1	1.55E+2	4.23E+1	1.51E+2	1.95E-1	1.45E+2
490	1.21E+2	1.32E+2	6.22E-1	1.41E+2	8.32E+1	1.54E+2	4.05E-1	1.55E+2	4.47E+1	1.51E+2	2.09E-1	1.45E+2
495	1.23E+2	1.34E+2	6.35E-1	1.43E+2	8.53E+1	1.57E+2	4.18E-1	1.58E+2	4.64E+1	1.54E+2	2.20E-1	1.48E+2
500	1.20E+2	1.34E+2	6.21E-1	1.43E+2	8.37E+1	1.57E+2	4.13E-1	1.58E+2	4.60E+1	1.54E+2	2.21E-1	1.48E+2
505	1.22E+2	1.33E+2	6.23E-1	1.42E+2	8.49E+1	1.55E+2	4.17E-1	1.56E+2	4.70E+1	1.52E+2	2.25E-1	1.47E+2
510	1.20E+2	1.33E+2	5.93E-1	1.42E+2	8.32E+1	1.55E+2	3.93E-1	1.56E+2	4.55E+1	1.52E+2	2.10E-1	1.47E+2
515	1.13E+2	1.28E+2	5.46E-1	1.37E+2	7.80E+1	1.50E+2	3.61E-1	1.51E+2	4.26E+1	1.47E+2	1.91E-1	1.41E+2
520	1.16E+2	1.28E+2	5.63E-1	1.37E+2	8.06E+1	1.50E+2	3.75E-1	1.51E+2	4.46E+1	1.47E+2	2.02E-1	1.41E+2
525	1.18E+2	1.32E+2	5.74E-1	1.41E+2	8.29E+1	1.54E+2	3.85E-1	1.55E+2	4.62E+1	1.51E+2	2.10E-1	1.45E+2
530	1.21E+2	1.32E+2	5.76E-1	1.41E+2	8.49E+1	1.54E+2	3.87E-1	1.55E+2	4.74E+1	1.51E+2	2.12E-1	1.45E+2
535	1.20E+2	1.34E+2	5.58E-1	1.43E+2	8.42E+1	1.56E+2	3.74E-1	1.57E+2	4.69E+1	1.53E+2	2.04E-1	1.47E+2
540	1.18E+2	1.34E+2	5.26E-1	1.43E+2	8.19E+1	1.56E+2	3.50E-1	1.57E+2	4.53E+1	1.53E+2	1.90E-1	1.47E+2
545	1.19E+2	1.34E+2	5.04E-1	1.42E+2	8.14E+1	1.56E+2	3.32E-1	1.57E+2	4.45E+1	1.53E+2	1.78E-1	1.47E+2
550	1.18E+2	1.34E+2	4.75E-1	1.42E+2	7.97E+1	1.56E+2	3.09E-1	1.57E+2	4.29E+1	1.53E+2	1.63E-1	1.47E+2
555	1.16E+2	1.32E+2	4.50E-1	1.41E+2	7.75E+1	1.54E+2	2.91E-1	1.55E+2	4.14E+1	1.51E+2	1.52E-1	1.45E+2
560	1.15E+2	1.32E+2	4.31E-1	1.41E+2	7.59E+1	1.54E+2	2.77E-1	1.55E+2	4.02E+1	1.51E+2	1.44E-1	1.45E+2
565	1.14E+2	1.30E+2	4.08E-1	1.38E+2	7.43E+1	1.51E+2	2.59E-1	1.53E+2	3.88E+1	1.48E+2	1.33E-1	1.43E+2
570	1.13E+2	1.30E+2	3.80E-1	1.38E+2	7.18E+1	1.51E+2	2.38E-1	1.53E+2	3.66E+1	1.48E+2	1.19E-1	1.43E+2
575	1.12E+2	1.29E+2	3.41E-1	1.37E+2	6.83E+1	1.51E+2	2.07E-1	1.52E+2	3.33E+1	1.47E+2	9.86E-2	1.42E+2
580	1.13E+2	1.29E+2	2.91E-1	1.37E+2	6.32E+1	1.51E+2	1.67E-1	1.52E+2	2.84E+1	1.47E+2	7.38E-2	1.42E+2
585	1.09E+2	1.29E+2	2.34E-1	1.37E+2	5.51E+1	1.50E+2	1.24E-1	1.51E+2	2.23E+1	1.47E+2	5.07E-2	1.42E+2
590	1.05E+2	1.29E+2	1.75E-1	1.37E+2	4.51E+1	1.50E+2	8.41E-2	1.51E+2	1.56E+1	1.47E+2	3.09E-2	1.42E+2
595	1.03E+2	1.26E+2	1.31E-1	1.34E+2	3.64E+1	1.46E+2	5.53E-2	1.47E+2	1.04E+1	1.43E+2	1.88E-2	1.38E+2
600	9.87E+1	1.26E+2	9.13E-2	1.34E+2	2.64E+1	1.46E+2	3.29E-2	1.47E+2	5.65E+0	1.43E+2	1.07E-2	1.38E+2
605	9.76E+1	1.26E+2	7.85E-2	1.34E+2	2.32E+1	1.47E+2	2.59E-2	1.48E+2	4.39E+0	1.44E+2	8.56E-3	1.39E+2

File: MOCE2:[MOS.PRC]STN06\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 18:49 (GMT) 04 Apr 1993STATION: 06 - Canal de Salsipuedes  
POSITION: 28°39.8 N 113°00.6 W

## SeaWiFS-weighted normalized water-leaving radiance:

Wavelength (nm): 412 443 490 510 555 670 765 865  
Lwn' (uW/cm^2/sr): 6.50E+0 7.11E+0 9.85E+0 1.00E+1 6.38E+0 nil nil nil

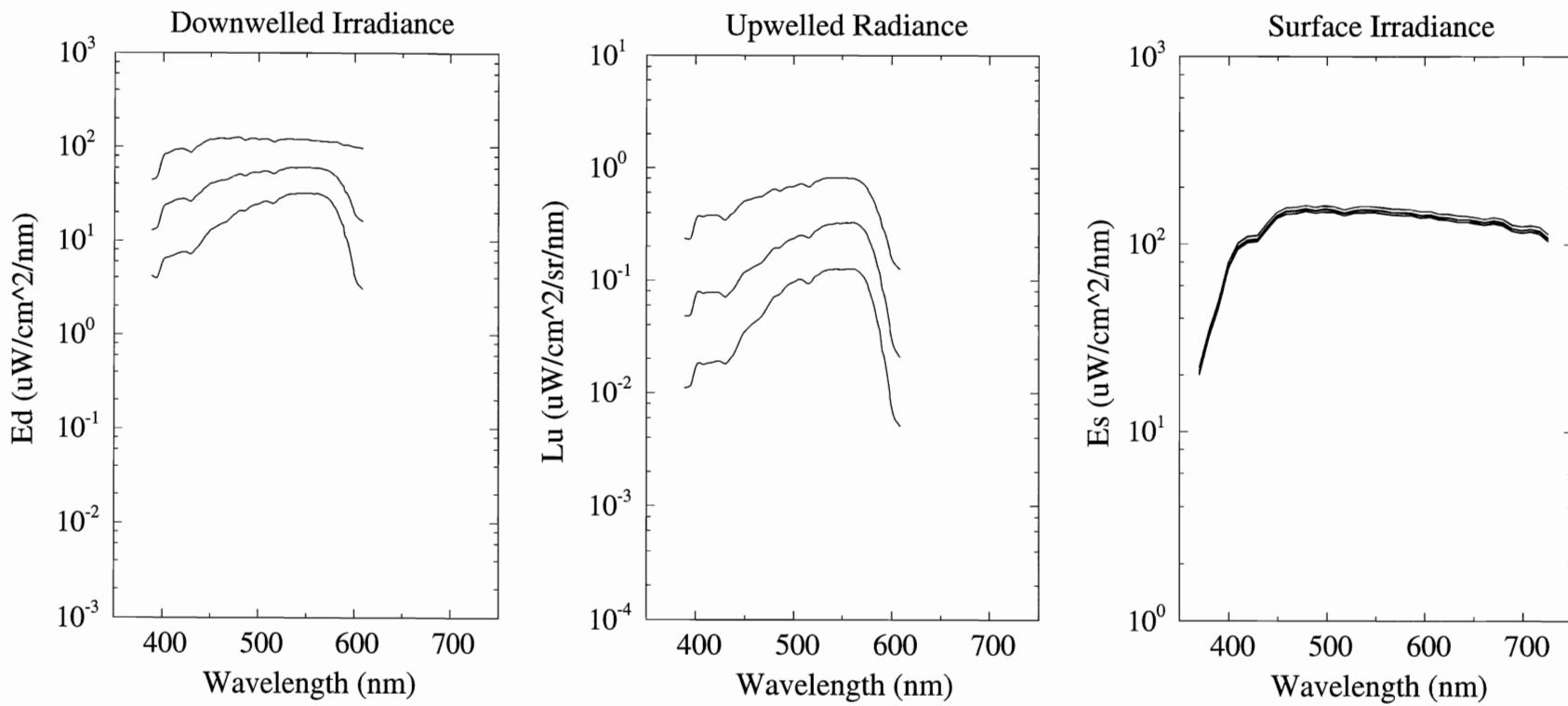
Depth (m)	0-5	1-6	0-10	1-11	5-10	6-11	Top KL_1	Top KL_2	Mid KL_1	Bot KL_2	Lw_1
Lambda	Ke_1	KL_1	Ke_2	KL_2	Ke_3	KL_3	Lw_1	Lw_2	Lw_3	Lw_4	Lwn
400	1.67E-1	1.62E-1	1.77E-1	1.76E-1	1.86E-1	1.90E-1	2.34E-1	2.37E-1	2.58E-1	2.45E-1	3.22E-1
405	1.63E-1	1.63E-1	1.75E-1	1.75E-1	1.87E-1	1.88E-1	2.47E-1	2.50E-1	2.72E-1	2.59E-1	3.38E-1
410	1.64E-1	1.63E-1	1.75E-1	1.75E-1	1.86E-1	1.88E-1	2.46E-1	2.49E-1	2.71E-1	2.58E-1	3.34E-1
415	1.62E-1	1.62E-1	1.74E-1	1.74E-1	1.86E-1	1.86E-1	2.51E-1	2.54E-1	2.77E-1	2.63E-1	3.38E-1
420	1.60E-1	1.60E-1	1.71E-1	1.72E-1	1.82E-1	1.84E-1	2.48E-1	2.51E-1	2.73E-1	2.59E-1	3.30E-1
425	1.56E-1	1.58E-1	1.68E-1	1.69E-1	1.80E-1	1.81E-1	2.40E-1	2.43E-1	2.65E-1	2.51E-1	3.17E-1
430	1.55E-1	1.57E-1	1.66E-1	1.68E-1	1.78E-1	1.79E-1	2.24E-1	2.27E-1	2.47E-1	2.34E-1	2.94E-1
435	1.53E-1	1.56E-1	1.65E-1	1.66E-1	1.77E-1	1.77E-1	2.45E-1	2.48E-1	2.70E-1	2.56E-1	3.20E-1
440	1.48E-1	1.51E-1	1.60E-1	1.61E-1	1.72E-1	1.72E-1	2.63E-1	2.66E-1	2.90E-1	2.75E-1	3.41E-1
445	1.42E-1	1.45E-1	1.53E-1	1.54E-1	1.64E-1	1.64E-1	2.93E-1	2.96E-1	3.23E-1	3.06E-1	3.77E-1
450	1.36E-1	1.37E-1	1.46E-1	1.47E-1	1.56E-1	1.57E-1	3.18E-1	3.21E-1	3.50E-1	3.32E-1	4.07E-1
455	1.31E-1	1.33E-1	1.41E-1	1.42E-1	1.51E-1	1.51E-1	3.25E-1	3.28E-1	3.58E-1	3.39E-1	4.14E-1
460	1.28E-1	1.30E-1	1.37E-1	1.39E-1	1.47E-1	1.48E-1	3.35E-1	3.38E-1	3.69E-1	3.49E-1	4.25E-1
465	1.25E-1	1.27E-1	1.34E-1	1.36E-1	1.44E-1	1.44E-1	3.37E-1	3.40E-1	3.71E-1	3.51E-1	4.26E-1
470	1.21E-1	1.23E-1	1.30E-1	1.31E-1	1.40E-1	1.39E-1	3.44E-1	3.46E-1	3.79E-1	3.58E-1	4.32E-1
475	1.16E-1	1.17E-1	1.25E-1	1.25E-1	1.33E-1	1.34E-1	3.64E-1	3.67E-1	4.01E-1	3.79E-1	4.56E-1
480	1.11E-1	1.12E-1	1.20E-1	1.20E-1	1.28E-1	1.28E-1	3.78E-1	3.81E-1	4.17E-1	3.94E-1	4.73E-1
485	1.08E-1	1.08E-1	1.16E-1	1.16E-1	1.24E-1	1.24E-1	3.63E-1	3.66E-1	4.00E-1	3.79E-1	4.53E-1
490	1.06E-1	1.05E-1	1.13E-1	1.12E-1	1.20E-1	1.20E-1	3.76E-1	3.78E-1	4.14E-1	3.91E-1	4.66E-1
495	1.04E-1	1.03E-1	1.11E-1	1.10E-1	1.18E-1	1.17E-1	3.82E-1	3.85E-1	4.21E-1	3.98E-1	4.74E-1
500	1.02E-1	1.00E-1	1.09E-1	1.07E-1	1.16E-1	1.14E-1	3.73E-1	3.75E-1	4.11E-1	3.88E-1	4.62E-1
505	1.02E-1	9.93E-2	1.08E-1	1.06E-1	1.15E-1	1.12E-1	3.74E-1	3.76E-1	4.12E-1	3.89E-1	4.63E-1
510	1.04E-1	1.01E-1	1.10E-1	1.08E-1	1.17E-1	1.14E-1	3.56E-1	3.59E-1	3.93E-1	3.71E-1	4.41E-1
515	1.05E-1	1.02E-1	1.11E-1	1.08E-1	1.17E-1	1.15E-1	3.29E-1	3.31E-1	3.62E-1	3.42E-1	4.05E-1
520	1.04E-1	1.00E-1	1.09E-1	1.06E-1	1.15E-1	1.12E-1	3.38E-1	3.40E-1	3.73E-1	3.52E-1	4.17E-1
525	1.02E-1	9.88E-2	1.07E-1	1.04E-1	1.13E-1	1.10E-1	3.44E-1	3.46E-1	3.79E-1	3.58E-1	4.24E-1
530	1.01E-1	9.86E-2	1.07E-1	1.04E-1	1.13E-1	1.09E-1	3.46E-1	3.47E-1	3.81E-1	3.59E-1	4.26E-1
535	1.02E-1	9.91E-2	1.08E-1	1.04E-1	1.13E-1	1.09E-1	3.35E-1	3.36E-1	3.69E-1	3.48E-1	4.13E-1
540	1.04E-1	1.00E-1	1.09E-1	1.05E-1	1.14E-1	1.10E-1	3.16E-1	3.18E-1	3.48E-1	3.28E-1	3.90E-1
545	1.06E-1	1.03E-1	1.12E-1	1.08E-1	1.17E-1	1.13E-1	3.04E-1	3.05E-1	3.35E-1	3.16E-1	3.74E-1
550	1.10E-1	1.05E-1	1.15E-1	1.11E-1	1.20E-1	1.16E-1	2.87E-1	2.88E-1	3.16E-1	2.98E-1	3.54E-1
555	1.12E-1	1.07E-1	1.17E-1	1.12E-1	1.21E-1	1.17E-1	2.72E-1	2.74E-1	3.00E-1	2.83E-1	3.36E-1
560	1.13E-1	1.08E-1	1.18E-1	1.13E-1	1.23E-1	1.19E-1	2.61E-1	2.62E-1	2.88E-1	2.71E-1	3.22E-1
565	1.16E-1	1.09E-1	1.21E-1	1.16E-1	1.26E-1	1.22E-1	2.47E-1	2.49E-1	2.72E-1	2.57E-1	3.06E-1
570	1.21E-1	1.13E-1	1.26E-1	1.20E-1	1.31E-1	1.27E-1	2.31E-1	2.33E-1	2.55E-1	2.41E-1	2.87E-1
575	1.30E-1	1.19E-1	1.35E-1	1.28E-1	1.40E-1	1.37E-1	2.09E-1	2.10E-1	2.30E-1	2.18E-1	2.59E-1
580	1.46E-1	1.31E-1	1.51E-1	1.41E-1	1.56E-1	1.51E-1	1.80E-1	1.82E-1	1.98E-1	1.88E-1	2.23E-1
585	1.67E-1	1.45E-1	1.72E-1	1.57E-1	1.77E-1	1.68E-1	1.47E-1	1.49E-1	1.62E-1	1.54E-1	1.81E-1
590	1.99E-1	1.66E-1	2.04E-1	1.78E-1	2.09E-1	1.90E-1	1.12E-1	1.14E-1	1.24E-1	1.18E-1	1.38E-1
595	2.38E-1	1.92E-1	2.43E-1	1.99E-1	2.47E-1	2.06E-1	8.66E-2	8.72E-2	9.55E-2	9.02E-2	1.07E-1
600	2.94E-1	2.23E-1	2.99E-1	2.19E-1	3.05E-1	2.14E-1	6.21E-2	6.18E-2	6.84E-2	6.39E-2	7.65E-2
605	3.18E-1	2.40E-1	3.23E-1	2.25E-1	3.29E-1	2.10E-1	5.43E-2	5.35E-2	5.98E-2	5.53E-2	6.69E-2

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
 STATION: 07 - Punta Santa Lugarda

Top = 0.6 m  
 Mid = 6 m  
 Bot = 11 m

POSITION: 26°50.1 N 110°07.3 W  
 DATE: 19:27 (GMT) 05 Apr 1993



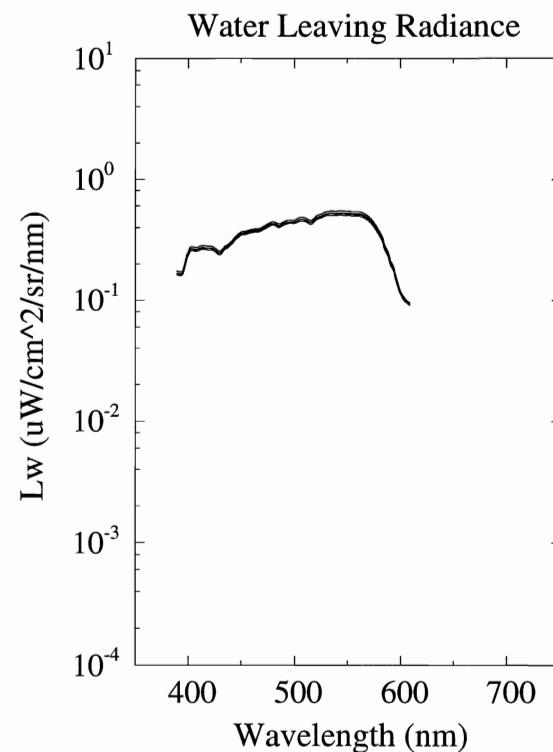
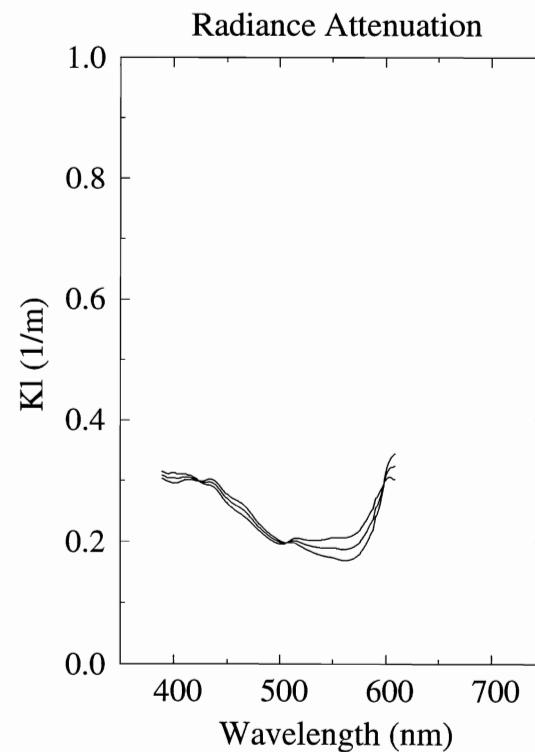
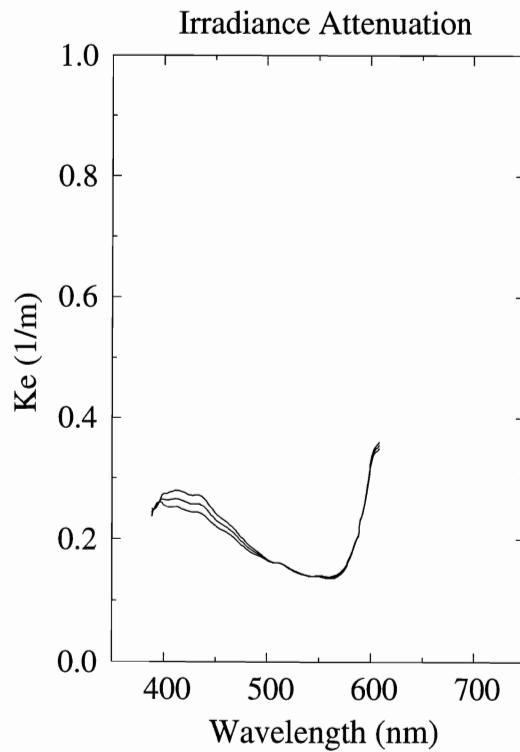
April 1995

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
 STATION: 07 - Punta Santa Lugarda

Top = 0.6 to 6 m  
 Mid = 0.6 to 11 m  
 Bot = 6 to 11 m

POSITION: 26°50.1 N 110°07.3 W  
 DATE: 19:27 (GMT) 05 Apr 1993



File: MOCE2:[MOS.PRC]STN07\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 19:27 (GMT) 05 Apr 1993STATION: 07 - Punta Santa Lugarda  
POSITION: 26°50.1 N 110°07.3 W

## SeaWiFS-weighted water-leaving radiance:

Wavelength (nm)	412	443	490	510	555	670	765	865
Lw' ( $\mu\text{W}/\text{cm}^2/\text{sr}$ )	5.21E+0	6.11E+0	9.18E+0	1.04E+1	9.59E+0	nil	nil	nil

Depth (m)	Top	Top	Mid	Mid	Bot	Bot						
Time (GMT)	0.3	0.9	5.3	6.0	10.3	10.9						
17:55	18:20	20:37	20:48	19:14	19:46							
Lambda	Ed_1	Es_1	Lu_1	Es_1	Ed_2	Es_2	Lu_2	Es_2	Ed_3	Es_3	Lu_3	Es_3
400	7.78E+1	7.32E+1	3.50E-1	7.64E+1	2.19E+1	7.51E+1	7.42E-2	7.36E+1	5.96E+0	7.95E+1	1.72E-2	7.93E+1
405	8.47E+1	9.31E+1	3.72E-1	9.71E+1	2.43E+1	9.56E+1	7.85E-2	9.37E+1	6.58E+0	1.01E+2	1.84E-2	1.01E+2
410	8.99E+1	9.31E+1	3.71E-1	9.71E+1	2.58E+1	9.56E+1	7.70E-2	9.37E+1	6.85E+0	1.01E+2	1.80E-2	1.01E+2
415	9.41E+1	1.01E+2	3.81E-1	1.05E+2	2.71E+1	1.04E+2	7.85E-2	1.02E+2	7.20E+0	1.09E+2	1.85E-2	1.09E+2
420	9.45E+1	1.01E+2	3.77E-1	1.05E+2	2.77E+1	1.04E+2	7.84E-2	1.02E+2	7.46E+0	1.09E+2	1.89E-2	1.09E+2
425	9.20E+1	1.02E+2	3.67E-1	1.07E+2	2.74E+1	1.05E+2	7.68E-2	1.03E+2	7.53E+0	1.11E+2	1.91E-2	1.11E+2
430	8.75E+1	1.02E+2	3.43E-1	1.07E+2	2.62E+1	1.05E+2	7.12E-2	1.03E+2	7.22E+0	1.11E+2	1.81E-2	1.11E+2
435	9.80E+1	1.19E+2	3.78E-1	1.24E+2	2.95E+1	1.22E+2	7.77E-2	1.20E+2	8.15E+0	1.29E+2	1.99E-2	1.28E+2
440	1.05E+2	1.19E+2	4.09E-1	1.24E+2	3.25E+1	1.22E+2	8.64E-2	1.20E+2	9.26E+0	1.29E+2	2.28E-2	1.28E+2
445	1.14E+2	1.36E+2	4.61E-1	1.42E+2	3.66E+1	1.39E+2	1.02E-1	1.37E+2	1.10E+1	1.47E+2	2.86E-2	1.47E+2
450	1.20E+2	1.36E+2	5.06E-1	1.42E+2	4.03E+1	1.39E+2	1.18E-1	1.37E+2	1.29E+1	1.47E+2	3.49E-2	1.47E+2
455	1.21E+2	1.44E+2	5.20E-1	1.50E+2	4.17E+1	1.47E+2	1.26E-1	1.45E+2	1.38E+1	1.55E+2	3.86E-2	1.55E+2
460	1.23E+2	1.44E+2	5.39E-1	1.50E+2	4.33E+1	1.47E+2	1.33E-1	1.45E+2	1.47E+1	1.55E+2	4.22E-2	1.55E+2
465	1.22E+2	1.45E+2	5.50E-1	1.51E+2	4.41E+1	1.48E+2	1.39E-1	1.46E+2	1.55E+1	1.56E+2	4.54E-2	1.56E+2
470	1.22E+2	1.45E+2	5.69E-1	1.51E+2	4.56E+1	1.48E+2	1.51E-1	1.46E+2	1.67E+1	1.56E+2	5.09E-2	1.56E+2
475	1.25E+2	1.49E+2	6.13E-1	1.55E+2	4.90E+1	1.52E+2	1.73E-1	1.50E+2	1.90E+1	1.60E+2	6.14E-2	1.60E+2
480	1.26E+2	1.49E+2	6.44E-1	1.55E+2	5.12E+1	1.52E+2	1.93E-1	1.50E+2	2.08E+1	1.60E+2	7.11E-2	1.60E+2
485	1.18E+2	1.45E+2	6.23E-1	1.51E+2	4.93E+1	1.49E+2	1.95E-1	1.46E+2	2.07E+1	1.57E+2	7.46E-2	1.56E+2
490	1.22E+2	1.45E+2	6.52E-1	1.51E+2	5.17E+1	1.49E+2	2.12E-1	1.46E+2	2.24E+1	1.57E+2	8.37E-2	1.56E+2
495	1.24E+2	1.48E+2	6.79E-1	1.54E+2	5.36E+1	1.52E+2	2.28E-1	1.49E+2	2.39E+1	1.60E+2	9.20E-2	1.59E+2
500	1.20E+2	1.48E+2	6.82E-1	1.54E+2	5.34E+1	1.52E+2	2.35E-1	1.49E+2	2.45E+1	1.60E+2	9.63E-2	1.59E+2
505	1.22E+2	1.46E+2	7.14E-1	1.52E+2	5.52E+1	1.50E+2	2.51E-1	1.47E+2	2.60E+1	1.58E+2	1.02E-1	1.58E+2
510	1.21E+2	1.46E+2	7.10E-1	1.52E+2	5.49E+1	1.50E+2	2.49E-1	1.47E+2	2.60E+1	1.58E+2	9.90E-2	1.58E+2
515	1.14E+2	1.41E+2	6.77E-1	1.46E+2	5.21E+1	1.44E+2	2.39E-1	1.42E+2	2.50E+1	1.52E+2	9.36E-2	1.52E+2
520	1.17E+2	1.41E+2	7.21E-1	1.46E+2	5.47E+1	1.44E+2	2.61E-1	1.42E+2	2.69E+1	1.52E+2	1.03E-1	1.52E+2
525	1.19E+2	1.45E+2	7.65E-1	1.51E+2	5.73E+1	1.49E+2	2.84E-1	1.46E+2	2.90E+1	1.57E+2	1.13E-1	1.56E+2
530	1.22E+2	1.45E+2	8.02E-1	1.51E+2	5.97E+1	1.49E+2	3.04E-1	1.46E+2	3.07E+1	1.57E+2	1.21E-1	1.56E+2
535	1.21E+2	1.47E+2	8.13E-1	1.53E+2	6.03E+1	1.51E+2	3.13E-1	1.48E+2	3.15E+1	1.59E+2	1.24E-1	1.58E+2
540	1.19E+2	1.47E+2	8.10E-1	1.53E+2	5.99E+1	1.51E+2	3.16E-1	1.48E+2	3.16E+1	1.59E+2	1.25E-1	1.58E+2
545	1.20E+2	1.47E+2	8.18E-1	1.52E+2	6.07E+1	1.50E+2	3.22E-1	1.48E+2	3.20E+1	1.58E+2	1.27E-1	1.58E+2
550	1.19E+2	1.47E+2	8.11E-1	1.52E+2	6.06E+1	1.50E+2	3.22E-1	1.48E+2	3.18E+1	1.58E+2	1.25E-1	1.58E+2
555	1.17E+2	1.45E+2	8.09E-1	1.50E+2	6.01E+1	1.48E+2	3.26E-1	1.46E+2	3.17E+1	1.56E+2	1.27E-1	1.56E+2
560	1.16E+2	1.45E+2	8.04E-1	1.50E+2	5.97E+1	1.48E+2	3.27E-1	1.46E+2	3.16E+1	1.56E+2	1.27E-1	1.56E+2
565	1.15E+2	1.42E+2	7.84E-1	1.48E+2	5.92E+1	1.46E+2	3.18E-1	1.43E+2	3.11E+1	1.54E+2	1.23E-1	1.54E+2
570	1.14E+2	1.42E+2	7.36E-1	1.48E+2	5.74E+1	1.46E+2	2.94E-1	1.43E+2	2.96E+1	1.54E+2	1.12E-1	1.54E+2
575	1.13E+2	1.41E+2	6.52E-1	1.47E+2	5.43E+1	1.45E+2	2.52E-1	1.43E+2	2.68E+1	1.53E+2	9.25E-2	1.53E+2
580	1.13E+2	1.41E+2	5.41E-1	1.47E+2	4.96E+1	1.45E+2	1.95E-1	1.43E+2	2.24E+1	1.53E+2	6.76E-2	1.53E+2
585	1.09E+2	1.41E+2	4.23E-1	1.47E+2	4.27E+1	1.45E+2	1.40E-1	1.42E+2	1.73E+1	1.52E+2	4.49E-2	1.52E+2
590	1.05E+2	1.41E+2	3.10E-1	1.47E+2	3.46E+1	1.45E+2	8.98E-2	1.42E+2	1.20E+1	1.52E+2	2.61E-2	1.52E+2
595	1.04E+2	1.37E+2	2.29E-1	1.43E+2	2.76E+1	1.41E+2	5.65E-2	1.39E+2	7.93E+0	1.48E+2	1.50E-2	1.48E+2
600	1.00E+2	1.37E+2	1.56E-1	1.43E+2	1.96E+1	1.41E+2	3.01E-2	1.39E+2	4.29E+0	1.48E+2	7.36E-3	1.48E+2
605	9.90E+1	1.38E+2	1.35E-1	1.43E+2	1.71E+1	1.42E+2	2.32E-2	1.39E+2	3.33E+0	1.49E+2	5.56E-3	1.49E+2

File: MOCE2:[MOS.PRC]STN07\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 19:27 (GMT) 05 Apr 1993STATION: 07 - Punta Santa Lugarda  
POSITION: 26°50.1 N 110°07.3 W

## SeaWiFS-weighted normalized water-leaving radiance:

Wavelength (nm):	412	443	490	510	555	670	765	865
Lwn' (uW/cm^2/sr):	6.73E+0	7.57E+0	1.10E+1	1.24E+1	1.14E+1	nil	nil	nil

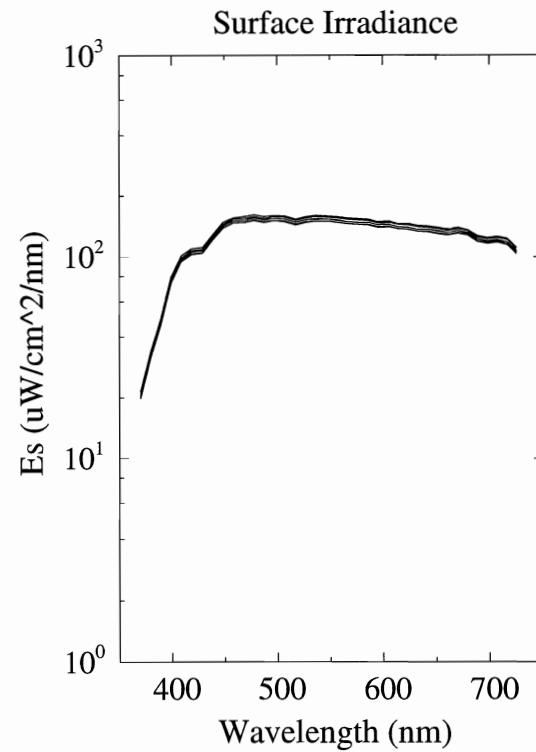
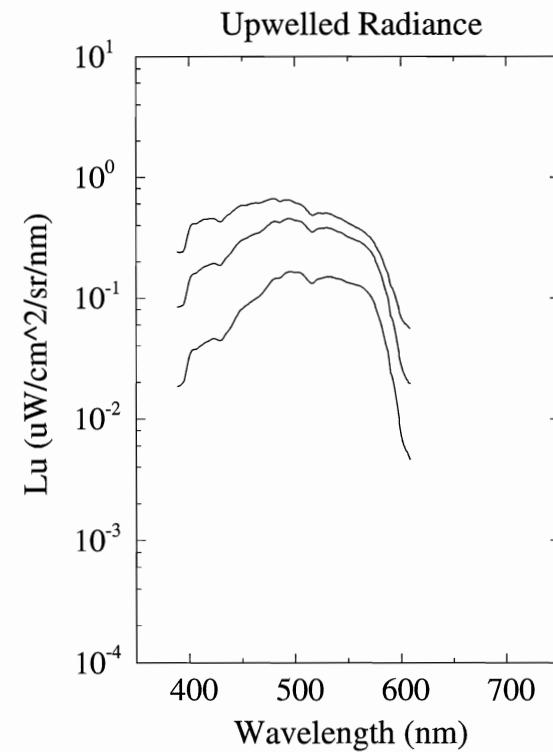
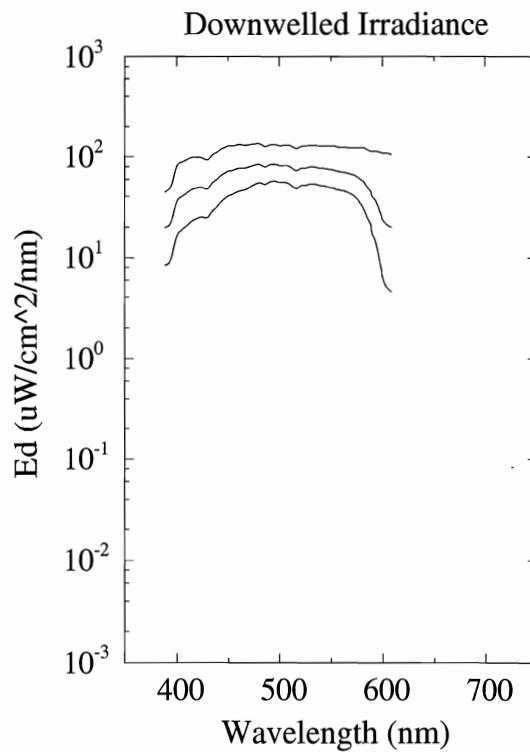
Depth (m)	0-5	1-6	0-10	1-11	5-10	6-11	Top Kl_1	Top Kl_2	Mid Kl_1	Bot Kl_2	Lw_1
R_Es	0.973	1.031	0.924	0.963	0.950	0.934					
Lambda	Ke_1	Kl_1	Ke_2	Kl_2	Ke_3	Kl_3	Lw_1	Lw_2	Lw_3	Lw_4	Lwn
400	2.56E-1	2.96E-1	2.66E-1	3.04E-1	2.75E-1	3.13E-1	2.48E-1	2.50E-1	2.40E-1	2.59E-1	3.28E-1
405	2.53E-1	2.97E-1	2.64E-1	3.04E-1	2.76E-1	3.11E-1	2.64E-1	2.65E-1	2.56E-1	2.75E-1	3.47E-1
410	2.53E-1	3.01E-1	2.66E-1	3.06E-1	2.80E-1	3.11E-1	2.64E-1	2.66E-1	2.56E-1	2.76E-1	3.44E-1
415	2.52E-1	3.02E-1	2.66E-1	3.05E-1	2.80E-1	3.09E-1	2.71E-1	2.72E-1	2.63E-1	2.83E-1	3.50E-1
420	2.49E-1	3.00E-1	2.63E-1	3.02E-1	2.77E-1	3.04E-1	2.68E-1	2.69E-1	2.60E-1	2.79E-1	3.44E-1
425	2.46E-1	2.99E-1	2.59E-1	2.98E-1	2.73E-1	2.98E-1	2.61E-1	2.61E-1	2.53E-1	2.71E-1	3.32E-1
430	2.44E-1	3.01E-1	2.58E-1	2.97E-1	2.73E-1	2.94E-1	2.44E-1	2.44E-1	2.37E-1	2.53E-1	3.08E-1
435	2.43E-1	3.02E-1	2.58E-1	2.97E-1	2.72E-1	2.92E-1	2.69E-1	2.68E-1	2.61E-1	2.78E-1	3.38E-1
440	2.38E-1	2.97E-1	2.52E-1	2.92E-1	2.66E-1	2.86E-1	2.90E-1	2.89E-1	2.82E-1	3.00E-1	3.62E-1
445	2.30E-1	2.87E-1	2.42E-1	2.81E-1	2.54E-1	2.75E-1	3.25E-1	3.23E-1	3.15E-1	3.35E-1	4.02E-1
450	2.22E-1	2.78E-1	2.32E-1	2.71E-1	2.43E-1	2.63E-1	3.53E-1	3.51E-1	3.42E-1	3.64E-1	4.35E-1
455	2.16E-1	2.71E-1	2.26E-1	2.63E-1	2.35E-1	2.55E-1	3.61E-1	3.58E-1	3.50E-1	3.72E-1	4.43E-1
460	2.13E-1	2.67E-1	2.21E-1	2.58E-1	2.30E-1	2.48E-1	3.72E-1	3.69E-1	3.61E-1	3.83E-1	4.55E-1
465	2.07E-1	2.61E-1	2.15E-1	2.52E-1	2.23E-1	2.43E-1	3.78E-1	3.75E-1	3.66E-1	3.89E-1	4.60E-1
470	2.01E-1	2.52E-1	2.08E-1	2.44E-1	2.15E-1	2.36E-1	3.88E-1	3.85E-1	3.76E-1	3.99E-1	4.69E-1
475	1.91E-1	2.40E-1	1.97E-1	2.33E-1	2.03E-1	2.26E-1	4.13E-1	4.11E-1	4.01E-1	4.26E-1	4.99E-1
480	1.84E-1	2.29E-1	1.89E-1	2.24E-1	1.94E-1	2.18E-1	4.30E-1	4.28E-1	4.17E-1	4.44E-1	5.19E-1
485	1.78E-1	2.20E-1	1.83E-1	2.15E-1	1.87E-1	2.10E-1	4.13E-1	4.11E-1	4.00E-1	4.26E-1	4.96E-1
490	1.75E-1	2.13E-1	1.78E-1	2.08E-1	1.81E-1	2.04E-1	4.29E-1	4.27E-1	4.16E-1	4.43E-1	5.13E-1
495	1.71E-1	2.07E-1	1.73E-1	2.03E-1	1.75E-1	1.99E-1	4.44E-1	4.43E-1	4.31E-1	4.59E-1	5.31E-1
500	1.66E-1	2.02E-1	1.67E-1	1.99E-1	1.68E-1	1.96E-1	4.44E-1	4.43E-1	4.31E-1	4.60E-1	5.30E-1
505	1.63E-1	1.98E-1	1.63E-1	1.97E-1	1.63E-1	1.97E-1	4.64E-1	4.63E-1	4.49E-1	4.81E-1	5.53E-1
510	1.62E-1	1.98E-1	1.62E-1	2.00E-1	1.62E-1	2.02E-1	4.61E-1	4.62E-1	4.47E-1	4.79E-1	5.49E-1
515	1.60E-1	1.97E-1	1.60E-1	2.01E-1	1.60E-1	2.06E-1	4.39E-1	4.41E-1	4.26E-1	4.58E-1	5.22E-1
520	1.56E-1	1.92E-1	1.55E-1	1.98E-1	1.55E-1	2.05E-1	4.66E-1	4.68E-1	4.51E-1	4.86E-1	5.53E-1
525	1.50E-1	1.87E-1	1.50E-1	1.95E-1	1.49E-1	2.03E-1	4.92E-1	4.95E-1	4.77E-1	5.14E-1	5.84E-1
530	1.47E-1	1.83E-1	1.46E-1	1.92E-1	1.46E-1	2.02E-1	5.14E-1	5.18E-1	4.98E-1	5.37E-1	6.11E-1
535	1.44E-1	1.80E-1	1.43E-1	1.91E-1	1.43E-1	2.02E-1	5.19E-1	5.24E-1	5.03E-1	5.44E-1	6.18E-1
540	1.41E-1	1.77E-1	1.41E-1	1.90E-1	1.41E-1	2.03E-1	5.16E-1	5.22E-1	5.00E-1	5.42E-1	6.13E-1
545	1.40E-1	1.75E-1	1.40E-1	1.90E-1	1.40E-1	2.05E-1	5.20E-1	5.27E-1	5.04E-1	5.47E-1	6.18E-1
550	1.40E-1	1.74E-1	1.41E-1	1.90E-1	1.41E-1	2.07E-1	5.15E-1	5.22E-1	4.99E-1	5.42E-1	6.12E-1
555	1.38E-1	1.71E-1	1.39E-1	1.88E-1	1.40E-1	2.06E-1	5.12E-1	5.20E-1	4.97E-1	5.40E-1	6.09E-1
560	1.37E-1	1.69E-1	1.38E-1	1.87E-1	1.39E-1	2.06E-1	5.09E-1	5.17E-1	4.93E-1	5.37E-1	6.05E-1
565	1.37E-1	1.70E-1	1.39E-1	1.88E-1	1.41E-1	2.08E-1	4.97E-1	5.05E-1	4.81E-1	5.24E-1	5.92E-1
570	1.41E-1	1.73E-1	1.43E-1	1.91E-1	1.45E-1	2.11E-1	4.67E-1	4.75E-1	4.53E-1	4.93E-1	5.58E-1
575	1.51E-1	1.80E-1	1.53E-1	1.98E-1	1.54E-1	2.18E-1	4.16E-1	4.23E-1	4.03E-1	4.39E-1	4.97E-1
580	1.69E-1	1.92E-1	1.70E-1	2.11E-1	1.72E-1	2.31E-1	3.49E-1	3.55E-1	3.38E-1	3.69E-1	4.16E-1
585	1.92E-1	2.09E-1	1.93E-1	2.28E-1	1.94E-1	2.47E-1	2.77E-1	2.82E-1	2.69E-1	2.92E-1	3.29E-1
590	2.26E-1	2.36E-1	2.26E-1	2.52E-1	2.26E-1	2.68E-1	2.08E-1	2.11E-1	2.02E-1	2.19E-1	2.46E-1
595	2.68E-1	2.68E-1	2.66E-1	2.76E-1	2.65E-1	2.85E-1	1.59E-1	1.60E-1	1.54E-1	1.66E-1	1.88E-1
600	3.28E-1	3.15E-1	3.24E-1	3.09E-1	3.21E-1	3.02E-1	1.13E-1	1.12E-1	1.09E-1	1.16E-1	1.34E-1
605	3.53E-1	3.38E-1	3.48E-1	3.22E-1	3.44E-1	3.05E-1	9.96E-2	9.82E-2	9.66E-2	1.02E-1	1.18E-1

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
 STATION: 08 - Isla Altamura

Top = 0.7 m  
 Mid = 6 m  
 Bot = 11 m

POSITION: 24°42.7 N 108°11.4 W  
 DATE: 19:03 (GMT) 06 Apr 1993



April 1995

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

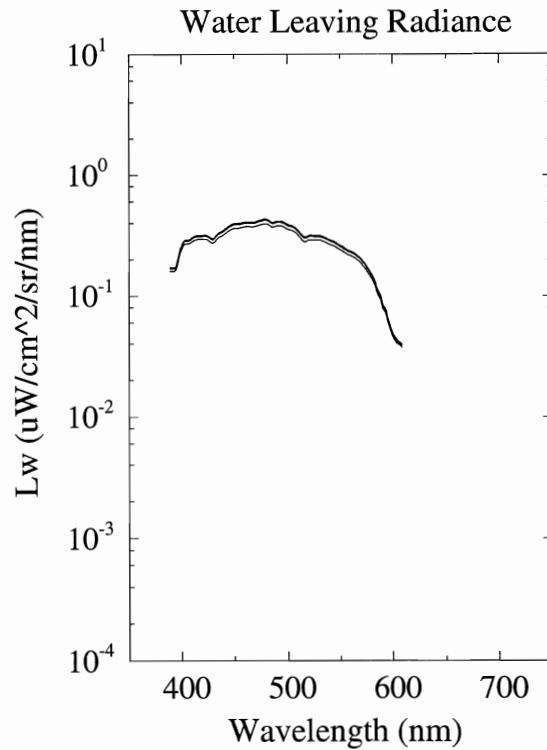
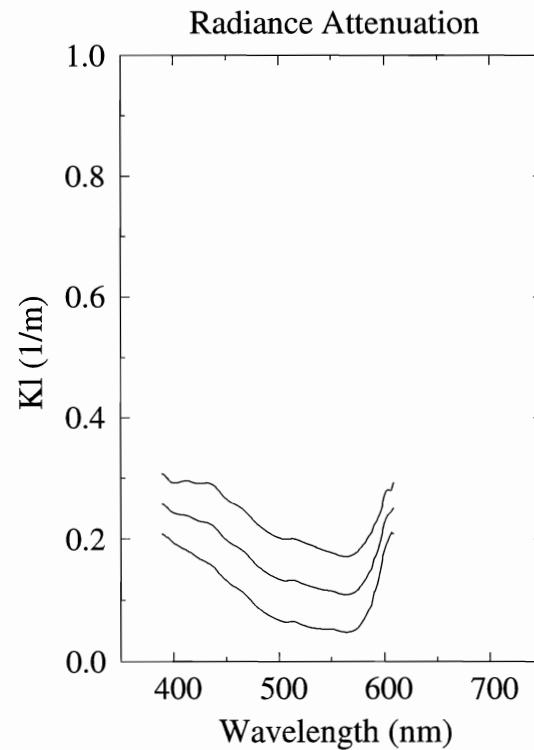
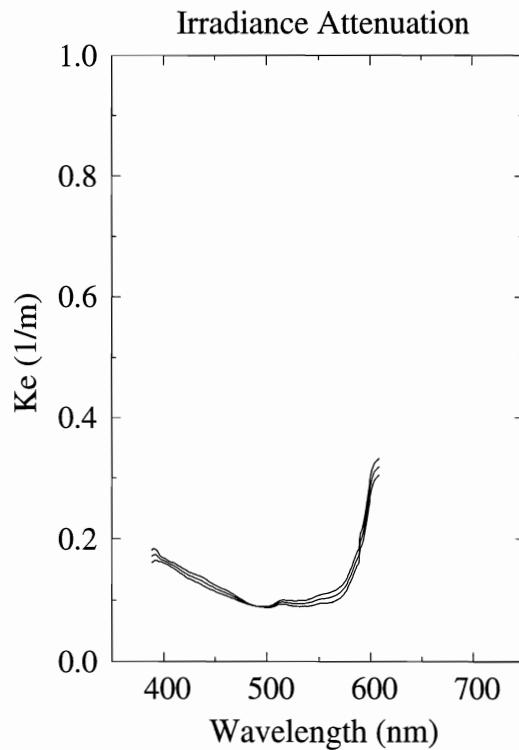
CRUISE: MOCE-2 SHIP: El Puma

STATION: 08 - Isla Altamura

Top = 0.7 to 6 m  
 Mid = 0.7 to 11 m  
 Bot = 6 to 11 m

POSITION: 24°42.7 N 108°11.4 W

DATE: 19:03 (GMT) 06 Apr 1993



File: MOCE2:[MOS.PRC]STN08\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 19:03 (GMT) 06 Apr 1993STATION: 08 - Isla Altamura  
POSITION: 24°42.7 N 108°11.4 W

## SeaWiFS-weighted water-leaving radience:

Wavelength (nm):	412	443	490	510	555	670	765	865
Lw' (uW/cm^2/sr):	5.54E+0	6.48E+0	7.91E+0	7.31E+0	4.30E+0	nil	nil	nil

Depth (m)	Top		Top		Mid		Mid		Bot		Bot	
	0.3	1.0	1.0	5.4	6.0	20:40	20:28	10.4	18:38	11.0	18:28	
Time (GMT)	17:48		18:03									
Lambda	Ed_1	Es_1	Lu_1	Es_1	Ed_2	Es_2	Lu_2	Es_2	Ed_3	Es_3	Lu_3	Es_3
400	8.05E+1	7.42E+1	3.75E-1	7.62E+1	3.59E+1	7.46E+1	1.42E-1	7.63E+1	1.63E+1	7.93E+1	3.37E-2	7.73E+1
405	8.83E+1	9.45E+1	4.12E-1	9.72E+1	4.00E+1	9.51E+1	1.60E-1	9.73E+1	1.86E+1	1.01E+2	3.77E-2	9.85E+1
410	9.40E+1	9.45E+1	4.27E-1	9.72E+1	4.39E+1	9.51E+1	1.69E-1	9.73E+1	2.07E+1	1.01E+2	3.95E-2	9.85E+1
415	9.86E+1	1.03E+2	4.50E-1	1.05E+2	4.73E+1	1.03E+2	1.83E-1	1.06E+2	2.29E+1	1.09E+2	4.27E-2	1.07E+2
420	9.95E+1	1.03E+2	4.54E-1	1.05E+2	4.91E+1	1.03E+2	1.90E-1	1.06E+2	2.44E+1	1.09E+2	4.50E-2	1.07E+2
425	9.74E+1	1.04E+2	4.50E-1	1.07E+2	4.93E+1	1.05E+2	1.94E-1	1.07E+2	2.51E+1	1.11E+2	4.61E-2	1.09E+2
430	9.31E+1	1.04E+2	4.29E-1	1.07E+2	4.82E+1	1.05E+2	1.89E-1	1.07E+2	2.50E+1	1.11E+2	4.48E-2	1.09E+2
435	1.04E+2	1.21E+2	4.74E-1	1.24E+2	5.51E+1	1.22E+2	2.14E-1	1.24E+2	2.90E+1	1.29E+2	5.10E-2	1.26E+2
440	1.12E+2	1.21E+2	5.06E-1	1.24E+2	6.06E+1	1.22E+2	2.37E-1	1.24E+2	3.25E+1	1.29E+2	5.81E-2	1.26E+2
445	1.21E+2	1.39E+2	5.51E-1	1.42E+2	6.68E+1	1.39E+2	2.72E-1	1.42E+2	3.69E+1	1.48E+2	6.98E-2	1.44E+2
450	1.28E+2	1.39E+2	5.84E-1	1.42E+2	7.21E+1	1.39E+2	3.01E-1	1.42E+2	4.08E+1	1.48E+2	8.14E-2	1.44E+2
455	1.29E+2	1.46E+2	5.90E-1	1.50E+2	7.38E+1	1.47E+2	3.15E-1	1.50E+2	4.27E+1	1.56E+2	8.79E-2	1.53E+2
460	1.32E+2	1.46E+2	6.07E-1	1.50E+2	7.68E+1	1.47E+2	3.33E-1	1.50E+2	4.52E+1	1.56E+2	9.47E-2	1.53E+2
465	1.31E+2	1.48E+2	6.12E-1	1.51E+2	7.75E+1	1.48E+2	3.45E-1	1.51E+2	4.66E+1	1.57E+2	1.01E-1	1.54E+2
470	1.31E+2	1.48E+2	6.21E-1	1.51E+2	7.88E+1	1.48E+2	3.63E-1	1.51E+2	4.86E+1	1.57E+2	1.11E-1	1.54E+2
475	1.35E+2	1.51E+2	6.48E-1	1.55E+2	8.26E+1	1.52E+2	4.00E-1	1.55E+2	5.26E+1	1.61E+2	1.28E-1	1.58E+2
480	1.36E+2	1.51E+2	6.65E-1	1.55E+2	8.45E+1	1.52E+2	4.30E-1	1.55E+2	5.52E+1	1.61E+2	1.44E-1	1.58E+2
485	1.27E+2	1.48E+2	6.33E-1	1.52E+2	8.02E+1	1.48E+2	4.23E-1	1.52E+2	5.34E+1	1.58E+2	1.47E-1	1.55E+2
490	1.31E+2	1.48E+2	6.46E-1	1.52E+2	8.32E+1	1.48E+2	4.43E-1	1.52E+2	5.60E+1	1.58E+2	1.58E-1	1.55E+2
495	1.33E+2	1.51E+2	6.47E-1	1.55E+2	8.49E+1	1.51E+2	4.54E-1	1.55E+2	5.75E+1	1.61E+2	1.66E-1	1.58E+2
500	1.30E+2	1.51E+2	6.16E-1	1.55E+2	8.25E+1	1.51E+2	4.40E-1	1.55E+2	5.62E+1	1.61E+2	1.64E-1	1.58E+2
505	1.31E+2	1.49E+2	5.96E-1	1.53E+2	8.26E+1	1.50E+2	4.32E-1	1.53E+2	5.61E+1	1.59E+2	1.63E-1	1.56E+2
510	1.30E+2	1.49E+2	5.49E-1	1.53E+2	7.99E+1	1.50E+2	3.96E-1	1.53E+2	5.34E+1	1.59E+2	1.49E-1	1.56E+2
515	1.23E+2	1.44E+2	4.92E-1	1.47E+2	7.41E+1	1.44E+2	3.56E-1	1.47E+2	4.90E+1	1.53E+2	1.34E-1	1.51E+2
520	1.25E+2	1.44E+2	4.97E-1	1.47E+2	7.60E+1	1.44E+2	3.66E-1	1.47E+2	5.07E+1	1.53E+2	1.40E-1	1.51E+2
525	1.28E+2	1.48E+2	5.03E-1	1.52E+2	7.79E+1	1.48E+2	3.77E-1	1.52E+2	5.24E+1	1.58E+2	1.47E-1	1.55E+2
530	1.31E+2	1.48E+2	5.04E-1	1.52E+2	7.97E+1	1.48E+2	3.82E-1	1.52E+2	5.38E+1	1.58E+2	1.51E-1	1.55E+2
535	1.31E+2	1.50E+2	4.90E-1	1.54E+2	7.93E+1	1.50E+2	3.74E-1	1.54E+2	5.35E+1	1.60E+2	1.50E-1	1.57E+2
540	1.28E+2	1.50E+2	4.64E-1	1.54E+2	7.71E+1	1.50E+2	3.56E-1	1.54E+2	5.19E+1	1.60E+2	1.45E-1	1.57E+2
545	1.29E+2	1.49E+2	4.46E-1	1.53E+2	7.67E+1	1.50E+2	3.42E-1	1.53E+2	5.13E+1	1.59E+2	1.42E-1	1.57E+2
550	1.29E+2	1.49E+2	4.19E-1	1.53E+2	7.51E+1	1.50E+2	3.21E-1	1.53E+2	4.96E+1	1.59E+2	1.35E-1	1.57E+2
555	1.27E+2	1.48E+2	3.96E-1	1.52E+2	7.31E+1	1.48E+2	3.07E-1	1.51E+2	4.80E+1	1.57E+2	1.31E-1	1.55E+2
560	1.26E+2	1.48E+2	3.77E-1	1.52E+2	7.14E+1	1.48E+2	2.96E-1	1.51E+2	4.67E+1	1.57E+2	1.28E-1	1.55E+2
565	1.25E+2	1.45E+2	3.54E-1	1.49E+2	6.99E+1	1.46E+2	2.79E-1	1.49E+2	4.52E+1	1.55E+2	1.21E-1	1.53E+2
570	1.24E+2	1.45E+2	3.25E-1	1.49E+2	6.75E+1	1.46E+2	2.54E-1	1.49E+2	4.27E+1	1.55E+2	1.09E-1	1.53E+2
575	1.23E+2	1.44E+2	2.84E-1	1.48E+2	6.39E+1	1.45E+2	2.16E-1	1.48E+2	3.87E+1	1.54E+2	8.96E-2	1.52E+2
580	1.24E+2	1.44E+2	2.35E-1	1.48E+2	5.88E+1	1.45E+2	1.68E-1	1.48E+2	3.28E+1	1.54E+2	6.62E-2	1.52E+2
585	1.20E+2	1.44E+2	1.84E-1	1.48E+2	5.09E+1	1.44E+2	1.21E-1	1.47E+2	2.57E+1	1.53E+2	4.49E-2	1.51E+2
590	1.15E+2	1.44E+2	1.34E-1	1.48E+2	4.14E+1	1.44E+2	7.84E-2	1.47E+2	1.79E+1	1.53E+2	2.67E-2	1.51E+2
595	1.14E+2	1.40E+2	1.00E-1	1.43E+2	3.33E+1	1.40E+2	4.99E-2	1.43E+2	1.19E+1	1.49E+2	1.54E-2	1.47E+2
600	1.10E+2	1.40E+2	6.96E-2	1.43E+2	2.40E+1	1.40E+2	2.79E-2	1.43E+2	6.46E+0	1.49E+2	7.34E-3	1.47E+2
605	1.09E+2	1.41E+2	6.04E-2	1.44E+2	2.11E+1	1.41E+2	2.17E-2	1.44E+2	4.99E+0	1.50E+2	5.44E-3	1.48E+2

File: MOCE2:[MOS.PRC]STN08\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 19:03 (GMT) 06 Apr 1993STATION: 08 - Isla Altamura  
POSITION: 24°42.7 N 108°11.4 W

## SeaWiFS-weighted normalized water-leaving radiance:

Wavelength (nm):	412	443	490	510	555	670	765	865
Lwn' (uW/cm^2/sr):	7.05E+0	7.91E+0	9.33E+0	8.58E+0	5.04E+0	nil	nil	nil

Depth (m)	0-5	1-6	0-10	1-11	5-10	6-11	Top KL_1	Top KL_2	Mid KL_1	Bot KL_2	Lw_1
R_Es	0.995	0.999	0.937	0.978	0.941	0.978					
Lambda	Ke_1	KL_1	Ke_2	KL_2	Ke_3	KL_3	Lw_1	Lw_2	Lw_3	Lw_4	Lwn
400	1.61E-1	1.93E-1	1.65E-1	2.43E-1	1.69E-1	2.93E-1	2.47E-1	2.59E-1	2.47E-1	2.65E-1	3.22E-1
405	1.58E-1	1.89E-1	1.61E-1	2.41E-1	1.65E-1	2.93E-1	2.70E-1	2.84E-1	2.70E-1	2.90E-1	3.49E-1
410	1.52E-1	1.84E-1	1.57E-1	2.40E-1	1.61E-1	2.96E-1	2.78E-1	2.94E-1	2.78E-1	3.00E-1	3.57E-1
415	1.46E-1	1.79E-1	1.51E-1	2.37E-1	1.56E-1	2.96E-1	2.92E-1	3.09E-1	2.92E-1	3.16E-1	3.71E-1
420	1.41E-1	1.74E-1	1.46E-1	2.33E-1	1.51E-1	2.93E-1	2.93E-1	3.10E-1	2.93E-1	3.17E-1	3.69E-1
425	1.36E-1	1.68E-1	1.41E-1	2.30E-1	1.47E-1	2.91E-1	2.88E-1	3.07E-1	2.89E-1	3.13E-1	3.61E-1
430	1.31E-1	1.64E-1	1.37E-1	2.28E-1	1.43E-1	2.92E-1	2.74E-1	2.92E-1	2.74E-1	2.98E-1	3.40E-1
435	1.28E-1	1.59E-1	1.34E-1	2.25E-1	1.40E-1	2.92E-1	3.01E-1	3.22E-1	3.02E-1	3.29E-1	3.72E-1
440	1.23E-1	1.51E-1	1.29E-1	2.19E-1	1.36E-1	2.86E-1	3.19E-1	3.42E-1	3.20E-1	3.49E-1	3.92E-1
445	1.19E-1	1.41E-1	1.25E-1	2.09E-1	1.30E-1	2.77E-1	3.44E-1	3.68E-1	3.44E-1	3.76E-1	4.20E-1
450	1.15E-1	1.32E-1	1.20E-1	1.99E-1	1.25E-1	2.66E-1	3.62E-1	3.86E-1	3.62E-1	3.95E-1	4.39E-1
455	1.11E-1	1.25E-1	1.16E-1	1.92E-1	1.21E-1	2.60E-1	3.63E-1	3.88E-1	3.63E-1	3.96E-1	4.39E-1
460	1.08E-1	1.20E-1	1.13E-1	1.88E-1	1.18E-1	2.56E-1	3.71E-1	3.97E-1	3.72E-1	4.06E-1	4.47E-1
465	1.05E-1	1.15E-1	1.09E-1	1.82E-1	1.13E-1	2.50E-1	3.72E-1	3.98E-1	3.72E-1	4.07E-1	4.46E-1
470	1.02E-1	1.07E-1	1.05E-1	1.75E-1	1.08E-1	2.43E-1	3.75E-1	4.01E-1	3.75E-1	4.10E-1	4.47E-1
475	9.77E-2	9.62E-2	9.99E-2	1.64E-1	1.02E-1	2.32E-1	3.87E-1	4.14E-1	3.88E-1	4.23E-1	4.61E-1
480	9.46E-2	8.73E-2	9.57E-2	1.55E-1	9.68E-2	2.23E-1	3.94E-1	4.21E-1	3.94E-1	4.31E-1	4.68E-1
485	9.23E-2	8.05E-2	9.26E-2	1.48E-1	9.30E-2	2.16E-1	3.72E-1	3.98E-1	3.72E-1	4.07E-1	4.41E-1
490	9.07E-2	7.50E-2	9.08E-2	1.43E-1	9.08E-2	2.11E-1	3.78E-1	4.04E-1	3.78E-1	4.13E-1	4.45E-1
495	9.01E-2	7.07E-2	8.98E-2	1.38E-1	8.95E-2	2.06E-1	3.77E-1	4.03E-1	3.77E-1	4.12E-1	4.44E-1
500	9.03E-2	6.71E-2	8.95E-2	1.35E-1	8.87E-2	2.02E-1	3.58E-1	3.82E-1	3.58E-1	3.91E-1	4.21E-1
505	9.27E-2	6.43E-2	9.10E-2	1.32E-1	8.93E-2	2.00E-1	3.45E-1	3.69E-1	3.45E-1	3.77E-1	4.06E-1
510	9.77E-2	6.50E-2	9.52E-2	1.33E-1	9.26E-2	2.01E-1	3.18E-1	3.40E-1	3.18E-1	3.48E-1	3.73E-1
515	1.01E-1	6.46E-2	9.75E-2	1.32E-1	9.43E-2	2.00E-1	2.85E-1	3.05E-1	2.85E-1	3.11E-1	3.33E-1
520	1.00E-1	6.10E-2	9.65E-2	1.29E-1	9.28E-2	1.97E-1	2.87E-1	3.07E-1	2.87E-1	3.14E-1	3.36E-1
525	9.96E-2	5.75E-2	9.53E-2	1.25E-1	9.09E-2	1.93E-1	2.89E-1	3.09E-1	2.89E-1	3.16E-1	3.39E-1
530	9.96E-2	5.53E-2	9.49E-2	1.23E-1	9.02E-2	1.90E-1	2.89E-1	3.09E-1	2.89E-1	3.16E-1	3.39E-1
535	1.00E-1	5.40E-2	9.52E-2	1.20E-1	9.03E-2	1.87E-1	2.81E-1	3.00E-1	2.81E-1	3.06E-1	3.29E-1
540	1.02E-1	5.32E-2	9.63E-2	1.18E-1	9.08E-2	1.84E-1	2.66E-1	2.84E-1	2.66E-1	2.90E-1	3.11E-1
545	1.05E-1	5.30E-2	9.84E-2	1.17E-1	9.22E-2	1.81E-1	2.55E-1	2.72E-1	2.55E-1	2.78E-1	2.99E-1
550	1.08E-1	5.31E-2	1.02E-1	1.15E-1	9.47E-2	1.78E-1	2.40E-1	2.55E-1	2.40E-1	2.61E-1	2.81E-1
555	1.11E-1	5.07E-2	1.03E-1	1.13E-1	9.58E-2	1.75E-1	2.26E-1	2.40E-1	2.26E-1	2.46E-1	2.65E-1
560	1.13E-1	4.84E-2	1.05E-1	1.10E-1	9.65E-2	1.72E-1	2.15E-1	2.28E-1	2.15E-1	2.33E-1	2.52E-1
565	1.16E-1	4.78E-2	1.07E-1	1.10E-1	9.88E-2	1.72E-1	2.02E-1	2.14E-1	2.02E-1	2.19E-1	2.37E-1
570	1.21E-1	4.96E-2	1.12E-1	1.12E-1	1.03E-1	1.74E-1	1.86E-1	1.97E-1	1.86E-1	2.02E-1	2.19E-1
575	1.31E-1	5.49E-2	1.21E-1	1.18E-1	1.12E-1	1.80E-1	1.63E-1	1.73E-1	1.63E-1	1.77E-1	1.92E-1
580	1.48E-1	6.74E-2	1.38E-1	1.29E-1	1.28E-1	1.91E-1	1.36E-1	1.45E-1	1.36E-1	1.48E-1	1.60E-1
585	1.70E-1	8.29E-2	1.59E-1	1.43E-1	1.48E-1	2.04E-1	1.08E-1	1.15E-1	1.08E-1	1.18E-1	1.27E-1
590	2.04E-1	1.08E-1	1.92E-1	1.64E-1	1.80E-1	2.20E-1	8.12E-2	8.58E-2	8.12E-2	8.77E-2	9.48E-2
595	2.45E-1	1.40E-1	2.31E-1	1.90E-1	2.17E-1	2.40E-1	6.25E-2	6.57E-2	6.26E-2	6.71E-2	7.31E-2
600	3.03E-1	1.83E-1	2.88E-1	2.27E-1	2.74E-1	2.72E-1	4.53E-2	4.73E-2	4.53E-2	4.84E-2	5.31E-2
605	3.27E-1	2.04E-1	3.13E-1	2.43E-1	2.99E-1	2.81E-1	4.01E-2	4.17E-2	4.02E-2	4.26E-2	4.70E-2

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

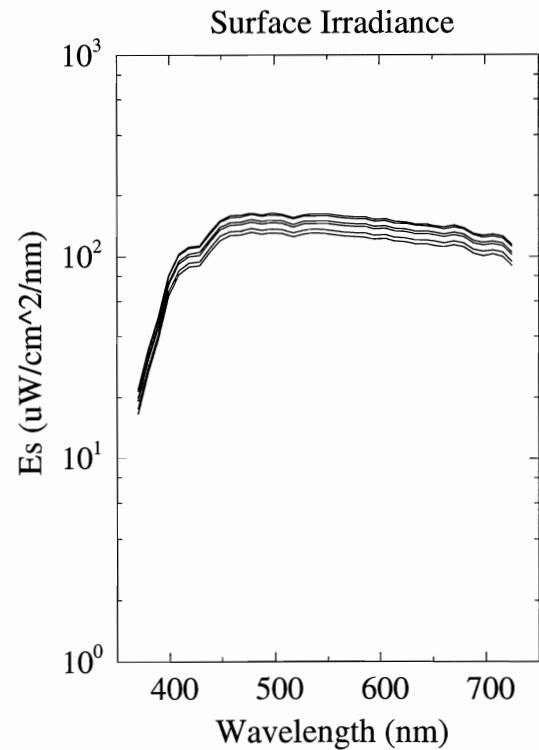
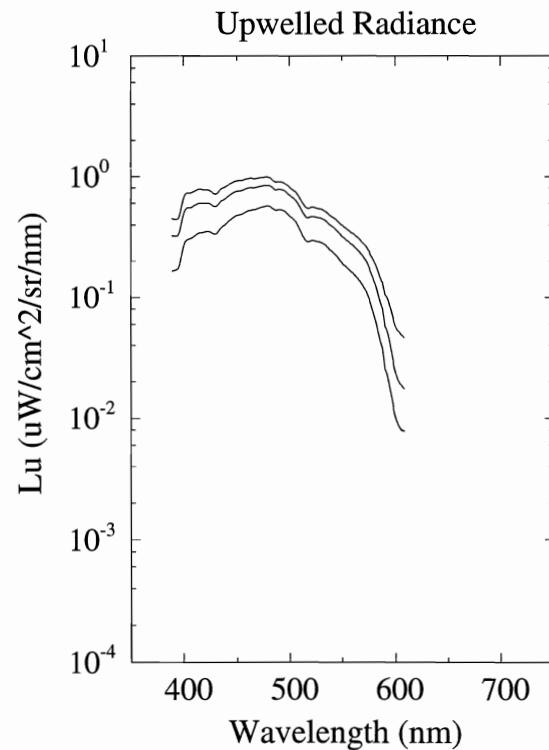
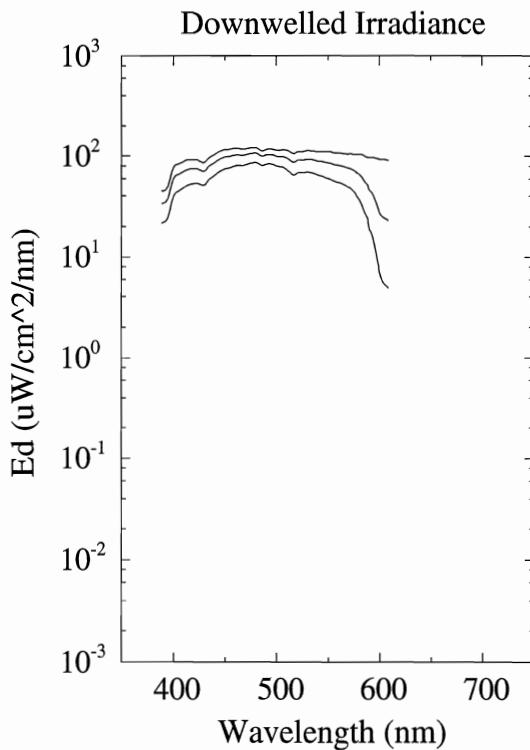
CRUISE: MOCE-2 SHIP: El Puma

STATION: 09 - Mazatlan

Top = 0.6 m  
 Mid = 6 m  
 Bot = 11 m

POSITION: 23°10.7 N 106°39.6 W

DATE: 17:48 (GMT) 07 Apr 1993



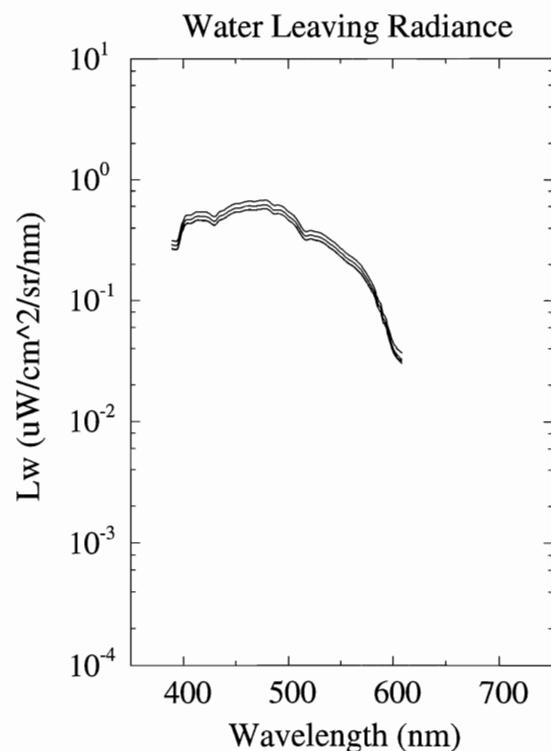
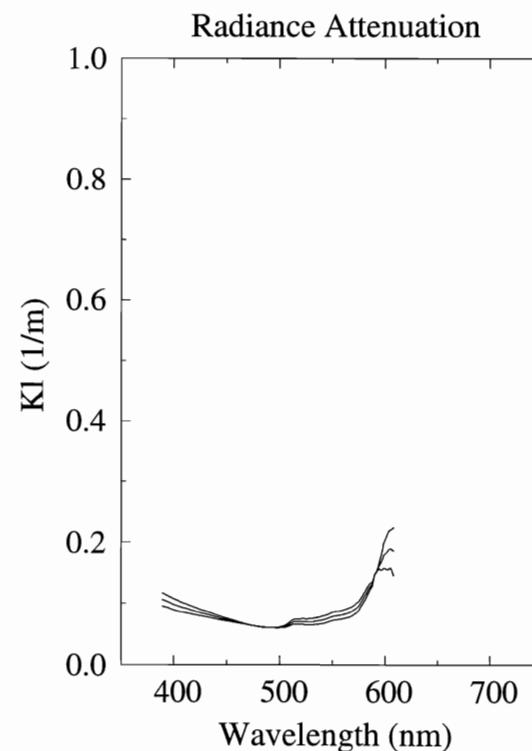
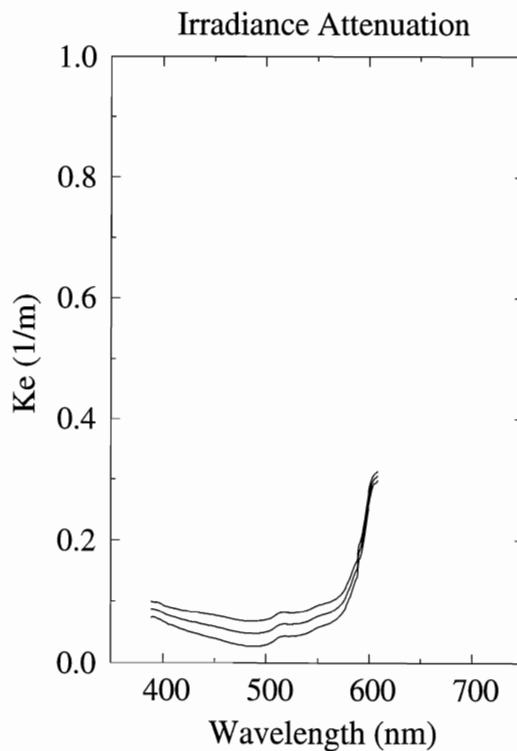
April 1995

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
 STATION: 09 - Mazatlan

Top = 0.6 to 6 m  
 Mid = 0.6 to 11 m  
 Bot = 6 to 11 m

POSITION: 23°10.7 N 106°39.6 W  
 DATE: 17:48 (GMT) 07 Apr 1993



## MOCE-2 Observations

## MLML Tech-Pub 95-1

File: MOCE2:[MOS.PRC]STN09\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 17:48 (GMT) 07 Apr 1993STATION: 09 - Mazatlan  
POSITION: 23°10.7 N 106°39.6 W

SeaWiFS-weighted water-leaving radience:

Wavelength (nm): 412 443 490 510 555 670 765 865  
Lw' (uW/cm^2/sr): 8.73E+0 9.71E+0 1.08E+1 8.80E+0 4.08E+0 nil nil nil

Depth (m)	Top		Mid		Bot		Bot	
	0.3	0.9	5.4	6.0	10.3	10.9		
Time (GMT)	16:49	17:03	19:01	18:32	17:46	17:32		
Lambda	Ed_1	Es_1	Lu_1	Es_1	Ed_2	Es_2	Lu_2	Es_2
400	7.69E+1	6.35E+1	6.75E-1	6.67E+1	5.96E+1	8.08E+1	5.04E-1	7.93E+1
405	8.34E+1	8.13E+1	7.33E-1	8.52E+1	6.55E+1	1.03E+2	5.52E-1	1.01E+2
410	8.84E+1	8.13E+1	7.52E-1	8.52E+1	7.03E+1	1.03E+2	5.72E-1	1.01E+2
415	9.24E+1	8.85E+1	7.84E-1	9.27E+1	7.42E+1	1.12E+2	6.00E-1	1.10E+2
420	9.27E+1	8.85E+1	7.77E-1	9.27E+1	7.52E+1	1.12E+2	6.02E-1	1.10E+2
425	9.06E+1	9.00E+1	7.59E-1	9.42E+1	7.39E+1	1.13E+2	5.93E-1	1.11E+2
430	8.64E+1	9.00E+1	7.16E-1	9.42E+1	7.07E+1	1.13E+2	5.63E-1	1.11E+2
435	9.65E+1	1.05E+2	7.84E-1	1.10E+2	7.96E+1	1.31E+2	6.23E-1	1.29E+2
440	1.03E+2	1.05E+2	8.26E-1	1.10E+2	8.58E+1	1.31E+2	6.62E-1	1.29E+2
445	1.11E+2	1.20E+2	8.84E-1	1.25E+2	9.28E+1	1.50E+2	7.15E-1	1.48E+2
450	1.17E+2	1.20E+2	9.24E-1	1.25E+2	9.84E+1	1.50E+2	7.54E-1	1.48E+2
455	1.17E+2	1.27E+2	9.32E-1	1.33E+2	9.97E+1	1.59E+2	7.66E-1	1.56E+2
460	1.20E+2	1.27E+2	9.63E-1	1.33E+2	1.03E+2	1.59E+2	7.97E-1	1.56E+2
465	1.19E+2	1.28E+2	9.70E-1	1.34E+2	1.03E+2	1.60E+2	8.09E-1	1.57E+2
470	1.18E+2	1.28E+2	9.72E-1	1.34E+2	1.03E+2	1.60E+2	8.17E-1	1.57E+2
475	1.21E+2	1.31E+2	9.89E-1	1.37E+2	1.06E+2	1.64E+2	8.39E-1	1.61E+2
480	1.21E+2	1.31E+2	9.89E-1	1.37E+2	1.07E+2	1.64E+2	8.44E-1	1.61E+2
485	1.14E+2	1.28E+2	9.15E-1	1.34E+2	1.01E+2	1.60E+2	7.86E-1	1.57E+2
490	1.17E+2	1.28E+2	9.09E-1	1.34E+2	1.03E+2	1.60E+2	7.83E-1	1.57E+2
495	1.18E+2	1.31E+2	8.82E-1	1.37E+2	1.04E+2	1.63E+2	7.62E-1	1.60E+2
500	1.15E+2	1.31E+2	8.10E-1	1.37E+2	1.00E+2	1.63E+2	7.00E-1	1.60E+2
505	1.16E+2	1.29E+2	7.46E-1	1.35E+2	9.96E+1	1.61E+2	6.42E-1	1.58E+2
510	1.15E+2	1.29E+2	6.50E-1	1.35E+2	9.59E+1	1.61E+2	5.50E-1	1.58E+2
515	1.08E+2	1.25E+2	5.60E-1	1.30E+2	8.84E+1	1.55E+2	4.68E-1	1.53E+2
520	1.10E+2	1.25E+2	5.53E-1	1.30E+2	9.03E+1	1.55E+2	4.65E-1	1.53E+2
525	1.12E+2	1.28E+2	5.47E-1	1.34E+2	9.21E+1	1.60E+2	4.61E-1	1.57E+2
530	1.14E+2	1.28E+2	5.36E-1	1.34E+2	9.38E+1	1.60E+2	4.52E-1	1.57E+2
535	1.13E+2	1.30E+2	5.08E-1	1.36E+2	9.26E+1	1.62E+2	4.26E-1	1.59E+2
540	1.11E+2	1.30E+2	4.66E-1	1.36E+2	8.96E+1	1.62E+2	3.88E-1	1.59E+2
545	1.12E+2	1.30E+2	4.34E-1	1.35E+2	8.87E+1	1.62E+2	3.58E-1	1.59E+2
550	1.11E+2	1.30E+2	3.96E-1	1.35E+2	8.65E+1	1.62E+2	3.21E-1	1.59E+2
555	1.09E+2	1.28E+2	3.63E-1	1.34E+2	8.37E+1	1.60E+2	2.92E-1	1.57E+2
560	1.08E+2	1.28E+2	3.39E-1	1.34E+2	8.15E+1	1.60E+2	2.71E-1	1.57E+2
565	1.07E+2	1.26E+2	3.10E-1	1.32E+2	7.95E+1	1.57E+2	2.46E-1	1.55E+2
570	1.06E+2	1.26E+2	2.81E-1	1.32E+2	7.67E+1	1.57E+2	2.17E-1	1.55E+2
575	1.05E+2	1.25E+2	2.41E-1	1.31E+2	7.26E+1	1.57E+2	1.79E-1	1.54E+2
580	1.06E+2	1.25E+2	1.96E-1	1.31E+2	6.68E+1	1.57E+2	1.36E-1	1.54E+2
585	1.02E+2	1.24E+2	1.52E-1	1.30E+2	5.80E+1	1.56E+2	9.69E-2	1.53E+2
590	9.81E+1	1.24E+2	1.11E-1	1.30E+2	4.73E+1	1.56E+2	6.27E-2	1.53E+2
595	9.70E+1	1.21E+2	8.32E-2	1.27E+2	3.81E+1	1.52E+2	4.09E-2	1.49E+2
600	9.40E+1	1.21E+2	5.79E-2	1.27E+2	2.74E+1	1.52E+2	2.41E-2	1.49E+2
605	9.33E+1	1.22E+2	5.01E-2	1.27E+2	2.43E+1	1.53E+2	1.92E-2	1.50E+2

File: MOCE2:[MOS.PRC]STN09\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 17:48 (GMT) 07 Apr 1993STATION: 09 - Mazatlan  
POSITION: 23°10.7 N 106°39.6 W

## SeaWiFS-weighted normalized water-leaving radiance:

Wavelength (nm)	412	443	490	510	555	670	765	865
Lwn' (uW/cm^2/sr)	1.18E+1	1.25E+1	1.35E+1	1.09E+1	5.05E+0	nil	nil	nil

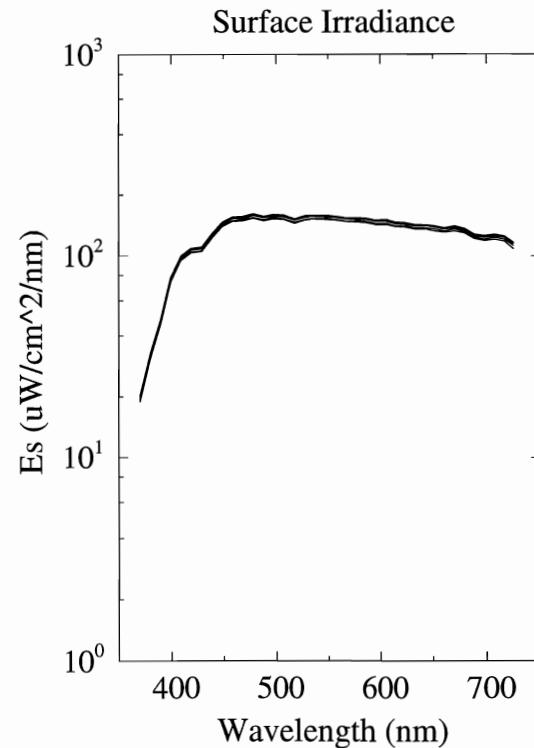
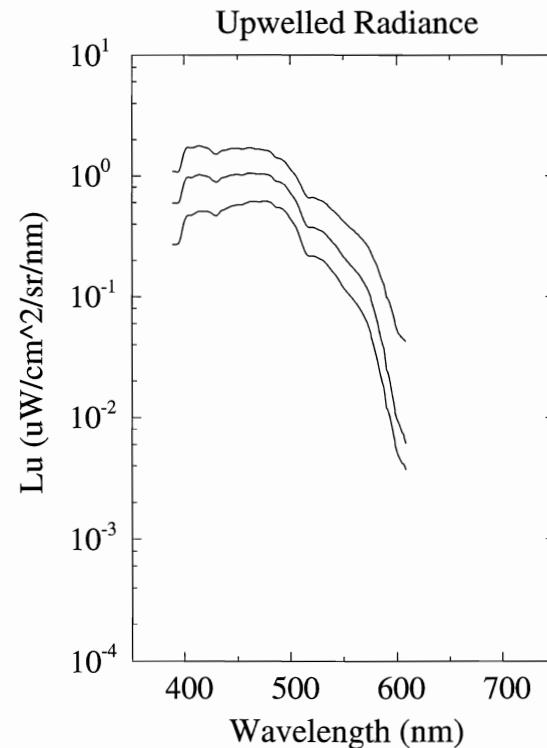
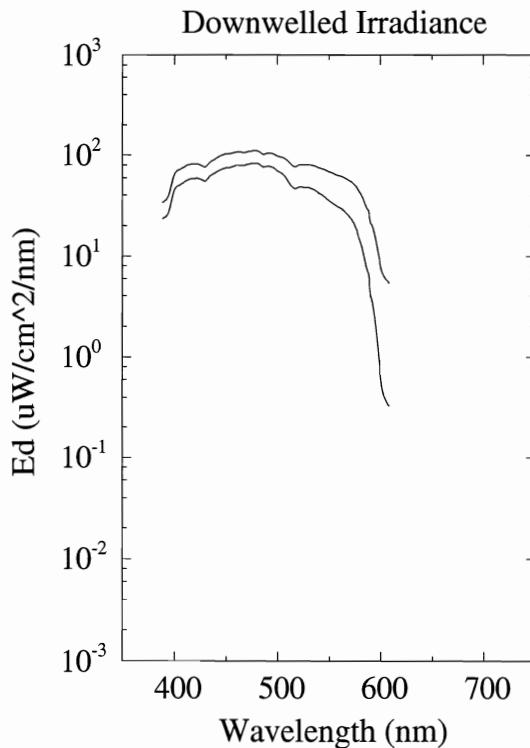
Depth (m)	0-5	1-6	0-10	1-11	5-10	6-11	Top KL_1	Top KL_2	Mid KL_1	Bot KL_2	Lw_1
R_Es	0.797	0.850	0.863	0.930	1.082	1.094					
Lambda	Ke_1	KL_1	Ke_2	KL_2	Ke_3	KL_3	Lw_1	Lw_2	Lw_3	Lw_4	Lwn
400	9.43E-2	8.91E-2	8.13E-2	9.81E-2	6.77E-2	1.08E-1	3.98E-1	4.02E-1	4.68E-1	4.32E-1	5.51E-1
405	9.16E-2	8.74E-2	7.79E-2	9.57E-2	6.37E-2	1.04E-1	4.32E-1	4.36E-1	5.08E-1	4.68E-1	5.93E-1
410	8.91E-2	8.56E-2	7.53E-2	9.29E-2	6.09E-2	1.01E-1	4.43E-1	4.46E-1	5.21E-1	4.79E-1	6.01E-1
415	8.73E-2	8.40E-2	7.27E-2	9.04E-2	5.73E-2	9.70E-2	4.60E-1	4.63E-1	5.42E-1	4.98E-1	6.20E-1
420	8.54E-2	8.19E-2	7.03E-2	8.77E-2	5.45E-2	9.38E-2	4.56E-1	4.58E-1	5.36E-1	4.93E-1	6.09E-1
425	8.42E-2	8.02E-2	6.81E-2	8.54E-2	5.13E-2	9.08E-2	4.45E-1	4.47E-1	5.23E-1	4.80E-1	5.89E-1
430	8.35E-2	7.88E-2	6.66E-2	8.32E-2	4.89E-2	8.79E-2	4.18E-1	4.20E-1	4.92E-1	4.52E-1	5.51E-1
435	8.20E-2	7.70E-2	6.47E-2	8.09E-2	4.66E-2	8.49E-2	4.58E-1	4.59E-1	5.38E-1	4.94E-1	5.98E-1
440	8.07E-2	7.52E-2	6.29E-2	7.84E-2	4.42E-2	8.17E-2	4.81E-1	4.83E-1	5.66E-1	5.19E-1	6.25E-1
445	7.95E-2	7.33E-2	6.12E-2	7.60E-2	4.21E-2	7.89E-2	5.14E-1	5.15E-1	6.05E-1	5.54E-1	6.64E-1
450	7.82E-2	7.19E-2	5.95E-2	7.41E-2	4.01E-2	7.64E-2	5.37E-1	5.38E-1	6.32E-1	5.79E-1	6.90E-1
455	7.64E-2	7.02E-2	5.75E-2	7.19E-2	3.78E-2	7.36E-2	5.41E-1	5.41E-1	6.36E-1	5.82E-1	6.91E-1
460	7.48E-2	6.88E-2	5.55E-2	6.99E-2	3.53E-2	7.10E-2	5.58E-1	5.58E-1	6.56E-1	6.00E-1	7.10E-1
465	7.30E-2	6.74E-2	5.34E-2	6.79E-2	3.29E-2	6.85E-2	5.61E-1	5.61E-1	6.60E-1	6.04E-1	7.11E-1
470	7.13E-2	6.58E-2	5.17E-2	6.60E-2	3.11E-2	6.61E-2	5.62E-1	5.62E-1	6.61E-1	6.04E-1	7.08E-1
475	6.96E-2	6.41E-2	5.00E-2	6.40E-2	2.94E-2	6.40E-2	5.70E-1	5.70E-1	6.71E-1	6.13E-1	7.17E-1
480	6.85E-2	6.28E-2	4.87E-2	6.26E-2	2.79E-2	6.23E-2	5.70E-1	5.70E-1	6.70E-1	6.12E-1	7.15E-1
485	6.83E-2	6.18E-2	4.82E-2	6.15E-2	2.72E-2	6.13E-2	5.27E-1	5.27E-1	6.20E-1	5.66E-1	6.59E-1
490	6.87E-2	6.11E-2	4.85E-2	6.09E-2	2.73E-2	6.07E-2	5.23E-1	5.23E-1	6.15E-1	5.62E-1	6.51E-1
495	6.94E-2	6.06E-2	4.91E-2	6.07E-2	2.80E-2	6.08E-2	5.07E-1	5.07E-1	5.97E-1	5.45E-1	6.30E-1
500	7.09E-2	6.06E-2	5.07E-2	6.12E-2	2.96E-2	6.19E-2	4.66E-1	4.66E-1	5.48E-1	5.01E-1	5.78E-1
505	7.37E-2	6.14E-2	5.39E-2	6.31E-2	3.32E-2	6.50E-2	4.29E-1	4.30E-1	5.05E-1	4.62E-1	5.33E-1
510	7.91E-2	6.45E-2	5.96E-2	6.75E-2	3.92E-2	7.07E-2	3.75E-1	3.76E-1	4.41E-1	4.04E-1	4.65E-1
515	8.27E-2	6.68E-2	6.35E-2	7.07E-2	4.33E-2	7.48E-2	3.24E-1	3.25E-1	3.81E-1	3.49E-1	4.00E-1
520	8.29E-2	6.61E-2	6.38E-2	7.06E-2	4.38E-2	7.53E-2	3.20E-1	3.21E-1	3.76E-1	3.45E-1	3.95E-1
525	8.24E-2	6.56E-2	6.36E-2	7.03E-2	4.39E-2	7.52E-2	3.16E-1	3.17E-1	3.72E-1	3.41E-1	3.91E-1
530	8.29E-2	6.56E-2	6.42E-2	7.07E-2	4.47E-2	7.61E-2	3.10E-1	3.11E-1	3.64E-1	3.35E-1	3.83E-1
535	8.42E-2	6.63E-2	6.57E-2	7.17E-2	4.64E-2	7.73E-2	2.93E-1	2.95E-1	3.45E-1	3.17E-1	3.63E-1
540	8.65E-2	6.74E-2	6.83E-2	7.34E-2	4.93E-2	7.96E-2	2.69E-1	2.71E-1	3.17E-1	2.91E-1	3.33E-1
545	8.97E-2	6.97E-2	7.17E-2	7.59E-2	5.28E-2	8.23E-2	2.52E-1	2.53E-1	2.96E-1	2.72E-1	3.11E-1
550	9.38E-2	7.25E-2	7.61E-2	7.91E-2	5.76E-2	8.59E-2	2.30E-1	2.31E-1	2.71E-1	2.49E-1	2.85E-1
555	9.67E-2	7.43E-2	7.93E-2	8.08E-2	6.12E-2	8.76E-2	2.11E-1	2.13E-1	2.48E-1	2.29E-1	2.61E-1
560	9.92E-2	7.57E-2	8.19E-2	8.24E-2	6.38E-2	8.95E-2	1.97E-1	1.99E-1	2.32E-1	2.14E-1	2.44E-1
565	1.02E-1	7.79E-2	8.56E-2	8.50E-2	6.80E-2	9.25E-2	1.81E-1	1.83E-1	2.13E-1	1.96E-1	2.25E-1
570	1.07E-1	8.19E-2	9.10E-2	8.90E-2	7.38E-2	9.65E-2	1.65E-1	1.66E-1	1.94E-1	1.78E-1	2.05E-1
575	1.17E-1	8.98E-2	1.01E-1	9.70E-2	8.43E-2	1.05E-1	1.42E-1	1.43E-1	1.67E-1	1.54E-1	1.77E-1
580	1.34E-1	1.04E-1	1.19E-1	1.11E-1	1.03E-1	1.18E-1	1.17E-1	1.18E-1	1.38E-1	1.27E-1	1.46E-1
585	1.55E-1	1.20E-1	1.41E-1	1.26E-1	1.26E-1	1.31E-1	9.26E-2	9.30E-2	1.09E-1	1.00E-1	1.14E-1
590	1.88E-1	1.45E-1	1.75E-1	1.45E-1	1.62E-1	1.45E-1	6.92E-2	6.92E-2	8.14E-2	7.44E-2	8.53E-2
595	2.28E-1	1.71E-1	2.16E-1	1.64E-1	2.03E-1	1.56E-1	5.31E-2	5.27E-2	6.24E-2	5.67E-2	6.55E-2
600	2.86E-1	2.04E-1	2.75E-1	1.81E-1	2.64E-1	1.58E-1	3.81E-2	3.73E-2	4.48E-2	4.01E-2	4.72E-2
605	3.08E-1	2.20E-1	3.01E-1	1.89E-1	2.94E-1	1.57E-1	3.35E-2	3.25E-2	3.94E-2	3.50E-2	4.14E-2

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
 STATION: 10 - Mouth of Gulf

Top = 1 m  
 Mid = 11 m  
 Bot = 21 m

POSITION: 23°04.4 N 107°27.9 W  
 DATE: 19:36 (GMT) 10 Apr 1993



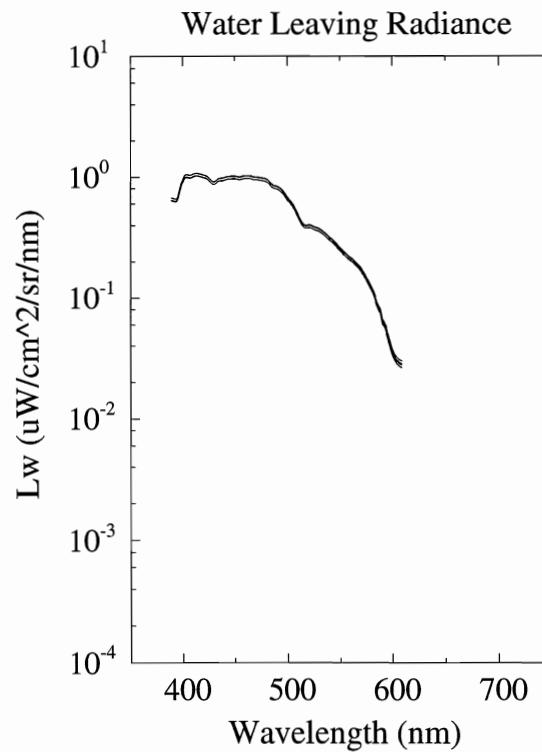
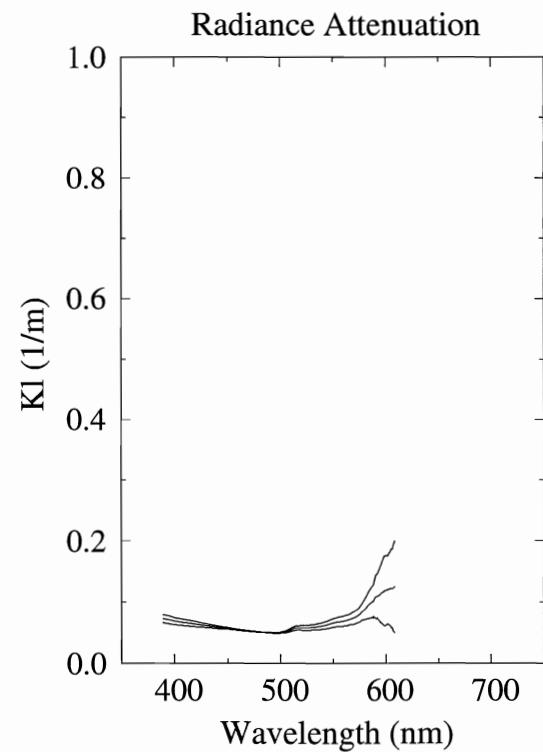
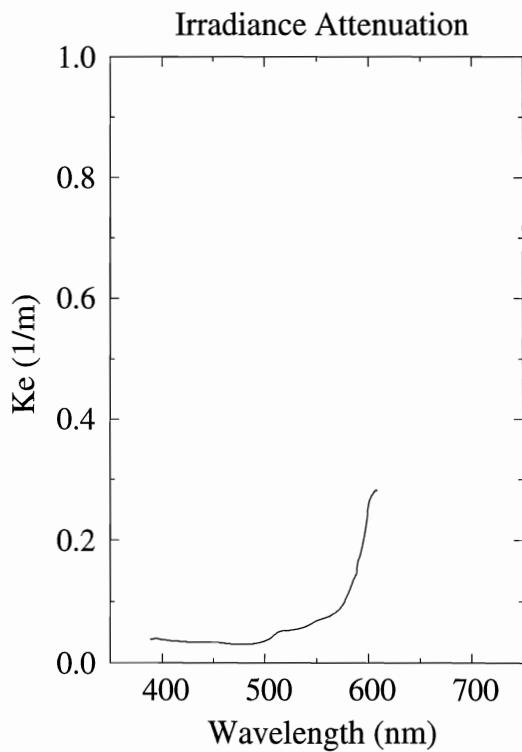
April 1995

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
 STATION: 10 - Mouth of Gulf

Top = 1 to 11 m  
 Mid = 1 to 21 m  
 Bot = 11 to 21 m

POSITION: 23°04.4 N 107°27.9 W  
 DATE: 19:36 (GMT) 10 Apr 1993



File: MOCE2:[MOS.PRC]STN10\_PRC\_CLIP.MLDAT;1

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 19:36 (GMT) 10 Apr 1993STATION: 10 - Mouth of Gulf  
POSITION: 23°04.4 N 107°27.9 W

## SeaWiFS-weighted water-leaving radiance:

Wavelength (nm):	412	443	490	510	555	670	765	865
Lw' (uW/cm^2/sr):	1.93E+1	1.83E+1	1.63E+1	1.14E+1	4.39E+0	nil	nil	nil

Depth (m)	Top		Mid		Bot						
	1.0	10.4	11.0	20.4	20.9						
Time (GMT)	18:02	20:29	19:09	20:19	19:56						
Lambda	Ed_1	Es_1	Lu_1	Es_1	Ed_2	Es_2	Lu_2	Es_2			
400		1.59E+0	7.39E+1	6.45E+1	7.44E+1	8.96E-1	7.82E+1	4.49E+1	7.60E+1	4.27E-1	7.73E+1
405		1.71E+0	9.46E+1	7.15E+1	9.56E+1	9.71E-1	1.00E+2	5.02E+1	9.75E+1	4.69E-1	9.91E+1
410		1.73E+0	9.46E+1	7.67E+1	9.56E+1	9.89E-1	1.00E+2	5.44E+1	9.75E+1	4.86E-1	9.91E+1
415		1.77E+0	1.03E+2	8.12E+1	1.04E+2	1.02E+0	1.09E+2	5.80E+1	1.06E+2	5.09E-1	1.08E+2
420		1.71E+0	1.03E+2	8.21E+1	1.04E+2	9.98E-1	1.09E+2	5.90E+1	1.06E+2	5.06E-1	1.08E+2
425		1.63E+0	1.05E+2	8.04E+1	1.06E+2	9.57E-1	1.11E+2	5.81E+1	1.08E+2	4.95E-1	1.10E+2
430		1.50E+0	1.05E+2	7.68E+1	1.06E+2	8.87E-1	1.11E+2	5.57E+1	1.08E+2	4.67E-1	1.10E+2
435		1.60E+0	1.22E+2	8.61E+1	1.23E+2	9.54E-1	1.28E+2	6.27E+1	1.25E+2	5.10E-1	1.27E+2
440		1.64E+0	1.22E+2	9.22E+1	1.23E+2	9.81E-1	1.28E+2	6.73E+1	1.25E+2	5.33E-1	1.27E+2
445		1.68E+0	1.39E+2	9.87E+1	1.41E+2	1.01E+0	1.47E+2	7.18E+1	1.44E+2	5.58E-1	1.46E+2
450		1.69E+0	1.39E+2	1.04E+2	1.41E+2	1.02E+0	1.47E+2	7.52E+1	1.44E+2	5.71E-1	1.46E+2
455		1.66E+0	1.47E+2	1.04E+2	1.49E+2	1.02E+0	1.55E+2	7.62E+1	1.52E+2	5.75E-1	1.54E+2
460		1.70E+0	1.47E+2	1.08E+2	1.49E+2	1.04E+0	1.55E+2	7.93E+1	1.52E+2	5.99E-1	1.54E+2
465		1.69E+0	1.49E+2	1.08E+2	1.50E+2	1.05E+0	1.57E+2	8.00E+1	1.53E+2	6.08E-1	1.55E+2
470		1.66E+0	1.49E+2	1.08E+2	1.50E+2	1.04E+0	1.57E+2	8.06E+1	1.53E+2	6.08E-1	1.55E+2
475		1.64E+0	1.53E+2	1.11E+2	1.54E+2	1.03E+0	1.61E+2	8.30E+1	1.57E+2	6.12E-1	1.60E+2
480		1.60E+0	1.53E+2	1.11E+2	1.54E+2	1.01E+0	1.61E+2	8.34E+1	1.57E+2	6.07E-1	1.60E+2
485		1.45E+0	1.49E+2	1.03E+2	1.51E+2	9.21E-1	1.57E+2	7.75E+1	1.54E+2	5.57E-1	1.56E+2
490		1.39E+0	1.49E+2	1.05E+2	1.51E+2	8.89E-1	1.57E+2	7.79E+1	1.54E+2	5.43E-1	1.56E+2
495		1.30E+0	1.52E+2	1.05E+2	1.54E+2	8.30E-1	1.60E+2	7.64E+1	1.57E+2	5.09E-1	1.59E+2
500		1.14E+0	1.52E+2	9.88E+1	1.54E+2	7.23E-1	1.60E+2	7.04E+1	1.57E+2	4.43E-1	1.59E+2
505		9.96E-1	1.51E+2	9.54E+1	1.52E+2	6.16E-1	1.58E+2	6.50E+1	1.55E+2	3.73E-1	1.57E+2
510		8.22E-1	1.51E+2	8.81E+1	1.52E+2	4.86E-1	1.58E+2	5.61E+1	1.55E+2	2.88E-1	1.57E+2
515		6.80E-1	1.45E+2	7.88E+1	1.47E+2	3.89E-1	1.52E+2	4.78E+1	1.50E+2	2.26E-1	1.52E+2
520		6.58E-1	1.45E+2	7.96E+1	1.47E+2	3.74E-1	1.52E+2	4.78E+1	1.50E+2	2.18E-1	1.52E+2
525		6.39E-1	1.50E+2	8.06E+1	1.51E+2	3.62E-1	1.57E+2	4.80E+1	1.54E+2	2.11E-1	1.56E+2
530		6.16E-1	1.50E+2	8.12E+1	1.51E+2	3.46E-1	1.57E+2	4.78E+1	1.54E+2	2.01E-1	1.56E+2
535		5.73E-1	1.52E+2	7.92E+1	1.53E+2	3.17E-1	1.59E+2	4.56E+1	1.56E+2	1.83E-1	1.58E+2
540		5.17E-1	1.52E+2	7.53E+1	1.53E+2	2.80E-1	1.59E+2	4.21E+1	1.56E+2	1.61E-1	1.58E+2
545		4.73E-1	1.51E+2	7.30E+1	1.53E+2	2.49E-1	1.59E+2	3.93E+1	1.56E+2	1.41E-1	1.58E+2
550		4.22E-1	1.51E+2	6.94E+1	1.53E+2	2.15E-1	1.59E+2	3.56E+1	1.56E+2	1.20E-1	1.58E+2
555		3.81E-1	1.49E+2	6.57E+1	1.51E+2	1.89E-1	1.57E+2	3.26E+1	1.54E+2	1.04E-1	1.56E+2
560		3.50E-1	1.49E+2	6.30E+1	1.51E+2	1.71E-1	1.57E+2	3.04E+1	1.54E+2	9.32E-2	1.56E+2
565		3.18E-1	1.47E+2	6.01E+1	1.49E+2	1.51E-1	1.55E+2	2.79E+1	1.52E+2	8.09E-2	1.54E+2
570		2.84E-1	1.47E+2	5.64E+1	1.49E+2	1.28E-1	1.55E+2	2.47E+1	1.52E+2	6.79E-2	1.54E+2
575		2.40E-1	1.46E+2	5.07E+1	1.48E+2	1.01E-1	1.54E+2	2.02E+1	1.51E+2	5.13E-2	1.53E+2
580		1.92E-1	1.46E+2	4.27E+1	1.48E+2	7.00E-2	1.54E+2	1.44E+1	1.51E+2	3.43E-2	1.53E+2
585		1.47E-1	1.46E+2	3.33E+1	1.48E+2	4.60E-2	1.54E+2	9.05E+0	1.51E+2	2.21E-2	1.53E+2
590		1.05E-1	1.46E+2	2.30E+1	1.48E+2	2.78E-2	1.54E+2	4.65E+0	1.51E+2	1.32E-2	1.53E+2
595		7.82E-2	1.42E+2	1.51E+1	1.45E+2	1.66E-2	1.50E+2	2.11E+0	1.47E+2	8.58E-3	1.49E+2
600		5.36E-2	1.42E+2	7.91E+0	1.45E+2	9.71E-3	1.50E+2	6.20E-1	1.47E+2	5.21E-3	1.49E+2
605		4.61E-2	1.43E+2	6.00E+0	1.45E+2	7.55E-3	1.50E+2	3.75E-1	1.48E+2	4.22E-3	1.50E+2

File: MOCE2:[MOS.PRC]STN10\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 19:36 (GMT) 10 Apr 1993STATION: 10 - Mouth of Gulf  
POSITION: 23°04.4 N 107°27.9 W

## SeaWiFS-weighted normalized water-leaving radiance:

Wavelength (nm):	412	443	490	510	555	670	765	865
Lwn' (uW/cm^2/sr):	2.43E+1	2.21E+1	1.91E+1	1.32E+1	5.10E+0	nil	nil	nil

Depth (m)	1-11	1-21	10-20	11-21	Top Kl_1	Top Kl_2	Mid Kl_1	Bot Kl_2	Lw_1		
R_Es	0.948	0.954	0.981	1.006							
Lambda	Ke_1	Kl_1	Ke_2	Kl_2	Ke_3	Kl_3	Lw_1	Lw_2	Lw_3	Lw_4	Lwn
400	6.31E-2	6.86E-2	3.80E-2	7.43E-2	9.23E-1	9.28E-1	9.73E-1	9.73E-1	1.19E+0		
405	6.22E-2	6.75E-2	3.71E-2	7.28E-2	9.91E-1	9.96E-1	1.04E+0	1.04E+0	1.27E+0		
410	6.11E-2	6.62E-2	3.60E-2	7.13E-2	9.97E-1	1.00E+0	1.05E+0	1.05E+0	1.26E+0		
415	6.02E-2	6.50E-2	3.55E-2	6.97E-2	1.02E+0	1.02E+0	1.07E+0	1.07E+0	1.28E+0		
420	5.94E-2	6.37E-2	3.48E-2	6.81E-2	9.88E-1	9.92E-1	1.04E+0	1.04E+0	1.23E+0		
425	5.89E-2	6.24E-2	3.41E-2	6.60E-2	9.42E-1	9.45E-1	9.93E-1	9.91E-1	1.16E+0		
430	5.82E-2	6.12E-2	3.38E-2	6.43E-2	8.66E-1	8.69E-1	9.13E-1	9.11E-1	1.06E+0		
435	5.73E-2	6.00E-2	3.34E-2	6.27E-2	9.23E-1	9.26E-1	9.73E-1	9.70E-1	1.13E+0		
440	5.65E-2	5.88E-2	3.32E-2	6.11E-2	9.40E-1	9.42E-1	9.91E-1	9.87E-1	1.14E+0		
445	5.58E-2	5.78E-2	3.35E-2	5.97E-2	9.65E-1	9.67E-1	1.02E+0	1.01E+0	1.16E+0		
450	5.54E-2	5.69E-2	3.38E-2	5.84E-2	9.70E-1	9.71E-1	1.02E+0	1.02E+0	1.16E+0		
455	5.47E-2	5.58E-2	3.32E-2	5.70E-2	9.55E-1	9.56E-1	1.01E+0	1.00E+0	1.14E+0		
460	5.39E-2	5.47E-2	3.23E-2	5.56E-2	9.73E-1	9.74E-1	1.03E+0	1.02E+0	1.16E+0		
465	5.30E-2	5.38E-2	3.14E-2	5.46E-2	9.68E-1	9.69E-1	1.02E+0	1.02E+0	1.15E+0		
470	5.22E-2	5.28E-2	3.07E-2	5.35E-2	9.50E-1	9.50E-1	1.00E+0	9.96E-1	1.12E+0		
475	5.13E-2	5.19E-2	3.04E-2	5.24E-2	9.37E-1	9.38E-1	9.88E-1	9.82E-1	1.10E+0		
480	5.08E-2	5.10E-2	3.03E-2	5.12E-2	9.13E-1	9.14E-1	9.63E-1	9.57E-1	1.07E+0		
485	5.04E-2	5.03E-2	3.06E-2	5.02E-2	8.26E-1	8.26E-1	8.71E-1	8.65E-1	9.67E-1		
490	5.02E-2	4.97E-2	3.15E-2	4.93E-2	7.95E-1	7.94E-1	8.38E-1	8.32E-1	9.27E-1		
495	5.03E-2	4.96E-2	3.31E-2	4.88E-2	7.43E-1	7.43E-1	7.84E-1	7.78E-1	8.65E-1		
500	5.11E-2	5.01E-2	3.56E-2	4.90E-2	6.54E-1	6.53E-1	6.89E-1	6.84E-1	7.60E-1		
505	5.35E-2	5.17E-2	4.01E-2	5.00E-2	5.71E-1	5.70E-1	6.02E-1	5.97E-1	6.64E-1		
510	5.79E-2	5.52E-2	4.67E-2	5.24E-2	4.73E-1	4.72E-1	4.99E-1	4.94E-1	5.49E-1		
515	6.12E-2	5.78E-2	5.16E-2	5.43E-2	3.93E-1	3.92E-1	4.14E-1	4.10E-1	4.55E-1		
520	6.19E-2	5.81E-2	5.26E-2	5.42E-2	3.81E-1	3.79E-1	4.01E-1	3.97E-1	4.41E-1		
525	6.22E-2	5.82E-2	5.35E-2	5.41E-2	3.69E-1	3.68E-1	3.90E-1	3.86E-1	4.28E-1		
530	6.31E-2	5.88E-2	5.48E-2	5.44E-2	3.56E-1	3.55E-1	3.76E-1	3.72E-1	4.13E-1		
535	6.44E-2	5.97E-2	5.68E-2	5.49E-2	3.32E-1	3.30E-1	3.50E-1	3.46E-1	3.85E-1		
540	6.65E-2	6.11E-2	5.97E-2	5.57E-2	3.00E-1	2.99E-1	3.16E-1	3.13E-1	3.48E-1		
545	6.94E-2	6.31E-2	6.35E-2	5.68E-2	2.75E-1	2.74E-1	2.90E-1	2.87E-1	3.19E-1		
550	7.27E-2	6.58E-2	6.82E-2	5.88E-2	2.47E-1	2.45E-1	2.60E-1	2.57E-1	2.86E-1		
555	7.54E-2	6.76E-2	7.16E-2	5.98E-2	2.23E-1	2.21E-1	2.35E-1	2.32E-1	2.59E-1		
560	7.71E-2	6.90E-2	7.43E-2	6.08E-2	2.06E-1	2.04E-1	2.17E-1	2.14E-1	2.39E-1		
565	7.99E-2	7.12E-2	7.84E-2	6.25E-2	1.87E-1	1.85E-1	1.97E-1	1.94E-1	2.18E-1		
570	8.48E-2	7.43E-2	8.40E-2	6.38E-2	1.68E-1	1.66E-1	1.77E-1	1.74E-1	1.96E-1		
575	9.24E-2	8.01E-2	9.39E-2	6.77E-2	1.43E-1	1.41E-1	1.51E-1	1.48E-1	1.67E-1		
580	1.06E-1	8.89E-2	1.11E-1	7.14E-2	1.16E-1	1.14E-1	1.22E-1	1.19E-1	1.35E-1		
585	1.22E-1	9.77E-2	1.32E-1	7.35E-2	9.01E-2	8.80E-2	9.50E-2	9.22E-2	1.04E-1		
590	1.40E-1	1.07E-1	1.62E-1	7.41E-2	6.59E-2	6.38E-2	6.95E-2	6.69E-2	7.61E-2		
595	1.61E-1	1.14E-1	1.99E-1	6.63E-2	4.99E-2	4.76E-2	5.26E-2	4.99E-2	5.77E-2		
600	1.76E-1	1.20E-1	2.57E-1	6.23E-2	3.48E-2	3.28E-2	3.66E-2	3.44E-2	4.03E-2		
605	1.87E-1	1.23E-1	2.78E-1	5.83E-2	3.02E-2	2.83E-2	3.19E-2	2.97E-2	3.50E-2		

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

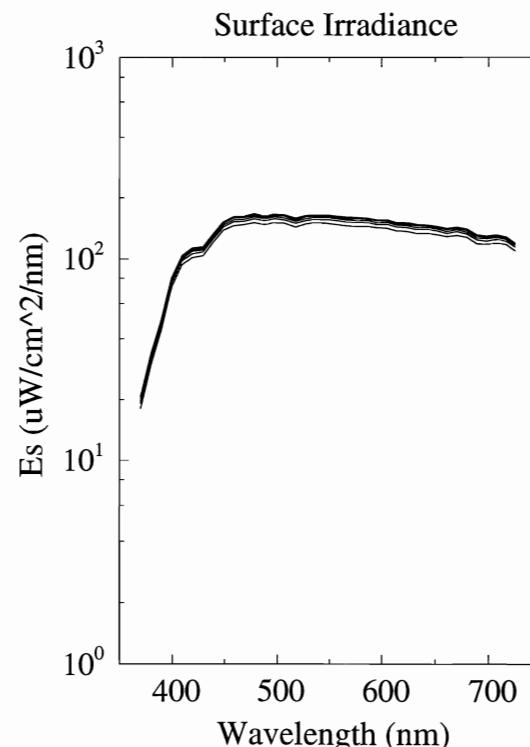
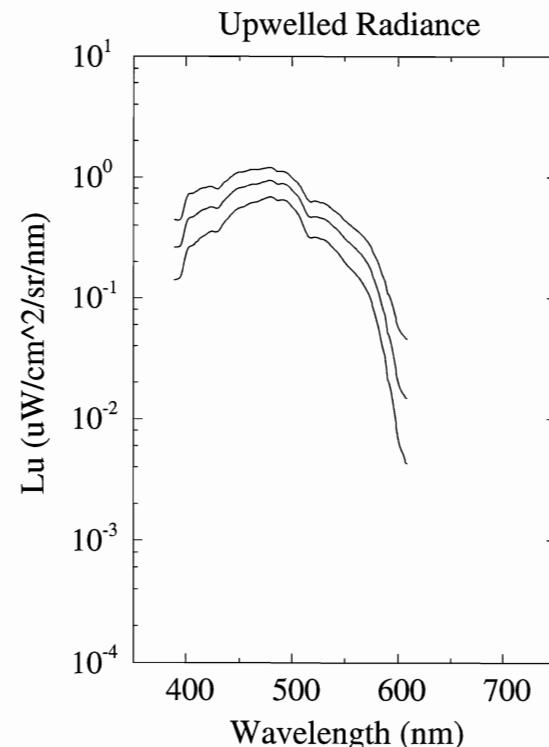
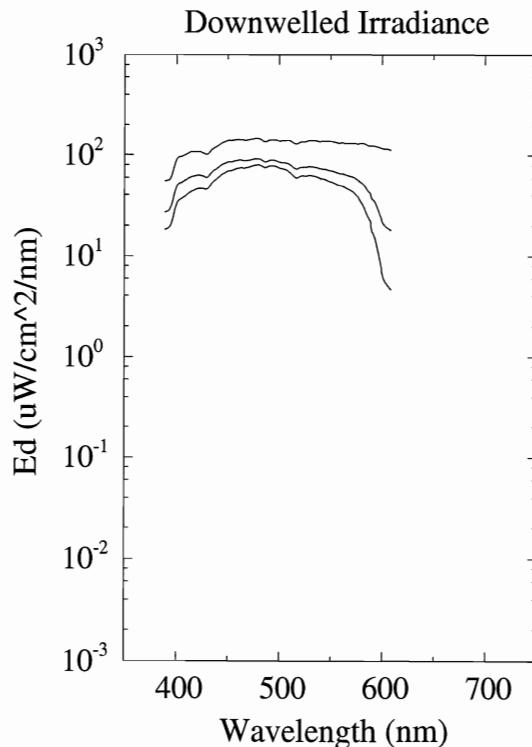
CRUISE: MOCE-2 SHIP: El Puma

STATION: 11 - Punta Marquez

Top = 1 m  
 Mid = 6 m  
 Bot = 11 m

POSITION: 23°44.3 N 111°10.7 W

DATE: 18:30 (GMT) 11 Apr 1993



April 1995

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

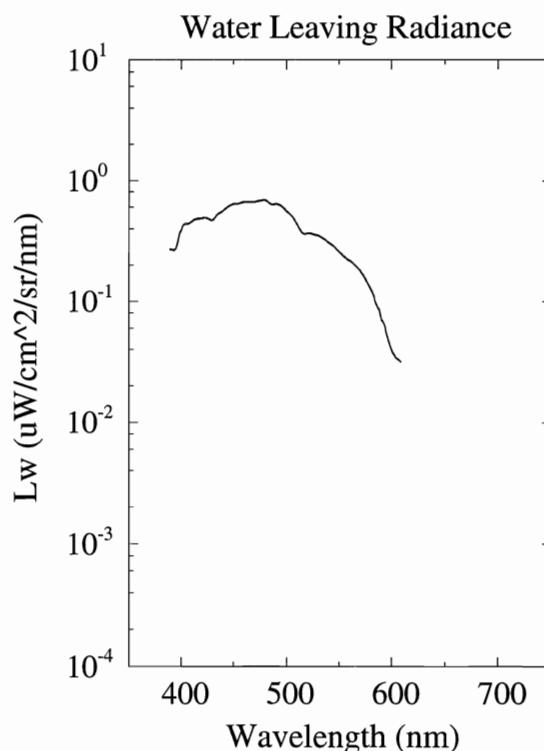
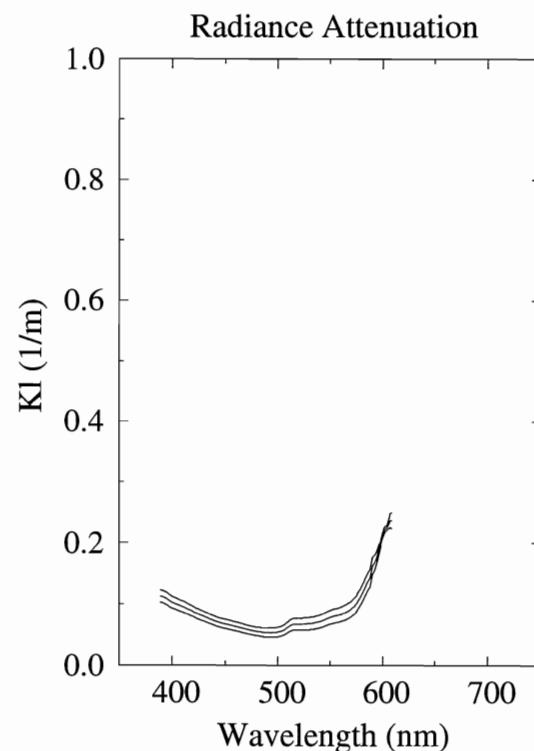
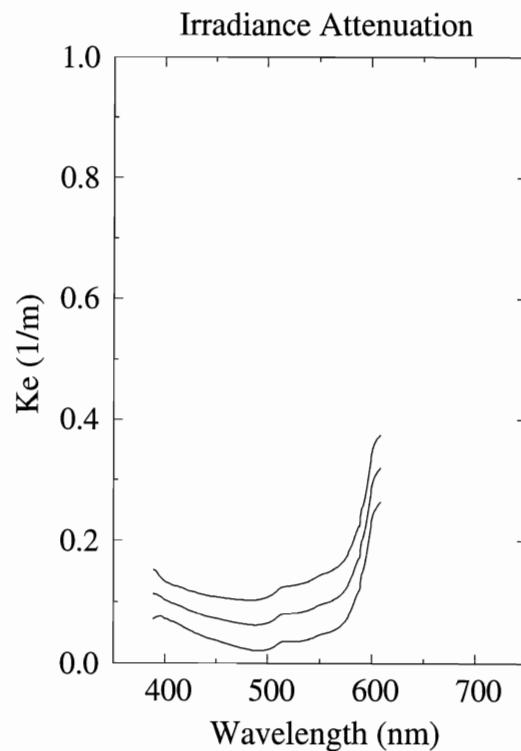
CRUISE: MOCE-2 SHIP: El Puma

STATION: 11 - Punta Marquez

Top = 1 to 6 m  
 Mid = 1 to 11 m  
 Bot = 6 to 11 m

POSITION: 23°44.3 N 111°10.7 W

DATE: 18:30 (GMT) 11 Apr 1993



File: MOCE2:[MOS.PRC]STN11\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 18:30 (GMT) 11 Apr 1993STATION: 11 - Punta Marquez  
POSITION: 23°44.3 N 111°10.7 W

## SeaWiFS-weighted water-leaving radiance:

Wavelength (nm)	412	443	490	510	555	670	765	865
Lw' (uW/cm^2/sr)	9.11E+0	1.14E+1	1.32E+1	1.03E+1	4.54E+0	nil	nil	nil

Depth (m)	Top			Mid			Bot			Bot		
	0.3	1.1	5.4	6.1	10.4	11.0	17:39	19:21	18:19	18:59	18:04	18:37
Lambda	Ed_1	Es_1	Lu_1	Es_1	Ed_2	Es_2	Lu_2	Es_2	Ed_3	Es_3	Lu_3	Es_3
400	8.94E+1	7.23E+1	6.68E-1	8.07E+1	4.83E+1	7.76E+1	4.18E-1	8.02E+1	3.28E+1	7.58E+1	2.38E-1	7.93E+1
405	9.68E+1	9.31E+1	7.31E-1	1.03E+2	5.31E+1	9.97E+1	4.64E-1	1.03E+2	3.66E+1	9.73E+1	2.68E-1	1.02E+2
410	1.03E+2	9.31E+1	7.60E-1	1.03E+2	5.73E+1	9.97E+1	4.91E-1	1.03E+2	4.02E+1	9.73E+1	2.90E-1	1.02E+2
415	1.08E+2	1.01E+2	8.08E-1	1.12E+2	6.10E+1	1.09E+2	5.31E-1	1.12E+2	4.36E+1	1.06E+2	3.20E-1	1.11E+2
420	1.09E+2	1.01E+2	8.23E-1	1.12E+2	6.26E+1	1.09E+2	5.52E-1	1.12E+2	4.59E+1	1.06E+2	3.40E-1	1.11E+2
425	1.06E+2	1.03E+2	8.26E-1	1.14E+2	6.22E+1	1.10E+2	5.64E-1	1.14E+2	4.65E+1	1.08E+2	3.55E-1	1.12E+2
430	1.02E+2	1.03E+2	7.99E-1	1.14E+2	6.01E+1	1.10E+2	5.55E-1	1.14E+2	4.60E+1	1.08E+2	3.56E-1	1.12E+2
435	1.14E+2	1.20E+2	8.95E-1	1.33E+2	6.82E+1	1.28E+2	6.32E-1	1.32E+2	5.30E+1	1.25E+2	4.13E-1	1.31E+2
440	1.22E+2	1.20E+2	9.62E-1	1.33E+2	7.38E+1	1.28E+2	6.91E-1	1.32E+2	5.85E+1	1.25E+2	4.60E-1	1.31E+2
445	1.32E+2	1.38E+2	1.05E+0	1.52E+2	8.04E+1	1.47E+2	7.62E-1	1.51E+2	6.44E+1	1.44E+2	5.15E-1	1.50E+2
450	1.39E+2	1.38E+2	1.10E+0	1.52E+2	8.53E+1	1.47E+2	8.11E-1	1.51E+2	6.91E+1	1.44E+2	5.54E-1	1.50E+2
455	1.40E+2	1.46E+2	1.11E+0	1.61E+2	8.63E+1	1.56E+2	8.28E-1	1.60E+2	7.09E+1	1.52E+2	5.71E-1	1.58E+2
460	1.43E+2	1.46E+2	1.15E+0	1.61E+2	8.88E+1	1.56E+2	8.63E-1	1.60E+2	7.39E+1	1.52E+2	6.02E-1	1.58E+2
465	1.42E+2	1.47E+2	1.16E+0	1.62E+2	8.86E+1	1.57E+2	8.78E-1	1.62E+2	7.46E+1	1.53E+2	6.19E-1	1.60E+2
470	1.42E+2	1.47E+2	1.16E+0	1.62E+2	8.87E+1	1.57E+2	8.92E-1	1.62E+2	7.56E+1	1.53E+2	6.36E-1	1.60E+2
475	1.46E+2	1.51E+2	1.19E+0	1.67E+2	9.14E+1	1.61E+2	9.23E-1	1.66E+2	7.88E+1	1.58E+2	6.67E-1	1.64E+2
480	1.46E+2	1.51E+2	1.20E+0	1.67E+2	9.22E+1	1.61E+2	9.38E-1	1.66E+2	8.03E+1	1.58E+2	6.83E-1	1.64E+2
485	1.37E+2	1.48E+2	1.12E+0	1.63E+2	8.64E+1	1.57E+2	8.83E-1	1.62E+2	7.59E+1	1.54E+2	6.45E-1	1.60E+2
490	1.41E+2	1.48E+2	1.12E+0	1.63E+2	8.86E+1	1.57E+2	8.86E-1	1.62E+2	7.81E+1	1.54E+2	6.50E-1	1.60E+2
495	1.43E+2	1.51E+2	1.09E+0	1.66E+2	8.93E+1	1.61E+2	8.60E-1	1.65E+2	7.85E+1	1.57E+2	6.30E-1	1.64E+2
500	1.39E+2	1.51E+2	9.88E-1	1.66E+2	8.57E+1	1.61E+2	7.79E-1	1.65E+2	7.49E+1	1.57E+2	5.67E-1	1.64E+2
505	1.41E+2	1.50E+2	8.93E-1	1.64E+2	8.47E+1	1.59E+2	6.95E-1	1.64E+2	7.28E+1	1.56E+2	4.98E-1	1.62E+2
510	1.40E+2	1.50E+2	7.60E-1	1.64E+2	8.09E+1	1.59E+2	5.78E-1	1.64E+2	6.76E+1	1.56E+2	4.01E-1	1.62E+2
515	1.32E+2	1.44E+2	6.43E-1	1.58E+2	7.42E+1	1.53E+2	4.80E-1	1.58E+2	6.07E+1	1.50E+2	3.25E-1	1.56E+2
520	1.34E+2	1.44E+2	6.32E-1	1.58E+2	7.53E+1	1.53E+2	4.71E-1	1.58E+2	6.16E+1	1.50E+2	3.18E-1	1.56E+2
525	1.37E+2	1.49E+2	6.22E-1	1.63E+2	7.64E+1	1.58E+2	4.64E-1	1.63E+2	6.25E+1	1.55E+2	3.13E-1	1.61E+2
530	1.41E+2	1.49E+2	6.08E-1	1.63E+2	7.76E+1	1.58E+2	4.52E-1	1.63E+2	6.33E+1	1.55E+2	3.04E-1	1.61E+2
535	1.40E+2	1.50E+2	5.74E-1	1.65E+2	7.63E+1	1.60E+2	4.24E-1	1.65E+2	6.19E+1	1.57E+2	2.83E-1	1.63E+2
540	1.37E+2	1.50E+2	5.25E-1	1.65E+2	7.37E+1	1.60E+2	3.85E-1	1.65E+2	5.91E+1	1.57E+2	2.54E-1	1.63E+2
545	1.38E+2	1.50E+2	4.87E-1	1.65E+2	7.28E+1	1.60E+2	3.52E-1	1.64E+2	5.76E+1	1.56E+2	2.28E-1	1.62E+2
550	1.38E+2	1.50E+2	4.40E-1	1.65E+2	7.07E+1	1.60E+2	3.13E-1	1.64E+2	5.48E+1	1.56E+2	1.99E-1	1.62E+2
555	1.35E+2	1.48E+2	4.01E-1	1.63E+2	6.82E+1	1.58E+2	2.82E-1	1.62E+2	5.22E+1	1.54E+2	1.77E-1	1.60E+2
560	1.34E+2	1.48E+2	3.72E-1	1.63E+2	6.62E+1	1.58E+2	2.59E-1	1.62E+2	5.01E+1	1.54E+2	1.60E-1	1.60E+2
565	1.33E+2	1.46E+2	3.40E-1	1.61E+2	6.44E+1	1.56E+2	2.33E-1	1.60E+2	4.78E+1	1.52E+2	1.41E-1	1.58E+2
570	1.32E+2	1.46E+2	3.06E-1	1.61E+2	6.21E+1	1.56E+2	2.05E-1	1.60E+2	4.49E+1	1.52E+2	1.21E-1	1.58E+2
575	1.32E+2	1.45E+2	2.60E-1	1.60E+2	5.85E+1	1.55E+2	1.66E-1	1.59E+2	4.03E+1	1.51E+2	9.38E-2	1.57E+2
580	1.32E+2	1.45E+2	2.08E-1	1.60E+2	5.36E+1	1.55E+2	1.24E-1	1.59E+2	3.39E+1	1.51E+2	6.48E-2	1.57E+2
585	1.29E+2	1.45E+2	1.60E-1	1.59E+2	4.65E+1	1.54E+2	8.75E-2	1.59E+2	2.65E+1	1.51E+2	4.18E-2	1.57E+2
590	1.25E+2	1.45E+2	1.16E-1	1.59E+2	3.80E+1	1.54E+2	5.62E-2	1.59E+2	1.86E+1	1.51E+2	2.39E-2	1.57E+2
595	1.22E+2	1.42E+2	8.49E-2	1.56E+2	3.05E+1	1.51E+2	3.56E-2	1.55E+2	1.22E+1	1.48E+2	1.38E-2	1.54E+2
600	1.17E+2	1.42E+2	5.78E-2	1.56E+2	2.18E+1	1.51E+2	2.03E-2	1.55E+2	6.59E+0	1.48E+2	6.91E-3	1.54E+2

File: MOCE2:[MOS.PRC]STN11\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 18:30 (GMT) 11 Apr 1993STATION: 11 - Punta Marquez  
POSITION: 23°44.3 N 111°10.7 W

## SeaWiFS-weighted normalized water-leaving radiance:

Wavelength (nm):	412	443	490	510	555	670	765	865
Lwn' (uW/cm^2/sr):	1.18E+1	1.41E+1	1.58E+1	1.23E+1	5.40E+0	nil	nil	nil

Depth (m)	0-5	1-6	0-10	1-11	5-10	6-11	Top KL_1	Top KL_2	Mid KL_1	Bot KL_2	Lw_1
R_Es	0.938	1.003	0.959	1.015	1.022	1.011					
Lambda	Ke_1	KL_1	Ke_2	KL_2	Ke_3	KL_3	Lw_1	Lw_2	Lw_3	Lw_4	Lwn
400	1.34E-1	9.28E-2	1.04E-1	1.02E-1	7.30E-2	1.12E-1	4.01E-1	4.05E-1	4.00E-1	3.99E-1	5.31E-1
405	1.30E-1	9.00E-2	1.00E-1	9.93E-2	6.99E-2	1.09E-1	4.38E-1	4.42E-1	4.36E-1	4.35E-1	5.75E-1
410	1.27E-1	8.65E-2	9.69E-2	9.56E-2	6.66E-2	1.05E-1	4.53E-1	4.58E-1	4.52E-1	4.51E-1	5.90E-1
415	1.25E-1	8.30E-2	9.38E-2	9.16E-2	6.27E-2	1.00E-1	4.80E-1	4.84E-1	4.78E-1	4.77E-1	6.20E-1
420	1.21E-1	7.91E-2	8.97E-2	8.74E-2	5.76E-2	9.60E-2	4.87E-1	4.91E-1	4.85E-1	4.84E-1	6.23E-1
425	1.18E-1	7.52E-2	8.60E-2	8.34E-2	5.35E-2	9.18E-2	4.86E-1	4.91E-1	4.85E-1	4.83E-1	6.18E-1
430	1.16E-1	7.19E-2	8.28E-2	7.98E-2	4.89E-2	8.79E-2	4.69E-1	4.73E-1	4.67E-1	4.66E-1	5.92E-1
435	1.13E-1	6.85E-2	7.99E-2	7.61E-2	4.57E-2	8.40E-2	5.23E-1	5.27E-1	5.21E-1	5.19E-1	6.56E-1
440	1.12E-1	6.53E-2	7.71E-2	7.28E-2	4.20E-2	8.05E-2	5.60E-1	5.65E-1	5.59E-1	5.57E-1	6.99E-1
445	1.10E-1	6.24E-2	7.51E-2	6.98E-2	3.98E-2	7.74E-2	6.07E-1	6.12E-1	6.05E-1	6.03E-1	7.53E-1
450	1.09E-1	6.03E-2	7.35E-2	6.77E-2	3.74E-2	7.52E-2	6.38E-1	6.43E-1	6.36E-1	6.33E-1	7.87E-1
455	1.08E-1	5.82E-2	7.15E-2	6.55E-2	3.48E-2	7.30E-2	6.43E-1	6.48E-1	6.41E-1	6.39E-1	7.90E-1
460	1.07E-1	5.61E-2	6.96E-2	6.34E-2	3.22E-2	7.09E-2	6.62E-1	6.67E-1	6.60E-1	6.58E-1	8.10E-1
465	1.06E-1	5.42E-2	6.80E-2	6.13E-2	2.98E-2	6.86E-2	6.66E-1	6.71E-1	6.64E-1	6.61E-1	8.11E-1
470	1.05E-1	5.21E-2	6.64E-2	5.90E-2	2.75E-2	6.61E-2	6.67E-1	6.72E-1	6.65E-1	6.62E-1	8.08E-1
475	1.04E-1	4.98E-2	6.49E-2	5.68E-2	2.50E-2	6.39E-2	6.82E-1	6.87E-1	6.79E-1	6.77E-1	8.24E-1
480	1.03E-1	4.84E-2	6.37E-2	5.52E-2	2.32E-2	6.21E-2	6.87E-1	6.92E-1	6.84E-1	6.81E-1	8.28E-1
485	1.04E-1	4.70E-2	6.29E-2	5.41E-2	2.15E-2	6.13E-2	6.41E-1	6.46E-1	6.39E-1	6.36E-1	7.71E-1
490	1.04E-1	4.61E-2	6.28E-2	5.33E-2	2.08E-2	6.07E-2	6.40E-1	6.45E-1	6.37E-1	6.35E-1	7.66E-1
495	1.06E-1	4.59E-2	6.38E-2	5.33E-2	2.12E-2	6.08E-2	6.20E-1	6.25E-1	6.18E-1	6.15E-1	7.41E-1
500	1.08E-1	4.68E-2	6.57E-2	5.44E-2	2.24E-2	6.22E-2	5.64E-1	5.69E-1	5.62E-1	5.60E-1	6.74E-1
505	1.13E-1	4.91E-2	6.98E-2	5.72E-2	2.59E-2	6.56E-2	5.11E-1	5.15E-1	5.09E-1	5.08E-1	6.10E-1
510	1.20E-1	5.40E-2	7.62E-2	6.29E-2	3.15E-2	7.20E-2	4.37E-1	4.42E-1	4.36E-1	4.35E-1	5.21E-1
515	1.25E-1	5.76E-2	8.07E-2	6.72E-2	3.57E-2	7.69E-2	3.72E-1	3.75E-1	3.70E-1	3.70E-1	4.41E-1
520	1.26E-1	5.79E-2	8.14E-2	6.75E-2	3.57E-2	7.72E-2	3.65E-1	3.69E-1	3.64E-1	3.63E-1	4.34E-1
525	1.28E-1	5.79E-2	8.21E-2	6.77E-2	3.57E-2	7.76E-2	3.59E-1	3.63E-1	3.58E-1	3.58E-1	4.27E-1
530	1.29E-1	5.84E-2	8.31E-2	6.83E-2	3.61E-2	7.84E-2	3.52E-1	3.55E-1	3.50E-1	3.50E-1	4.19E-1
535	1.32E-1	5.95E-2	8.49E-2	6.96E-2	3.73E-2	7.98E-2	3.32E-1	3.36E-1	3.31E-1	3.31E-1	3.96E-1
540	1.35E-1	6.12E-2	8.75E-2	7.16E-2	3.96E-2	8.21E-2	3.05E-1	3.08E-1	3.04E-1	3.03E-1	3.62E-1
545	1.39E-1	6.40E-2	9.10E-2	7.47E-2	4.24E-2	8.56E-2	2.83E-1	2.87E-1	2.82E-1	2.82E-1	3.37E-1
550	1.44E-1	6.73E-2	9.54E-2	7.83E-2	4.64E-2	8.96E-2	2.57E-1	2.60E-1	2.56E-1	2.56E-1	3.06E-1
555	1.47E-1	6.96E-2	9.86E-2	8.11E-2	4.91E-2	9.28E-2	2.35E-1	2.38E-1	2.34E-1	2.34E-1	2.79E-1
560	1.50E-1	7.16E-2	1.01E-1	8.33E-2	5.12E-2	9.52E-2	2.18E-1	2.21E-1	2.17E-1	2.18E-1	2.60E-1
565	1.55E-1	7.45E-2	1.05E-1	8.67E-2	5.50E-2	9.91E-2	2.00E-1	2.03E-1	1.99E-1	2.00E-1	2.39E-1
570	1.61E-1	7.95E-2	1.11E-1	9.19E-2	6.03E-2	1.05E-1	1.81E-1	1.83E-1	1.80E-1	1.81E-1	2.16E-1
575	1.72E-1	8.80E-2	1.21E-1	1.01E-1	6.99E-2	1.14E-1	1.55E-1	1.57E-1	1.55E-1	1.55E-1	1.85E-1
580	1.90E-1	1.02E-1	1.39E-1	1.16E-1	8.68E-2	1.30E-1	1.26E-1	1.28E-1	1.26E-1	1.26E-1	1.50E-1
585	2.12E-1	1.20E-1	1.61E-1	1.34E-1	1.08E-1	1.48E-1	9.87E-2	1.00E-1	9.84E-2	9.87E-2	1.17E-1
590	2.46E-1	1.44E-1	1.93E-1	1.58E-1	1.39E-1	1.73E-1	7.34E-2	7.46E-2	7.32E-2	7.34E-2	8.71E-2
595	2.86E-1	1.73E-1	2.33E-1	1.82E-1	1.79E-1	1.91E-1	5.55E-2	5.60E-2	5.53E-2	5.52E-2	6.59E-2
600	3.44E-1	2.08E-1	2.90E-1	2.13E-1	2.35E-1	2.17E-1	3.93E-2	3.94E-2	3.91E-2	3.89E-2	4.67E-2

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

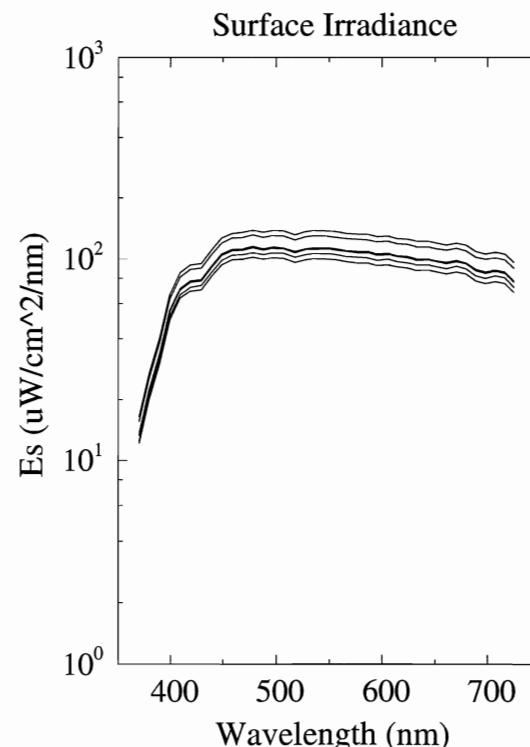
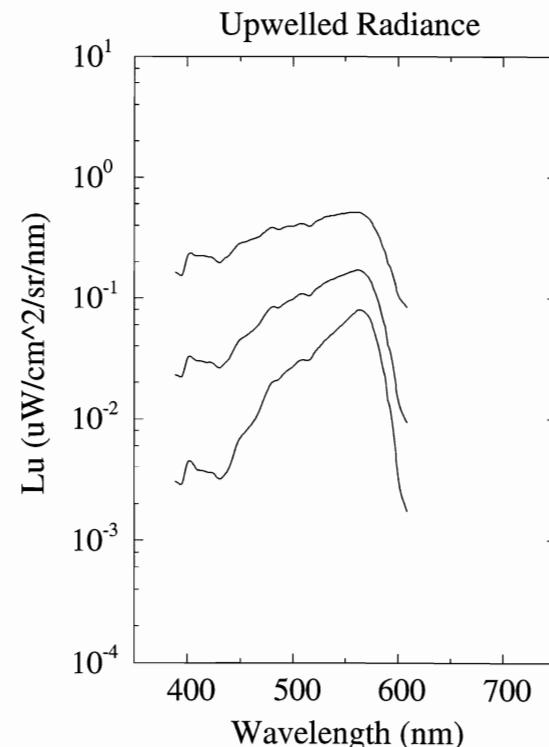
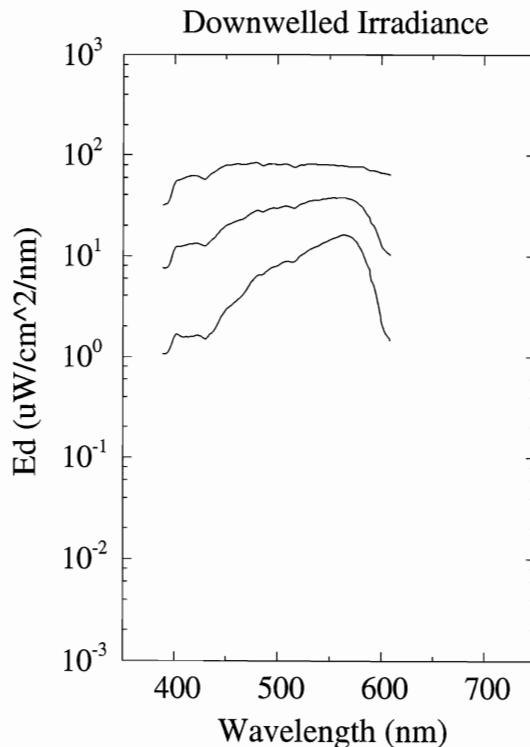
CRUISE: MOCE-2 SHIP: El Puma

STATION: 12 - Punta Abreojos

Top = 1 m  
 Mid = 6 m  
 Bot = 11 m

POSITION: 26°30.0 N 114°00.1 W

DATE: 18:59 (GMT) 12 Apr 1993



## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

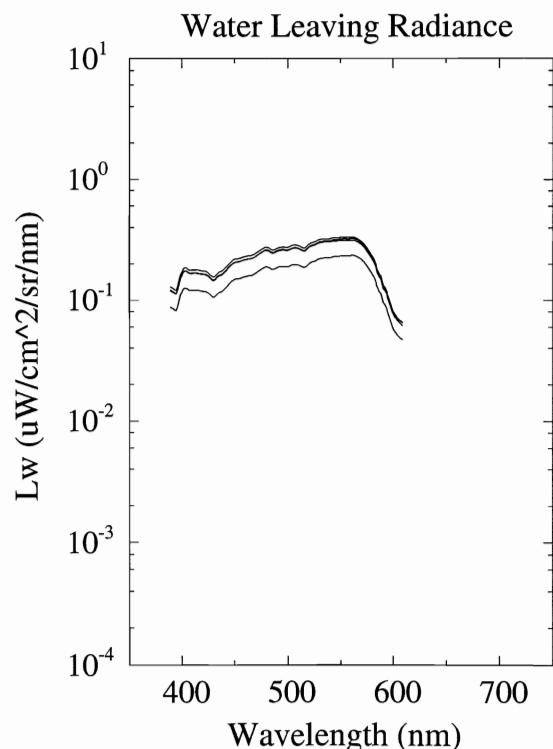
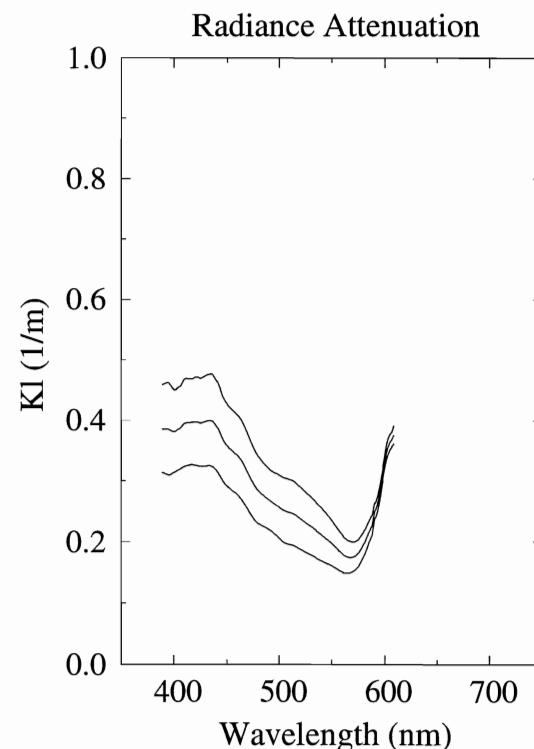
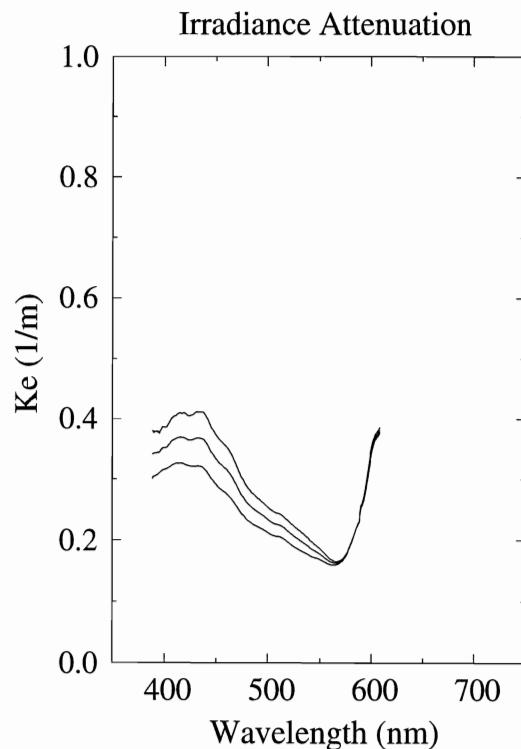
CRUISE: MOCE-2 SHIP: El Puma

STATION: 12 - Punta Abreojos

Top = 1 to 6 m  
 Mid = 1 to 11 m  
 Bot = 6 to 11 m

POSITION: 26°30.0 N 114°00.1 W

DATE: 18:59 (GMT) 12 Apr 1993



File: MOCE2:[MOS.PRC]STN12\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 18:59 (GMT) 12 Apr 1993STATION: 12 - Punta Abreojos  
POSITION: 26°30.0 N 114°00.1 W

## SeaWiFS-weighted water-leaving radiance:

Wavelength (nm)	412	443	490	510	555	670	765	865
Lw' (uW/cm^2/sr)	3.24E+0	3.53E+0	5.46E+0	6.10E+0	6.00E+0	nil	nil	nil

Depth (m)	Top	Top	Mid	Mid	Bot	Bot						
Time (GMT)	0.4	1.0	5.3	6.1	10.5	11.1						
Lambda	Ed_1	Es_1	Lu_1	Es_1	Ed_2	Es_2	Lu_2	Es_2	Ed_3	Es_3	Lu_3	Es_3
400	5.26E+1	5.16E+1	2.24E-1	6.64E+1	1.17E+1	5.46E+1	3.18E-2	4.97E+1	1.59E+0	5.56E+1	4.36E-3	6.32E+1
405	5.65E+1	6.65E+1	2.33E-1	8.54E+1	1.24E+1	7.03E+1	3.24E-2	6.39E+1	1.64E+0	7.15E+1	4.35E-3	8.12E+1
410	5.93E+1	6.65E+1	2.24E-1	8.54E+1	1.27E+1	7.03E+1	3.04E-2	6.39E+1	1.57E+0	7.15E+1	3.81E-3	8.12E+1
415	6.17E+1	7.25E+1	2.25E-1	9.31E+1	1.30E+1	7.67E+1	3.00E-2	6.95E+1	1.58E+0	7.79E+1	3.75E-3	8.85E+1
420	6.20E+1	7.25E+1	2.20E-1	9.31E+1	1.33E+1	7.67E+1	2.95E-2	6.95E+1	1.60E+0	7.79E+1	3.65E-3	8.85E+1
425	6.04E+1	7.37E+1	2.13E-1	9.48E+1	1.31E+1	7.78E+1	2.88E-2	7.05E+1	1.62E+0	7.91E+1	3.58E-3	8.99E+1
430	5.75E+1	7.37E+1	1.96E-1	9.48E+1	1.25E+1	7.78E+1	2.64E-2	7.05E+1	1.50E+0	7.91E+1	3.21E-3	8.99E+1
435	6.42E+1	8.58E+1	2.12E-1	1.10E+2	1.40E+1	9.05E+1	2.85E-2	8.18E+1	1.67E+0	9.19E+1	3.43E-3	1.05E+2
440	6.89E+1	8.58E+1	2.28E-1	1.10E+2	1.54E+1	9.05E+1	3.18E-2	8.18E+1	1.90E+0	9.19E+1	4.02E-3	1.05E+2
445	7.46E+1	9.84E+1	2.58E-1	1.26E+2	1.77E+1	1.04E+2	3.85E-2	9.36E+1	2.39E+0	1.05E+2	5.38E-3	1.20E+2
450	7.92E+1	9.84E+1	2.84E-1	1.26E+2	1.99E+1	1.04E+2	4.53E-2	9.36E+1	2.91E+0	1.05E+2	6.95E-3	1.20E+2
455	7.96E+1	1.04E+2	2.92E-1	1.34E+2	2.09E+1	1.10E+2	4.85E-2	9.88E+1	3.21E+0	1.11E+2	7.83E-3	1.27E+2
460	8.15E+1	1.04E+2	3.05E-1	1.34E+2	2.20E+1	1.10E+2	5.23E-2	9.88E+1	3.54E+0	1.11E+2	8.80E-3	1.27E+2
465	8.10E+1	1.05E+2	3.14E-1	1.35E+2	2.28E+1	1.10E+2	5.69E-2	9.94E+1	3.91E+0	1.12E+2	1.02E-2	1.28E+2
470	8.09E+1	1.05E+2	3.32E-1	1.35E+2	2.42E+1	1.10E+2	6.44E-2	9.94E+1	4.54E+0	1.12E+2	1.26E-2	1.28E+2
475	8.32E+1	1.08E+2	3.64E-1	1.39E+2	2.66E+1	1.13E+2	7.63E-2	1.02E+2	5.60E+0	1.15E+2	1.67E-2	1.31E+2
480	8.41E+1	1.08E+2	3.84E-1	1.39E+2	2.82E+1	1.13E+2	8.45E-2	1.02E+2	6.41E+0	1.15E+2	2.01E-2	1.31E+2
485	7.91E+1	1.05E+2	3.69E-1	1.36E+2	2.73E+1	1.11E+2	8.33E-2	9.94E+1	6.54E+0	1.12E+2	2.10E-2	1.28E+2
490	8.14E+1	1.05E+2	3.82E-1	1.36E+2	2.87E+1	1.11E+2	8.83E-2	9.94E+1	7.15E+0	1.12E+2	2.32E-2	1.28E+2
495	8.26E+1	1.07E+2	3.93E-1	1.38E+2	2.98E+1	1.13E+2	9.41E-2	1.01E+2	7.70E+0	1.14E+2	2.55E-2	1.31E+2
500	8.04E+1	1.07E+2	3.94E-1	1.38E+2	2.98E+1	1.13E+2	9.81E-2	1.01E+2	8.01E+0	1.14E+2	2.71E-2	1.31E+2
505	8.16E+1	1.06E+2	4.12E-1	1.37E+2	3.10E+1	1.12E+2	1.07E-1	1.00E+2	8.67E+0	1.13E+2	3.02E-2	1.29E+2
510	8.11E+1	1.06E+2	4.11E-1	1.37E+2	3.10E+1	1.12E+2	1.08E-1	1.00E+2	8.84E+0	1.13E+2	3.09E-2	1.29E+2
515	7.65E+1	1.02E+2	3.94E-1	1.32E+2	2.98E+1	1.07E+2	1.05E-1	9.62E+1	8.70E+0	1.09E+2	3.07E-2	1.24E+2
520	7.86E+1	1.02E+2	4.19E-1	1.32E+2	3.16E+1	1.07E+2	1.15E-1	9.62E+1	9.60E+0	1.09E+2	3.50E-2	1.24E+2
525	8.02E+1	1.05E+2	4.45E-1	1.36E+2	3.33E+1	1.11E+2	1.25E-1	9.92E+1	1.06E+1	1.12E+2	3.99E-2	1.28E+2
530	8.22E+1	1.05E+2	4.69E-1	1.36E+2	3.50E+1	1.11E+2	1.35E-1	9.92E+1	1.15E+1	1.12E+2	4.46E-2	1.28E+2
535	8.21E+1	1.07E+2	4.80E-1	1.38E+2	3.57E+1	1.12E+2	1.41E-1	1.00E+2	1.22E+1	1.14E+2	4.86E-2	1.30E+2
540	8.06E+1	1.07E+2	4.85E-1	1.38E+2	3.59E+1	1.12E+2	1.46E-1	1.00E+2	1.28E+1	1.14E+2	5.30E-2	1.30E+2
545	8.14E+1	1.06E+2	4.98E-1	1.37E+2	3.69E+1	1.12E+2	1.53E-1	9.99E+1	1.36E+1	1.13E+2	5.83E-2	1.30E+2
550	8.14E+1	1.06E+2	5.03E-1	1.37E+2	3.74E+1	1.12E+2	1.58E-1	9.99E+1	1.43E+1	1.13E+2	6.34E-2	1.30E+2
555	8.02E+1	1.05E+2	5.11E-1	1.36E+2	3.77E+1	1.11E+2	1.66E-1	9.87E+1	1.52E+1	1.12E+2	7.10E-2	1.28E+2
560	7.93E+1	1.05E+2	5.14E-1	1.36E+2	3.80E+1	1.11E+2	1.71E-1	9.87E+1	1.59E+1	1.12E+2	7.74E-2	1.28E+2
565	7.87E+1	1.03E+2	5.05E-1	1.34E+2	3.78E+1	1.09E+2	1.69E-1	9.68E+1	1.62E+1	1.10E+2	7.98E-2	1.26E+2
570	7.78E+1	1.03E+2	4.74E-1	1.34E+2	3.68E+1	1.09E+2	1.57E-1	9.68E+1	1.56E+1	1.10E+2	7.48E-2	1.26E+2
575	7.71E+1	1.02E+2	4.19E-1	1.32E+2	3.47E+1	1.07E+2	1.32E-1	9.56E+1	1.41E+1	1.09E+2	6.21E-2	1.25E+2
580	7.74E+1	1.02E+2	3.48E-1	1.32E+2	3.17E+1	1.07E+2	1.01E-1	9.56E+1	1.17E+1	1.09E+2	4.44E-2	1.25E+2
585	7.44E+1	1.01E+2	2.73E-1	1.32E+2	2.72E+1	1.07E+2	7.09E-2	9.54E+1	8.96E+0	1.08E+2	2.87E-2	1.24E+2
590	7.11E+1	1.01E+2	2.02E-1	1.32E+2	2.19E+1	1.07E+2	4.46E-2	9.54E+1	6.15E+0	1.08E+2	1.60E-2	1.24E+2
595	6.98E+1	9.85E+1	1.53E-1	1.29E+2	1.76E+1	1.04E+2	2.78E-2	9.27E+1	4.07E+0	1.05E+2	8.49E-3	1.21E+2
600	6.70E+1	9.85E+1	1.07E-1	1.29E+2	1.27E+1	1.04E+2	1.45E-2	9.27E+1	2.20E+0	1.05E+2	3.43E-3	1.21E+2
605	6.60E+1	9.94E+1	9.17E-2	1.29E+2	1.10E+1	1.05E+2	1.08E-2	9.34E+1	1.65E+0	1.06E+2	2.15E-3	1.22E+2

File: MOCE2:[MOS.PRC]STN12\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 18:59 (GMT) 12 Apr 1993STATION: 12 - Punta Abreojos  
POSITION: 26°30.0 N 114°00.1 W

## SeaWiFS-weighted normalized water-leaving radiance:

Wavelength (nm):	412	443	490	510	555	670	765	865
Lwn' (uW/cm^2/sr):	4.18E+0	4.38E+0	6.53E+0	7.26E+0	7.13E+0	nil	nil	nil

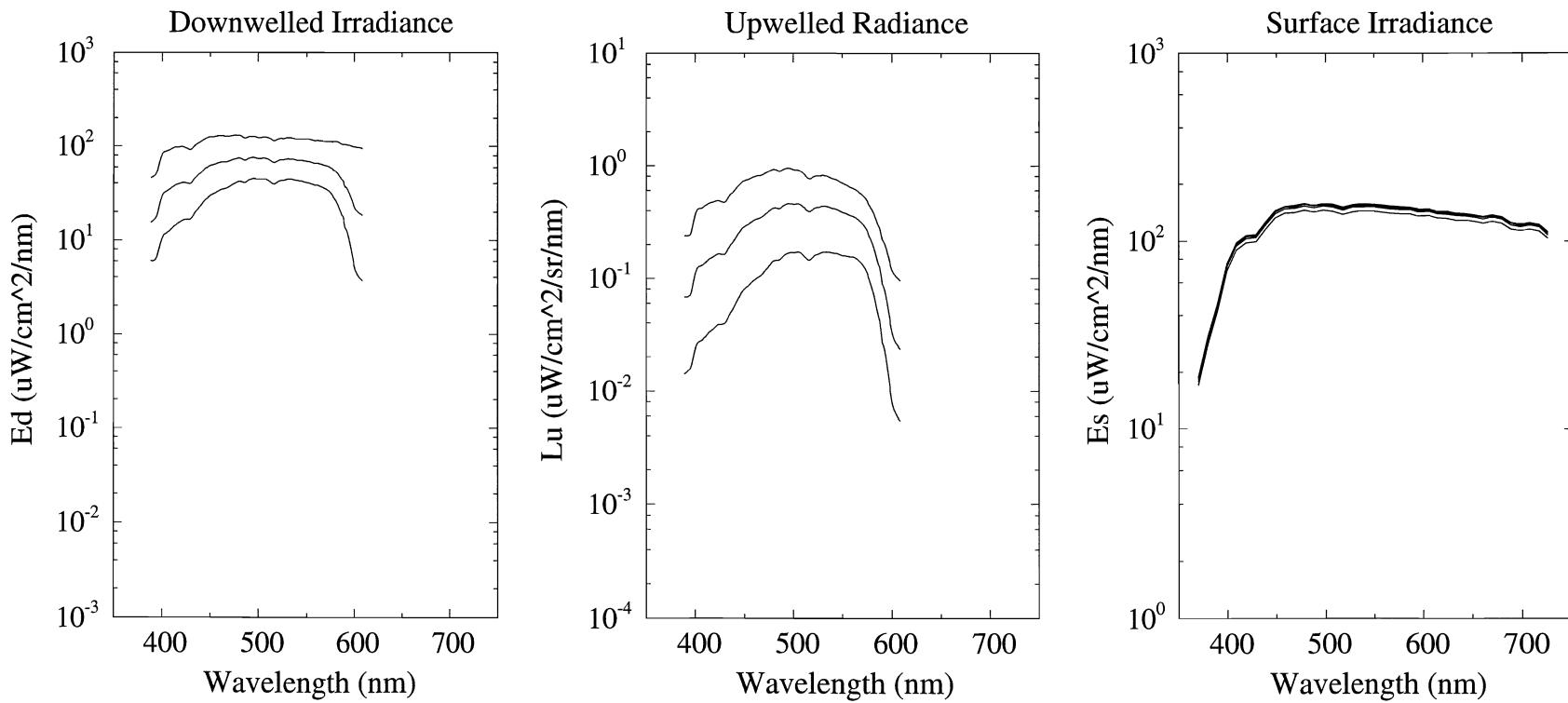
Depth (m)	0-5	1-6	0-11	1-11	5-11	6-11	Top KL_1	Top KL_2	Mid KL_1	Bot KL_2	Lw_1
R_Es	0.947	1.375	0.934	1.060	0.986	0.771					
Lambda	Ke_1	KL_1	Ke_2	KL_2	Ke_3	KL_3	Lw_1	Lw_2	Lw_3	Lw_4	Lwn
400	3.17E-1	3.14E-1	3.52E-1	3.81E-1	3.86E-1	4.51E-1	1.64E-1	1.75E-1	1.19E-1	1.65E-1	2.17E-1
405	3.20E-1	3.19E-1	3.57E-1	3.85E-1	3.92E-1	4.55E-1	1.71E-1	1.83E-1	1.25E-1	1.72E-1	2.25E-1
410	3.25E-1	3.24E-1	3.66E-1	3.95E-1	4.04E-1	4.68E-1	1.66E-1	1.78E-1	1.21E-1	1.68E-1	2.16E-1
415	3.27E-1	3.27E-1	3.69E-1	3.97E-1	4.09E-1	4.69E-1	1.67E-1	1.78E-1	1.21E-1	1.68E-1	2.15E-1
420	3.25E-1	3.26E-1	3.68E-1	3.97E-1	4.09E-1	4.71E-1	1.63E-1	1.75E-1	1.19E-1	1.65E-1	2.09E-1
425	3.22E-1	3.24E-1	3.64E-1	3.96E-1	4.05E-1	4.70E-1	1.58E-1	1.69E-1	1.15E-1	1.59E-1	2.00E-1
430	3.22E-1	3.25E-1	3.67E-1	3.98E-1	4.10E-1	4.75E-1	1.45E-1	1.56E-1	1.06E-1	1.47E-1	1.83E-1
435	3.21E-1	3.25E-1	3.67E-1	4.00E-1	4.11E-1	4.77E-1	1.57E-1	1.69E-1	1.14E-1	1.59E-1	1.97E-1
440	3.15E-1	3.18E-1	3.62E-1	3.91E-1	4.06E-1	4.67E-1	1.68E-1	1.80E-1	1.22E-1	1.70E-1	2.09E-1
445	3.03E-1	3.05E-1	3.47E-1	3.75E-1	3.88E-1	4.47E-1	1.87E-1	2.00E-1	1.36E-1	1.89E-1	2.32E-1
450	2.92E-1	2.92E-1	3.33E-1	3.59E-1	3.73E-1	4.28E-1	2.04E-1	2.17E-1	1.48E-1	2.05E-1	2.51E-1
455	2.83E-1	2.85E-1	3.24E-1	3.50E-1	3.63E-1	4.18E-1	2.08E-1	2.22E-1	1.51E-1	2.09E-1	2.55E-1
460	2.77E-1	2.78E-1	3.17E-1	3.43E-1	3.54E-1	4.09E-1	2.16E-1	2.29E-1	1.57E-1	2.16E-1	2.63E-1
465	2.69E-1	2.68E-1	3.06E-1	3.32E-1	3.42E-1	3.98E-1	2.20E-1	2.34E-1	1.60E-1	2.21E-1	2.68E-1
470	2.57E-1	2.55E-1	2.92E-1	3.16E-1	3.24E-1	3.79E-1	2.30E-1	2.44E-1	1.67E-1	2.30E-1	2.78E-1
475	2.43E-1	2.40E-1	2.74E-1	2.97E-1	3.02E-1	3.57E-1	2.48E-1	2.62E-1	1.81E-1	2.47E-1	2.99E-1
480	2.33E-1	2.30E-1	2.61E-1	2.84E-1	2.87E-1	3.40E-1	2.60E-1	2.73E-1	1.89E-1	2.58E-1	3.13E-1
485	2.27E-1	2.25E-1	2.53E-1	2.76E-1	2.78E-1	3.29E-1	2.48E-1	2.61E-1	1.81E-1	2.46E-1	2.98E-1
490	2.23E-1	2.21E-1	2.47E-1	2.69E-1	2.70E-1	3.20E-1	2.56E-1	2.68E-1	1.86E-1	2.53E-1	3.06E-1
495	2.18E-1	2.14E-1	2.41E-1	2.63E-1	2.63E-1	3.14E-1	2.62E-1	2.75E-1	1.91E-1	2.59E-1	3.13E-1
500	2.13E-1	2.06E-1	2.35E-1	2.57E-1	2.55E-1	3.10E-1	2.60E-1	2.73E-1	1.89E-1	2.58E-1	3.10E-1
505	2.08E-1	1.99E-1	2.28E-1	2.51E-1	2.48E-1	3.05E-1	2.70E-1	2.84E-1	1.97E-1	2.68E-1	3.22E-1
510	2.07E-1	1.96E-1	2.26E-1	2.48E-1	2.44E-1	3.03E-1	2.69E-1	2.83E-1	1.96E-1	2.67E-1	3.20E-1
515	2.03E-1	1.93E-1	2.22E-1	2.45E-1	2.39E-1	2.98E-1	2.57E-1	2.70E-1	1.87E-1	2.55E-1	3.05E-1
520	1.97E-1	1.88E-1	2.15E-1	2.38E-1	2.32E-1	2.90E-1	2.72E-1	2.86E-1	1.98E-1	2.69E-1	3.23E-1
525	1.90E-1	1.83E-1	2.07E-1	2.31E-1	2.23E-1	2.81E-1	2.88E-1	3.02E-1	2.09E-1	2.84E-1	3.42E-1
530	1.85E-1	1.79E-1	2.01E-1	2.25E-1	2.17E-1	2.74E-1	3.02E-1	3.16E-1	2.20E-1	2.98E-1	3.59E-1
535	1.80E-1	1.74E-1	1.95E-1	2.19E-1	2.10E-1	2.66E-1	3.08E-1	3.21E-1	2.24E-1	3.03E-1	3.66E-1
540	1.76E-1	1.69E-1	1.89E-1	2.12E-1	2.01E-1	2.56E-1	3.09E-1	3.22E-1	2.25E-1	3.04E-1	3.67E-1
545	1.72E-1	1.65E-1	1.84E-1	2.05E-1	1.94E-1	2.46E-1	3.16E-1	3.29E-1	2.30E-1	3.10E-1	3.76E-1
550	1.69E-1	1.61E-1	1.79E-1	1.98E-1	1.87E-1	2.36E-1	3.19E-1	3.30E-1	2.32E-1	3.11E-1	3.78E-1
555	1.64E-1	1.56E-1	1.71E-1	1.88E-1	1.78E-1	2.22E-1	3.22E-1	3.32E-1	2.34E-1	3.13E-1	3.82E-1
560	1.61E-1	1.51E-1	1.66E-1	1.80E-1	1.70E-1	2.11E-1	3.23E-1	3.32E-1	2.35E-1	3.13E-1	3.83E-1
565	1.60E-1	1.49E-1	1.63E-1	1.76E-1	1.66E-1	2.03E-1	3.16E-1	3.24E-1	2.30E-1	3.06E-1	3.77E-1
570	1.63E-1	1.52E-1	1.65E-1	1.76E-1	1.67E-1	2.01E-1	2.98E-1	3.05E-1	2.16E-1	2.87E-1	3.55E-1
575	1.73E-1	1.60E-1	1.75E-1	1.82E-1	1.76E-1	2.04E-1	2.65E-1	2.71E-1	1.93E-1	2.55E-1	3.16E-1
580	1.93E-1	1.77E-1	1.93E-1	1.97E-1	1.94E-1	2.17E-1	2.24E-1	2.28E-1	1.63E-1	2.15E-1	2.66E-1
585	2.16E-1	1.99E-1	2.16E-1	2.16E-1	2.16E-1	2.34E-1	1.79E-1	1.82E-1	1.31E-1	1.72E-1	2.13E-1
590	2.51E-1	2.31E-1	2.49E-1	2.45E-1	2.48E-1	2.59E-1	1.37E-1	1.39E-1	9.95E-2	1.31E-1	1.62E-1
595	2.91E-1	2.68E-1	2.88E-1	2.79E-1	2.85E-1	2.91E-1	1.07E-1	1.08E-1	7.80E-2	1.02E-1	1.27E-1
600	3.50E-1	3.23E-1	3.45E-1	3.33E-1	3.40E-1	3.43E-1	7.88E-2	7.95E-2	5.73E-2	7.50E-2	9.35E-2
605	3.76E-1	3.51E-1	3.71E-1	3.63E-1	3.67E-1	3.76E-1	6.96E-2	7.04E-2	5.06E-2	6.64E-2	8.25E-2

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
 STATION: 13 - Bahia de San Quintin

Top = 0.6 m  
 Mid = 6 m  
 Bot = 11 m

POSITION: 30°05.0 N 116°03.4 W  
 DATE: 19:54 (GMT) 13 Apr 1993



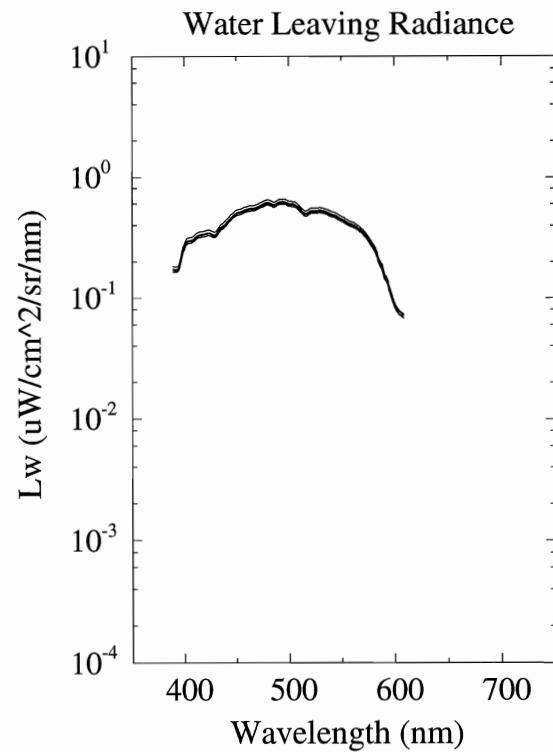
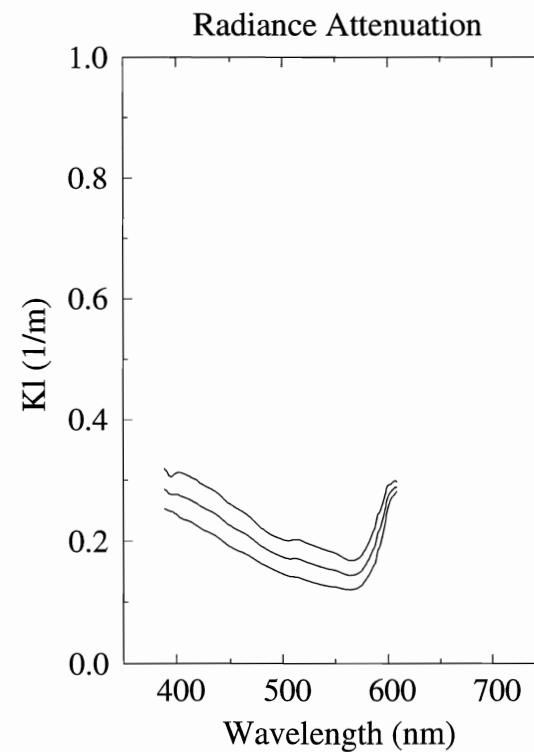
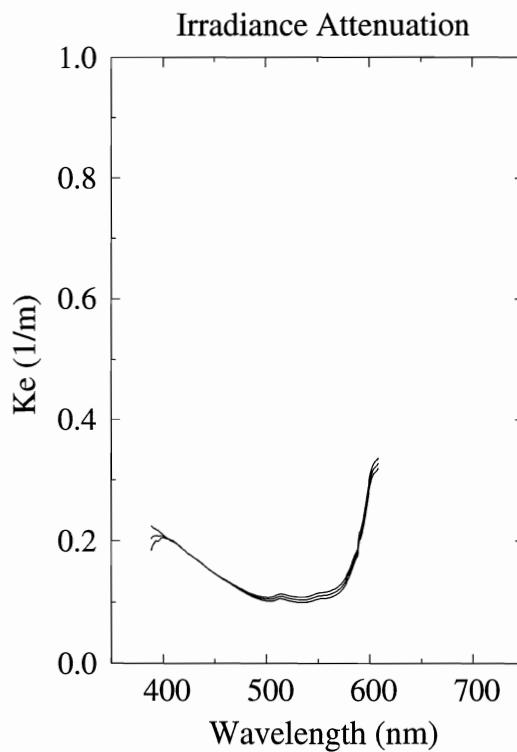
April 1995

## MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
 STATION: 13 - Bahia de San Quintin

Top = 0.6 to 6 m  
 Mid = 0.6 to 11 m  
 Bot = 6 to 11 m

POSITION: 30°05.0 N 116°03.4 W  
 DATE: 19:54 (GMT) 13 Apr 1993



File: MOCE2:[MOS.PRC]STN13\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 19:54 (GMT) 13 Apr 1993STATION: 13 - Bahia de San Quintin  
POSITION: 30°05.0 N 116°03.4 W

## SeaWiFS-weighted water-leaving radiances:

Wavelength (nm)	412	443	490	510	555	670	765	865
Lw' (uW/cm^2/sr)	5.99E+0	8.23E+0	1.23E+1	1.21E+1	7.66E+0	nil	nil	nil

Depth (m)	Top			Mid			Bot			Bot		
	0.4	0.9	5.3	6.1	10.4	11.1	18:43	21:11	19:11	20:30	19:39	20:05
Lambda	Ed_1	Es_1	Lu_1	Es_1	Ed_2	Es_2	Lu_2	Es_2	Ed_3	Es_3	Lu_3	Es_3
400	8.07E+1	7.28E+1	3.77E-1	6.91E+1	2.92E+1	7.51E+1	1.13E-1	7.32E+1	1.04E+1	7.56E+1	2.44E-2	7.47E+1
405	8.79E+1	9.38E+1	4.17E-1	8.90E+1	3.27E+1	9.66E+1	1.29E-1	9.41E+1	1.18E+1	9.72E+1	2.77E-2	9.60E+1
410	9.32E+1	9.38E+1	4.37E-1	8.90E+1	3.57E+1	9.66E+1	1.37E-1	9.41E+1	1.30E+1	9.72E+1	3.00E-2	9.60E+1
415	9.78E+1	1.03E+2	4.68E-1	9.72E+1	3.85E+1	1.05E+2	1.50E-1	1.03E+2	1.46E+1	1.06E+2	3.37E-2	1.05E+2
420	9.85E+1	1.03E+2	4.81E-1	9.72E+1	4.01E+1	1.05E+2	1.59E-1	1.03E+2	1.57E+1	1.06E+2	3.65E-2	1.05E+2
425	9.62E+1	1.04E+2	4.87E-1	9.91E+1	4.06E+1	1.07E+2	1.65E-1	1.05E+2	1.65E+1	1.08E+2	3.92E-2	1.07E+2
430	9.17E+1	1.04E+2	4.76E-1	9.91E+1	4.00E+1	1.07E+2	1.65E-1	1.05E+2	1.68E+1	1.08E+2	4.01E-2	1.07E+2
435	1.03E+2	1.22E+2	5.42E-1	1.15E+2	4.61E+1	1.25E+2	1.92E-1	1.22E+2	1.99E+1	1.26E+2	4.78E-2	1.24E+2
440	1.10E+2	1.22E+2	5.97E-1	1.15E+2	5.11E+1	1.25E+2	2.18E-1	1.22E+2	2.28E+1	1.26E+2	5.61E-2	1.24E+2
445	1.19E+2	1.40E+2	6.70E-1	1.32E+2	5.70E+1	1.43E+2	2.54E-1	1.40E+2	2.63E+1	1.44E+2	6.80E-2	1.42E+2
450	1.26E+2	1.40E+2	7.32E-1	1.32E+2	6.20E+1	1.43E+2	2.87E-1	1.40E+2	2.97E+1	1.44E+2	7.98E-2	1.42E+2
455	1.26E+2	1.48E+2	7.58E-1	1.40E+2	6.40E+1	1.52E+2	3.05E-1	1.48E+2	3.15E+1	1.53E+2	8.73E-2	1.51E+2
460	1.29E+2	1.48E+2	7.95E-1	1.40E+2	6.69E+1	1.52E+2	3.26E-1	1.48E+2	3.37E+1	1.53E+2	9.56E-2	1.51E+2
465	1.28E+2	1.49E+2	8.15E-1	1.41E+2	6.78E+1	1.53E+2	3.40E-1	1.49E+2	3.50E+1	1.54E+2	1.02E-1	1.52E+2
470	1.27E+2	1.49E+2	8.38E-1	1.41E+2	6.92E+1	1.53E+2	3.59E-1	1.49E+2	3.67E+1	1.54E+2	1.12E-1	1.52E+2
475	1.30E+2	1.54E+2	8.89E-1	1.45E+2	7.27E+1	1.58E+2	3.92E-1	1.53E+2	3.98E+1	1.58E+2	1.28E-1	1.56E+2
480	1.31E+2	1.54E+2	9.25E-1	1.45E+2	7.48E+1	1.58E+2	4.20E-1	1.53E+2	4.20E+1	1.58E+2	1.43E-1	1.56E+2
485	1.22E+2	1.50E+2	8.93E-1	1.42E+2	7.13E+1	1.54E+2	4.15E-1	1.50E+2	4.10E+1	1.55E+2	1.46E-1	1.53E+2
490	1.26E+2	1.50E+2	9.30E-1	1.42E+2	7.41E+1	1.54E+2	4.41E-1	1.50E+2	4.33E+1	1.55E+2	1.59E-1	1.53E+2
495	1.27E+2	1.53E+2	9.51E-1	1.45E+2	7.59E+1	1.57E+2	4.60E-1	1.53E+2	4.50E+1	1.58E+2	1.68E-1	1.56E+2
500	1.24E+2	1.53E+2	9.22E-1	1.45E+2	7.42E+1	1.57E+2	4.55E-1	1.53E+2	4.44E+1	1.58E+2	1.69E-1	1.56E+2
505	1.25E+2	1.52E+2	9.10E-1	1.44E+2	7.48E+1	1.56E+2	4.58E-1	1.51E+2	4.48E+1	1.56E+2	1.72E-1	1.54E+2
510	1.24E+2	1.52E+2	8.51E-1	1.44E+2	7.28E+1	1.56E+2	4.30E-1	1.51E+2	4.30E+1	1.56E+2	1.60E-1	1.54E+2
515	1.16E+2	1.46E+2	7.72E-1	1.38E+2	6.78E+1	1.50E+2	3.93E-1	1.46E+2	3.99E+1	1.51E+2	1.47E-1	1.49E+2
520	1.18E+2	1.46E+2	7.91E-1	1.38E+2	6.98E+1	1.50E+2	4.09E-1	1.46E+2	4.15E+1	1.51E+2	1.55E-1	1.49E+2
525	1.21E+2	1.51E+2	8.10E-1	1.43E+2	7.18E+1	1.55E+2	4.27E-1	1.50E+2	4.31E+1	1.55E+2	1.65E-1	1.53E+2
530	1.23E+2	1.51E+2	8.22E-1	1.43E+2	7.36E+1	1.55E+2	4.38E-1	1.50E+2	4.44E+1	1.55E+2	1.72E-1	1.53E+2
535	1.22E+2	1.53E+2	8.04E-1	1.45E+2	7.31E+1	1.57E+2	4.34E-1	1.52E+2	4.42E+1	1.57E+2	1.73E-1	1.55E+2
540	1.20E+2	1.53E+2	7.67E-1	1.45E+2	7.13E+1	1.57E+2	4.18E-1	1.52E+2	4.30E+1	1.57E+2	1.69E-1	1.55E+2
545	1.20E+2	1.53E+2	7.41E-1	1.44E+2	7.09E+1	1.56E+2	4.07E-1	1.52E+2	4.24E+1	1.57E+2	1.67E-1	1.55E+2
550	1.20E+2	1.53E+2	7.01E-1	1.44E+2	6.95E+1	1.56E+2	3.87E-1	1.52E+2	4.10E+1	1.57E+2	1.60E-1	1.55E+2
555	1.17E+2	1.51E+2	6.64E-1	1.43E+2	6.76E+1	1.55E+2	3.71E-1	1.50E+2	3.96E+1	1.55E+2	1.58E-1	1.53E+2
560	1.15E+2	1.51E+2	6.34E-1	1.43E+2	6.60E+1	1.55E+2	3.57E-1	1.50E+2	3.85E+1	1.55E+2	1.56E-1	1.53E+2
565	1.15E+2	1.49E+2	5.98E-1	1.40E+2	6.45E+1	1.52E+2	3.38E-1	1.48E+2	3.72E+1	1.53E+2	1.49E-1	1.51E+2
570	1.13E+2	1.49E+2	5.51E-1	1.40E+2	6.24E+1	1.52E+2	3.08E-1	1.48E+2	3.51E+1	1.53E+2	1.35E-1	1.51E+2
575	1.13E+2	1.48E+2	4.84E-1	1.39E+2	5.91E+1	1.51E+2	2.63E-1	1.47E+2	3.17E+1	1.52E+2	1.11E-1	1.50E+2
580	1.13E+2	1.48E+2	4.02E-1	1.39E+2	5.43E+1	1.51E+2	2.05E-1	1.47E+2	2.68E+1	1.52E+2	8.06E-2	1.50E+2
585	1.09E+2	1.47E+2	3.16E-1	1.39E+2	4.72E+1	1.51E+2	1.49E-1	1.47E+2	2.09E+1	1.51E+2	5.31E-2	1.49E+2
590	1.04E+2	1.47E+2	2.32E-1	1.39E+2	3.85E+1	1.51E+2	9.68E-2	1.47E+2	1.45E+1	1.51E+2	3.01E-2	1.49E+2
595	1.03E+2	1.43E+2	1.72E-1	1.36E+2	3.09E+1	1.47E+2	6.11E-2	1.43E+2	9.63E+0	1.48E+2	1.69E-2	1.45E+2
600	9.87E+1	1.43E+2	1.19E-1	1.36E+2	2.23E+1	1.47E+2	3.36E-2	1.43E+2	5.23E+0	1.48E+2	8.03E-3	1.45E+2
605	9.76E+1	1.44E+2	1.03E-1	1.36E+2	1.95E+1	1.48E+2	2.62E-2	1.43E+2	4.05E+0	1.48E+2	6.11E-3	1.46E+2

File: MOCE2:[MOS.PRC]STN13\_PRC\_CLIP.MLDAT;1

MODIS Marine Optical Characterization Experiment - 2 NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma  
DATE: 19:54 (GMT) 13 Apr 1993STATION: 13 - Bahia de San Quintin  
POSITION: 30°05.0 N 116°03.4 W

## SeaWiFS-weighted normalized water-leaving radiance:

Wavelength (nm):	412	443	490	510	555	670	765	865
Lwn' (uW/cm^2/sr):	7.80E+0	1.03E+1	1.48E+1	1.45E+1	9.18E+0	nil	nil	nil

Depth (m)	0-5	1-6	0-10	1-11	5-10	6-11	Top KL_1	Top KL_2	Mid KL_1	Bot KL_2	Lw_1
R_Es	0.975	0.949	0.971	0.931	0.996	0.981					
Lambda	Ke_1	KL_1	Ke_2	KL_2	Ke_3	KL_3	Lw_1	Lw_2	Lw_3	Lw_4	Lwn
400	2.10E-1	2.43E-1	2.08E-1	2.77E-1	2.06E-1	3.12E-1	2.57E-1	2.66E-1	2.71E-1	2.85E-1	3.44E-1
405	2.04E-1	2.37E-1	2.04E-1	2.74E-1	2.03E-1	3.12E-1	2.83E-1	2.93E-1	2.98E-1	3.14E-1	3.74E-1
410	1.98E-1	2.34E-1	1.99E-1	2.71E-1	2.00E-1	3.09E-1	2.95E-1	3.06E-1	3.11E-1	3.28E-1	3.87E-1
415	1.93E-1	2.30E-1	1.93E-1	2.66E-1	1.93E-1	3.04E-1	3.16E-1	3.26E-1	3.33E-1	3.51E-1	4.10E-1
420	1.86E-1	2.24E-1	1.86E-1	2.61E-1	1.86E-1	2.99E-1	3.22E-1	3.34E-1	3.40E-1	3.58E-1	4.16E-1
425	1.79E-1	2.19E-1	1.79E-1	2.55E-1	1.79E-1	2.93E-1	3.25E-1	3.36E-1	3.43E-1	3.61E-1	4.16E-1
430	1.72E-1	2.15E-1	1.72E-1	2.51E-1	1.72E-1	2.88E-1	3.16E-1	3.27E-1	3.33E-1	3.51E-1	4.02E-1
435	1.67E-1	2.11E-1	1.67E-1	2.46E-1	1.67E-1	2.83E-1	3.59E-1	3.71E-1	3.78E-1	3.98E-1	4.53E-1
440	1.60E-1	2.05E-1	1.60E-1	2.40E-1	1.61E-1	2.77E-1	3.93E-1	4.07E-1	4.14E-1	4.36E-1	4.94E-1
445	1.53E-1	1.98E-1	1.53E-1	2.33E-1	1.53E-1	2.69E-1	4.38E-1	4.53E-1	4.62E-1	4.86E-1	5.47E-1
450	1.47E-1	1.91E-1	1.47E-1	2.25E-1	1.47E-1	2.61E-1	4.76E-1	4.91E-1	5.01E-1	5.28E-1	5.91E-1
455	1.42E-1	1.86E-1	1.41E-1	2.20E-1	1.41E-1	2.55E-1	4.91E-1	5.06E-1	5.17E-1	5.44E-1	6.06E-1
460	1.37E-1	1.83E-1	1.37E-1	2.16E-1	1.36E-1	2.50E-1	5.13E-1	5.29E-1	5.40E-1	5.68E-1	6.31E-1
465	1.33E-1	1.79E-1	1.32E-1	2.11E-1	1.31E-1	2.45E-1	5.24E-1	5.40E-1	5.52E-1	5.80E-1	6.42E-1
470	1.28E-1	1.74E-1	1.27E-1	2.05E-1	1.26E-1	2.38E-1	5.36E-1	5.52E-1	5.65E-1	5.93E-1	6.54E-1
475	1.22E-1	1.68E-1	1.21E-1	1.98E-1	1.20E-1	2.29E-1	5.65E-1	5.81E-1	5.95E-1	6.24E-1	6.87E-1
480	1.18E-1	1.63E-1	1.16E-1	1.91E-1	1.15E-1	2.21E-1	5.85E-1	6.01E-1	6.17E-1	6.46E-1	7.11E-1
485	1.14E-1	1.58E-1	1.12E-1	1.86E-1	1.10E-1	2.14E-1	5.63E-1	5.78E-1	5.93E-1	6.20E-1	6.81E-1
490	1.11E-1	1.54E-1	1.09E-1	1.81E-1	1.07E-1	2.10E-1	5.84E-1	5.99E-1	6.15E-1	6.43E-1	7.04E-1
495	1.09E-1	1.50E-1	1.07E-1	1.78E-1	1.04E-1	2.06E-1	5.95E-1	6.10E-1	6.27E-1	6.55E-1	7.16E-1
500	1.08E-1	1.47E-1	1.05E-1	1.74E-1	1.02E-1	2.03E-1	5.75E-1	5.90E-1	6.06E-1	6.33E-1	6.91E-1
505	1.09E-1	1.43E-1	1.05E-1	1.71E-1	1.02E-1	2.01E-1	5.65E-1	5.81E-1	5.96E-1	6.24E-1	6.80E-1
510	1.12E-1	1.42E-1	1.08E-1	1.71E-1	1.05E-1	2.02E-1	5.28E-1	5.43E-1	5.56E-1	5.83E-1	6.33E-1
515	1.13E-1	1.40E-1	1.10E-1	1.71E-1	1.06E-1	2.02E-1	4.78E-1	4.92E-1	5.04E-1	5.29E-1	5.72E-1
520	1.12E-1	1.37E-1	1.08E-1	1.68E-1	1.04E-1	1.99E-1	4.88E-1	5.02E-1	5.15E-1	5.39E-1	5.84E-1
525	1.10E-1	1.34E-1	1.06E-1	1.64E-1	1.02E-1	1.95E-1	4.99E-1	5.13E-1	5.26E-1	5.51E-1	5.97E-1
530	1.09E-1	1.32E-1	1.05E-1	1.61E-1	1.00E-1	1.92E-1	5.05E-1	5.19E-1	5.32E-1	5.57E-1	6.05E-1
535	1.09E-1	1.29E-1	1.04E-1	1.59E-1	1.00E-1	1.89E-1	4.93E-1	5.07E-1	5.20E-1	5.44E-1	5.91E-1
540	1.09E-1	1.27E-1	1.05E-1	1.56E-1	1.01E-1	1.86E-1	4.70E-1	4.82E-1	4.95E-1	5.18E-1	5.62E-1
545	1.12E-1	1.26E-1	1.07E-1	1.54E-1	1.02E-1	1.83E-1	4.53E-1	4.65E-1	4.77E-1	4.99E-1	5.42E-1
550	1.15E-1	1.25E-1	1.10E-1	1.52E-1	1.05E-1	1.80E-1	4.28E-1	4.39E-1	4.51E-1	4.71E-1	5.12E-1
555	1.16E-1	1.23E-1	1.11E-1	1.48E-1	1.06E-1	1.75E-1	4.05E-1	4.15E-1	4.26E-1	4.45E-1	4.85E-1
560	1.18E-1	1.21E-1	1.12E-1	1.45E-1	1.07E-1	1.70E-1	3.86E-1	3.95E-1	4.07E-1	4.24E-1	4.63E-1
565	1.21E-1	1.21E-1	1.15E-1	1.44E-1	1.10E-1	1.68E-1	3.64E-1	3.72E-1	3.83E-1	3.99E-1	4.37E-1
570	1.26E-1	1.22E-1	1.20E-1	1.46E-1	1.15E-1	1.70E-1	3.35E-1	3.43E-1	3.53E-1	3.68E-1	4.04E-1
575	1.35E-1	1.28E-1	1.30E-1	1.52E-1	1.24E-1	1.77E-1	2.96E-1	3.03E-1	3.12E-1	3.25E-1	3.56E-1
580	1.52E-1	1.40E-1	1.46E-1	1.65E-1	1.41E-1	1.92E-1	2.49E-1	2.55E-1	2.62E-1	2.73E-1	2.98E-1
585	1.73E-1	1.55E-1	1.68E-1	1.83E-1	1.62E-1	2.11E-1	1.98E-1	2.03E-1	2.09E-1	2.18E-1	2.37E-1
590	2.07E-1	1.80E-1	2.00E-1	2.09E-1	1.95E-1	2.40E-1	1.49E-1	1.53E-1	1.57E-1	1.64E-1	1.78E-1
595	2.47E-1	2.11E-1	2.40E-1	2.36E-1	2.32E-1	2.63E-1	1.14E-1	1.17E-1	1.20E-1	1.25E-1	1.36E-1
600	3.05E-1	2.54E-1	2.96E-1	2.73E-1	2.88E-1	2.92E-1	8.18E-2	8.33E-2	8.62E-2	8.94E-2	9.80E-2
605	3.29E-1	2.74E-1	3.21E-1	2.85E-1	3.12E-1	2.97E-1	7.21E-2	7.29E-2	7.60E-2	7.82E-2	8.62E-2

## Appendix 2. CTD Profiling Results: Vertical profiles and data listings.

### Explanation of Data Tables:

Data presented here were obtained from the MLML CTD. All observations have been interpolated to 2 m intervals, but data files contain data at 1 m intervals. Data processing algorithms are those described in Fofonoff and Millard (1983). Oxygen solubility calculations are from Postma, *et al.* 1976.

Press dbar	Pressure in decibars (numerically equivalent to depth in m).
Temp °C	<i>In situ</i> seawater temperature in Celsius.
Theta °C	Potential temperature in Celsius.
Salin PSU	Seawater salinity in Practical Salinity Units (numerically equivalent to gm/kg).
Sigma-θ g/l	Potential seawater density anomaly based on potential temperature in grams per liter.
c(625) 1/m	The total attenuation coefficient in $m^{-1}$ measured by a SeaTech 25 cm path transmissometer at 625 nm.
Fluoro (680)	<i>In situ</i> chlorophyll fluorescence in relative unscaled units measured by a SeaTech fluorometer at 680 nm.

April 1995

## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

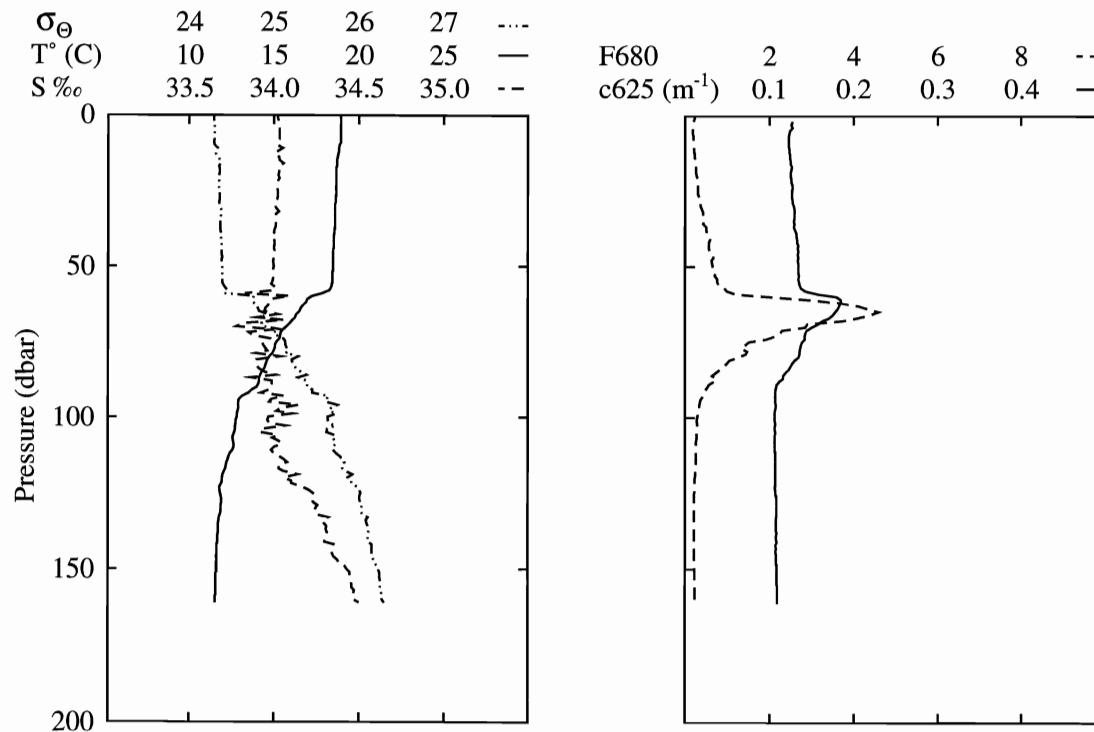
CTD # 21529033

STATION: 01 Test

Secchi: 24 m Munsell: 10B 7/8

DATE: 21:44 (GMT) 29 Mar 1993

POSITION: 25° 51.5' N 113° 30.0' W



## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

CTD # 21529033

STATION: 01 Test

DATE: 21:44 (GMT) 29 Mar 1993

Secchi: 24 m Munsell: 10B 7/8

POSITION: 25° 51.5' N 113° 30.0' W

Press db	Temp °C	Theta °C	Salin PSU	Sigma-θ g/l	c(625) 1/m	Fluor (680)
0	18.93	18.93	34.02	24.29		0.22
5	18.94	18.94	34.03	24.30	0.124	0.17
10	18.88	18.88	34.02	24.30	0.122	0.19
15	18.71	18.71	34.04	24.36	0.125	0.23
20	18.69	18.68	34.03	24.36	0.125	0.27
25	18.67	18.66	34.02	24.36	0.127	0.29
30	18.61	18.61	34.00	24.36	0.129	0.36
35	18.59	18.58	34.01	24.37	0.129	0.43
40	18.54	18.53	34.01	24.39	0.132	0.56
45	18.50	18.49	34.00	24.39	0.134	0.57
50	18.48	18.47	34.00	24.39	0.134	0.65
55	18.44	18.43	33.99	24.39	0.135	0.75
60	17.24	17.23	34.09	24.76	0.180	1.99
65	16.50	16.49	33.94	24.82	0.178	4.59
70	15.76	15.75	33.78	24.87	0.150	2.85
75	15.19	15.18	33.96	25.13	0.138	1.51
80	14.74	14.73	34.04	25.29	0.134	1.26
85	14.26	14.25	33.94	25.32	0.119	0.72
90	13.98	13.97	33.97	25.40	0.108	0.51
95	12.92	12.90	33.97	25.62	0.106	0.35
100	12.81	12.80	33.97	25.64	0.106	0.28
105	12.66	12.65	33.92	25.62	0.106	0.27
110	12.62	12.61	34.00	25.70	0.106	0.25
115	12.23	12.22	34.08	25.83	0.107	0.25
120	11.95	11.93	34.06	25.87	0.107	0.22
125	11.85	11.83	34.23	26.02	0.107	0.21
130	11.89	11.87	34.25	26.03	0.108	0.21
135	11.75	11.73	34.29	26.09	0.108	0.21
140	11.71	11.69	34.30	26.10	0.108	0.21
145	11.64	11.62	34.35	26.15	0.107	0.21
150	11.61	11.59	34.43	26.22	0.108	0.21
155	11.59	11.57	34.46	26.25	0.108	0.22
160	11.54	11.52	34.48	26.27	0.109	0.22
161	11.52	11.50	34.50	26.30	0.109	0.22

April 1995

## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

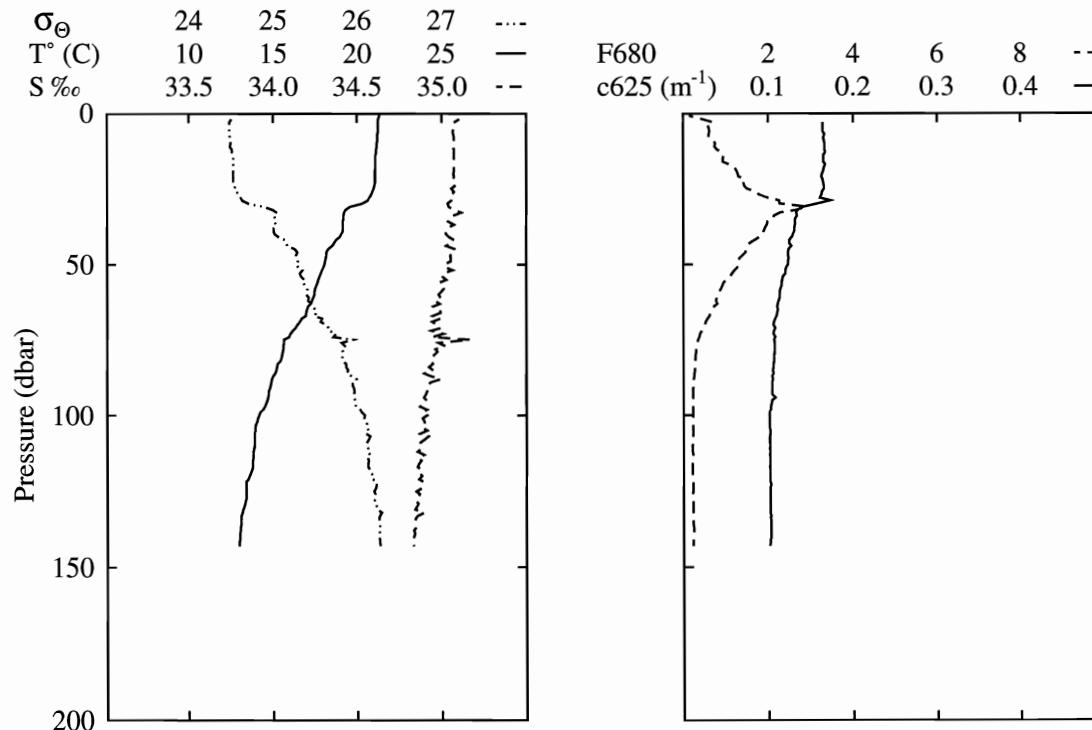
CTD # 21031033

STATION: 02 Isla Santa Cruz

Secchi: 17 m Munsell: 10G 7/6

DATE: 20:40 (GMT) 31 Mar 1993

POSITION: 25° 14.7' N 110° 42.7' W



## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

CTD # 21031033

STATION: 02 Isla Santa Cruz

DATE: 20:40 (GMT) 31 Mar 1993

Secchi: 17 m Munsell: 10G 7/6

POSITION: 25° 14.7' N 110° 42.7' W

Press db	Temp °C	Theta °C	Salin PSU	Sigma-θ g/l	c(625) 1/m	Fluor (680)
0	21.33					0.16
5	21.25	21.25	35.07	24.48	0.164	0.61
10	21.20	21.20	35.07	24.50	0.166	0.75
15	21.10	21.10	35.07	24.53	0.165	0.93
20	21.08	21.08	35.07	24.53	0.164	1.28
25	20.99	20.99	35.06	24.54	0.166	1.49
30	20.30	20.30	35.03	24.71	0.159	2.27
35	19.19	19.18	35.06	25.02	0.132	2.10
40	19.10	19.09	35.02	25.02	0.129	1.88
45	18.31	18.30	35.08	25.26	0.124	1.46
50	18.07	18.06	35.02	25.27	0.123	1.27
55	17.71	17.70	35.03	25.37	0.116	1.02
60	17.44	17.43	34.98	25.40	0.114	0.82
65	17.00	16.99	34.99	25.51	0.111	0.68
70	16.44	16.43	34.97	25.63	0.106	0.50
75	15.65	15.64	35.16	25.96	0.107	0.34
80	15.51	15.50	34.95	25.83	0.107	0.29
85	15.18	15.16	34.95	25.90	0.105	0.26
90	14.86	14.84	34.92	25.94	0.104	0.23
95	14.65	14.64	34.91	25.98	0.104	0.21
100	14.15	14.13	34.91	26.09	0.102	0.22
105	13.93	13.92	34.92	26.14	0.102	0.21
110	13.88	13.86	34.87	26.12	0.102	0.21
115	13.80	13.78	34.88	26.14	0.102	0.22
120	13.58	13.56	34.88	26.19	0.102	0.21
125	13.40	13.38	34.85	26.20	0.102	0.22
130	13.27	13.25	34.85	26.23	0.102	0.22
135	13.09	13.07	34.84	26.26	0.103	0.22
140	13.03	13.01	34.83	26.26	0.103	0.23
143	12.99	12.97	34.83	26.27	0.102	0.22

April 1995

## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

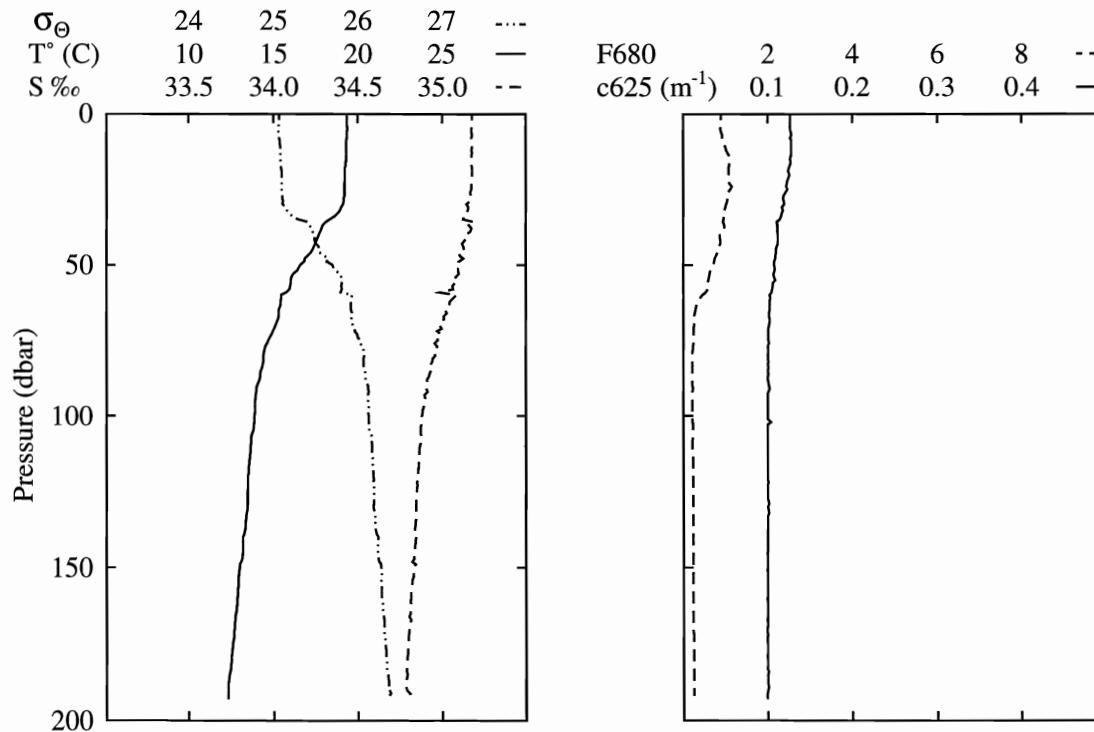
CTD # 17001043

STATION: 03 Santa Rosalia

Secchi: 24 m Munsell: 10G 7/6

DATE: 16:26 (GMT) 01 Apr 1993

POSITION: 27° 38.6' N 112° 10.6' W



## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

CTD # 17001043

STATION: 03 Santa Rosalia

DATE: 16:26 (GMT) 01 Apr 1993

Secchi: 24 m Munsell: 10G 7/6

POSITION: 27° 38.6' N 112° 10.6' W

Press db	Temp °C	Theta °C	Salin PSU	Sigma-θ g/l	c(625) 1/m	Fluor (680)
0	19.38	19.38	35.18	25.06	0.127	0.88
5	19.38	19.38	35.18	25.06	0.126	0.88
10	19.32	19.32	35.18	25.08	0.128	0.95
15	19.30	19.30	35.18	25.08	0.127	1.09
20	19.24	19.23	35.18	25.10	0.126	1.07
25	19.22	19.22	35.18	25.10	0.123	1.11
30	19.12	19.12	35.14	25.10	0.119	1.02
35	18.34	18.33	35.13	25.29	0.114	0.94
40	17.68	17.67	35.15	25.47	0.112	0.86
45	17.29	17.29	35.13	25.55	0.110	0.82
50	16.60	16.60	35.11	25.70	0.107	0.70
55	16.01	16.01	35.10	25.82	0.109	0.58
60	15.47	15.46	35.08	25.94	0.102	0.45
65	15.31	15.30	35.02	25.92	0.102	0.28
70	15.10	15.09	34.99	25.94	0.101	0.25
75	14.68	14.67	34.97	26.03	0.100	0.24
80	14.39	14.38	34.96	26.08	0.100	0.20
85	14.24	14.23	34.93	26.09	0.100	0.21
90	14.01	14.00	34.91	26.12	0.101	0.21
95	13.91	13.89	34.89	26.13	0.100	0.21
100	13.86	13.84	34.88	26.13	0.100	0.21
105	13.77	13.75	34.87	26.14	0.100	0.22
110	13.64	13.62	34.87	26.17	0.099	0.21
115	13.56	13.54	34.86	26.18	0.100	0.22
120	13.49	13.47	34.85	26.18	0.100	0.22
125	13.45	13.44	34.85	26.19	0.100	0.22
130	13.45	13.43	34.84	26.19	0.100	0.21
135	13.34	13.32	34.84	26.21	0.100	0.21
140	13.19	13.17	34.85	26.24	0.100	0.22
145	13.16	13.14	34.83	26.24	0.099	0.22
150	12.97	12.94	34.84	26.28	0.100	0.22
155	12.91	12.89	34.82	26.28	0.100	0.23
160	12.85	12.83	34.82	26.29	0.099	0.23
165	12.76	12.74	34.81	26.30	0.099	0.23
170	12.67	12.65	34.80	26.31	0.099	0.22
175	12.57	12.55	34.80	26.33	0.100	0.24
180	12.49	12.46	34.79	26.34	0.100	0.24
185	12.38	12.36	34.79	26.36	0.100	0.23
190	12.30	12.27	34.79	26.37	0.100	0.24
193	12.31	12.28	34.79	26.37	0.099	0.24

April 1995

## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

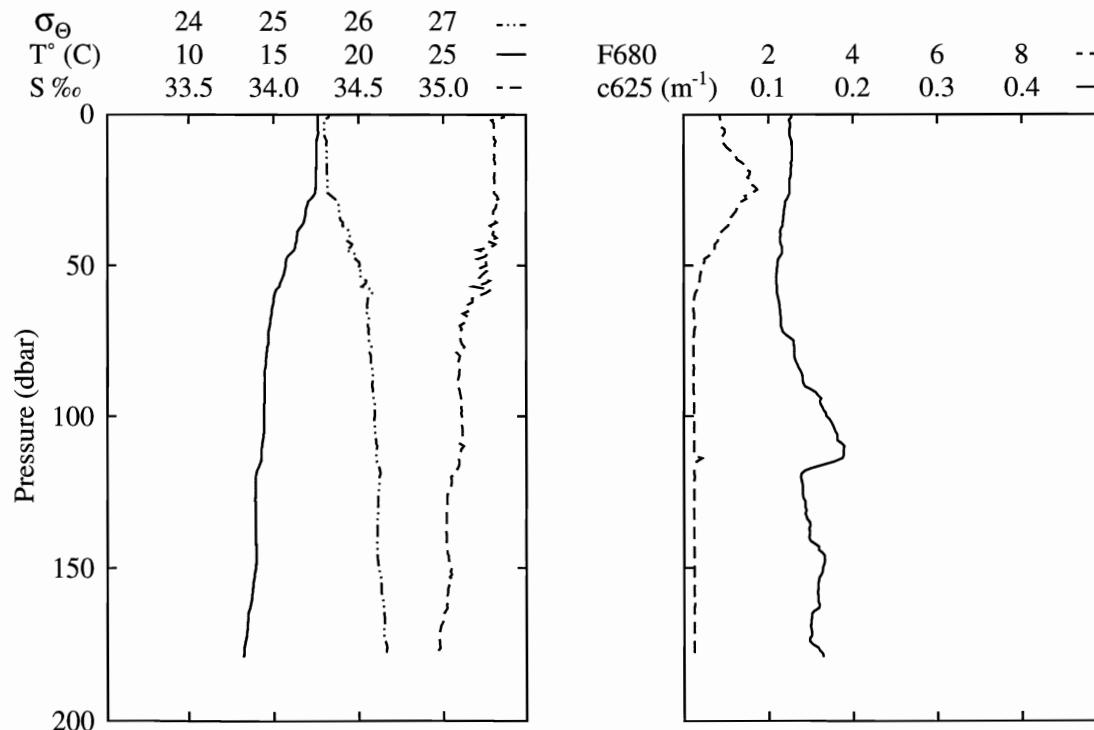
CTD # 17302043

STATION: 04 Puertocitos (Cuenca Delfin)

Secchi: 21 m Munsell: 10G 7/6

DATE: 17:11 (GMT) 02 Apr 1993

POSITION: 30° 13.9' N 114° 14.6' W



## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma CTD # 17302043  
 STATION: 04 Puertocitos (Cuenca Delfin)  
 DATE: 17:11 (GMT) 02 Apr 1993 Secchi: 21 m Munsell: 10G 7/6  
 POSITION: 30° 13.9' N 114° 14.6' W

Press db	Temp °C	Theta °C	Salin PSU	Sigma-θ g/l	c(625) 1/m	Fluor (680)
0	17.60	17.60	35.36	25.65	0.127	0.84
5	17.62	17.62	35.31	25.60	0.125	0.94
10	17.54	17.54	35.31	25.62	0.127	0.95
15	17.53	17.52	35.31	25.62	0.128	1.25
20	17.51	17.51	35.31	25.63	0.126	1.54
25	17.48	17.47	35.31	25.64	0.125	1.72
30	16.99	16.98	35.32	25.77	0.120	1.34
35	16.82	16.81	35.30	25.79	0.117	1.04
40	16.39	16.38	35.30	25.89	0.114	0.81
45	16.21	16.20	35.21	25.86	0.116	0.72
50	15.71	15.70	35.26	26.02	0.110	0.44
55	15.44	15.43	35.28	26.09	0.109	0.37
60	15.04	15.03	35.22	26.13	0.111	0.25
65	14.89	14.88	35.16	26.12	0.114	0.22
70	14.77	14.76	35.10	26.10	0.114	0.26
75	14.70	14.69	35.11	26.12	0.129	0.22
80	14.57	14.56	35.10	26.15	0.131	0.22
85	14.47	14.46	35.09	26.16	0.137	0.23
90	14.45	14.44	35.09	26.16	0.143	0.22
95	14.45	14.44	35.11	26.18	0.161	0.24
100	14.42	14.40	35.11	26.19	0.168	0.24
105	14.42	14.40	35.11	26.19	0.179	0.24
110	14.30	14.28	35.12	26.22	0.189	0.23
115	14.23	14.21	35.09	26.22	0.178	0.30
120	13.94	13.92	35.05	26.24	0.138	0.25
125	13.92	13.90	35.03	26.23	0.140	0.23
130	13.91	13.90	35.02	26.23	0.143	0.23
135	13.92	13.90	35.02	26.22	0.148	0.23
140	13.92	13.90	35.02	26.22	0.148	0.24
145	13.97	13.95	35.02	26.22	0.164	0.24
150	13.91	13.89	35.05	26.25	0.164	0.24
155	13.78	13.76	35.04	26.27	0.158	0.25
160	13.69	13.67	35.03	26.28	0.159	0.29
165	13.49	13.47	35.00	26.30	0.151	0.23
170	13.43	13.41	34.98	26.30	0.150	0.24
175	13.27	13.25	34.98	26.33	0.152	0.23
179	13.23	13.20	34.97	26.33	0.165	0.24

April 1995

## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

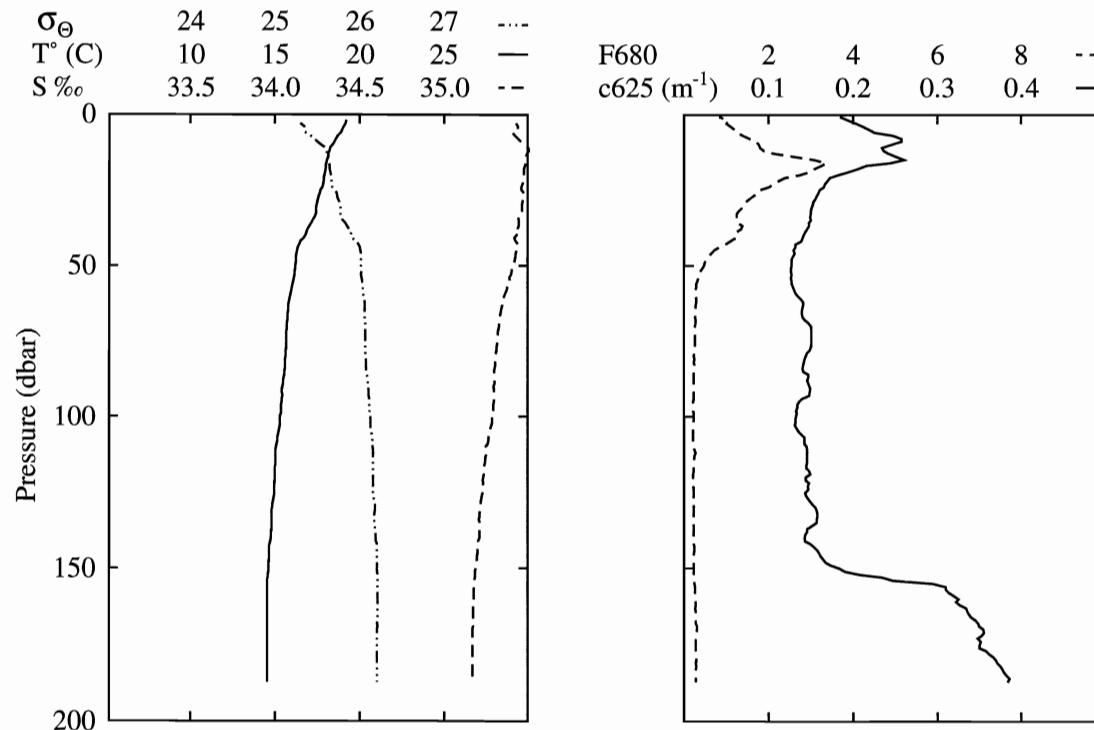
CTD # 19103043

STATION: 05 Wagner Basin

Secchi: 10 m Munsell: 5G 7/6

DATE: 18:33 (GMT) 03 Apr 1993

POSITION: 31° 01.5' N 114° 12.6' W



## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

CTD # 19103043

STATION: 05 Wagner Basin

DATE: 18:33 (GMT) 03 Apr 1993

Secchi: 10 m Munsell: 5G 7/6

POSITION: 31° 01.5' N 114° 12.6' W

Press db	Temp °C	Theta °C	Salin PSU	Sigma-θ g/l	c(625) 1/m	Fluor (680)
0					0.185	0.84
5	18.99	18.99	35.44	25.36	0.218	1.17
10	18.41	18.40	35.48	25.54	0.246	1.77
15	18.08	18.08	35.49	25.63	0.260	3.08
20	17.92	17.91	35.47	25.66	0.182	2.72
25	17.70	17.70	35.46	25.70	0.161	1.79
30	17.46	17.45	35.47	25.76	0.152	1.40
35	17.25	17.24	35.44	25.80	0.150	1.24
40	16.81	16.80	35.44	25.90	0.142	1.24
45	16.32	16.32	35.43	26.01	0.129	0.70
50	16.22	16.22	35.41	26.01	0.127	0.46
55	16.08	16.08	35.39	26.03	0.127	0.31
60	15.91	15.90	35.36	26.05	0.134	0.27
65	15.78	15.77	35.34	26.06	0.139	0.26
70	15.70	15.69	35.33	26.07	0.150	0.25
75	15.68	15.67	35.32	26.07	0.151	0.25
80	15.63	15.62	35.31	26.07	0.144	0.23
85	15.57	15.56	35.30	26.08	0.141	0.22
90	15.46	15.45	35.29	26.10	0.148	0.22
95	15.41	15.39	35.30	26.12	0.137	0.21
100	15.32	15.30	35.29	26.13	0.133	0.22
105	15.22	15.21	35.27	26.14	0.135	0.21
110	15.08	15.07	35.25	26.15	0.145	0.21
115	15.02	15.00	35.24	26.16	0.145	0.22
120	15.00	14.98	35.23	26.16	0.144	0.21
125	14.95	14.94	35.23	26.16	0.143	0.21
130	14.83	14.81	35.22	26.18	0.155	0.22
135	14.81	14.79	35.21	26.18	0.157	0.22
140	14.76	14.74	35.21	26.19	0.142	0.21
145	14.65	14.63	35.20	26.21	0.160	0.23
150	14.62	14.60	35.19	26.20	0.183	0.22
155	14.55	14.52	35.18	26.22	0.295	0.24
160	14.54	14.52	35.18	26.21	0.325	0.26
165	14.54	14.52	35.17	26.21	0.337	0.26
170	14.54	14.52	35.17	26.21	0.355	0.29
175	14.54	14.52	35.17	26.21	0.350	0.26
180	14.54	14.52	35.17	26.21	0.370	0.28
185	14.55	14.52	35.17	26.21	0.382	0.27
187	14.55	14.52	35.17	26.21	0.383	0.27

April 1995

## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

CTD # 17004043

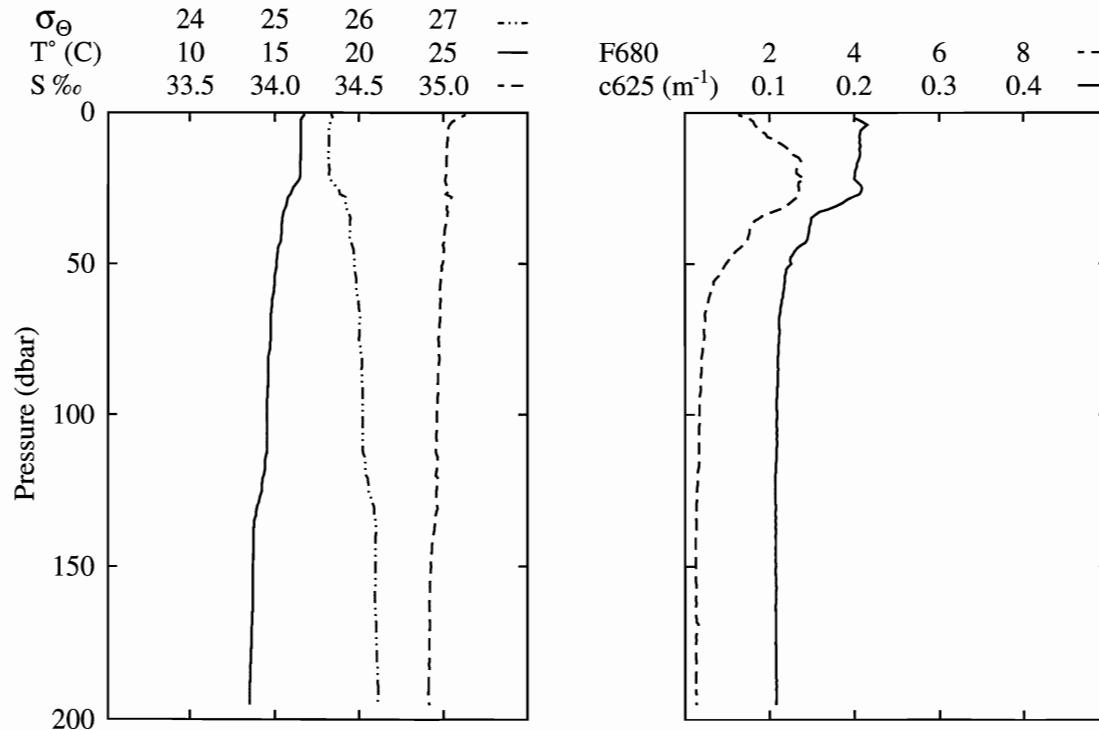
STATION: 06 Canal de Salsipuedes

Wind 0 kts; Waves 0 ft; Sky clear

DATE: 18:36 (GMT) 04 Apr 1993

Secchi: 12 m Munsell: 10G 7/6

POSITION: 28° 40.0' N 113° 01.0' W



## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma CTD # 17004043  
 STATION: 06 Canal de Salsipuedes Wind 0 kts; Waves 0 ft; Sky clear  
 DATE: 18:36 (GMT) 04 Apr 1993 Secchi: 12 m Munsell: 10G 7/6  
 POSITION: 28° 40.0' N 113° 01.0' W

Press db	Temp °C	Theta °C	Salin PSU	Sigma-θ g/l	c(625) 1/m	Fluor (680)
0	16.73	16.73	35.13	25.68		1.29
5	16.55	16.55	35.03	25.65	0.211	1.72
10	16.55	16.55	35.03	25.64	0.206	2.23
15	16.54	16.54	35.02	25.64	0.206	2.69
20	16.51	16.51	35.02	25.65	0.201	2.64
25	16.08	16.08	35.03	25.75	0.209	2.69
30	15.72	15.72	35.04	25.84	0.186	2.48
35	15.44	15.43	35.03	25.90	0.150	1.75
40	15.40	15.39	35.01	25.89	0.146	1.52
45	15.20	15.20	35.01	25.93	0.132	1.28
50	15.11	15.11	35.00	25.95	0.126	0.96
55	14.99	14.98	34.99	25.97	0.118	0.73
60	14.92	14.91	34.98	25.98	0.116	0.60
65	14.81	14.80	34.98	26.00	0.113	0.51
70	14.77	14.76	34.98	26.01	0.111	0.46
75	14.77	14.76	34.97	26.00	0.111	0.45
80	14.65	14.64	34.98	26.03	0.110	0.41
85	14.63	14.62	34.97	26.03	0.110	0.38
90	14.60	14.59	34.97	26.04	0.109	0.36
95	14.55	14.54	34.97	26.05	0.108	0.35
100	14.55	14.53	34.96	26.05	0.109	0.34
105	14.54	14.53	34.96	26.05	0.109	0.33
110	14.54	14.52	34.96	26.05	0.109	0.32
115	14.44	14.42	34.97	26.07	0.108	0.34
120	14.35	14.33	34.96	26.09	0.107	0.30
125	14.22	14.21	34.96	26.11	0.107	0.28
130	13.95	13.93	34.96	26.17	0.107	0.26
135	13.80	13.78	34.96	26.20	0.107	0.26
140	13.75	13.73	34.94	26.20	0.107	0.25
145	13.73	13.71	34.93	26.20	0.107	0.26
150	13.71	13.69	34.93	26.20	0.107	0.25
155	13.70	13.67	34.92	26.20	0.107	0.25
160	13.71	13.69	34.92	26.19	0.107	0.25
165	13.68	13.66	34.92	26.20	0.107	0.26
170	13.65	13.62	34.92	26.21	0.108	0.30
175	13.63	13.61	34.92	26.21	0.107	0.26
180	13.58	13.56	34.92	26.22	0.108	0.26
185	13.54	13.52	34.92	26.22	0.107	0.25
190	13.52	13.49	34.91	26.23	0.108	0.25
195	13.52	13.49	34.92	26.23	0.108	0.26

April 1995

## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

STATION: 07 Punta Santa Lugarda

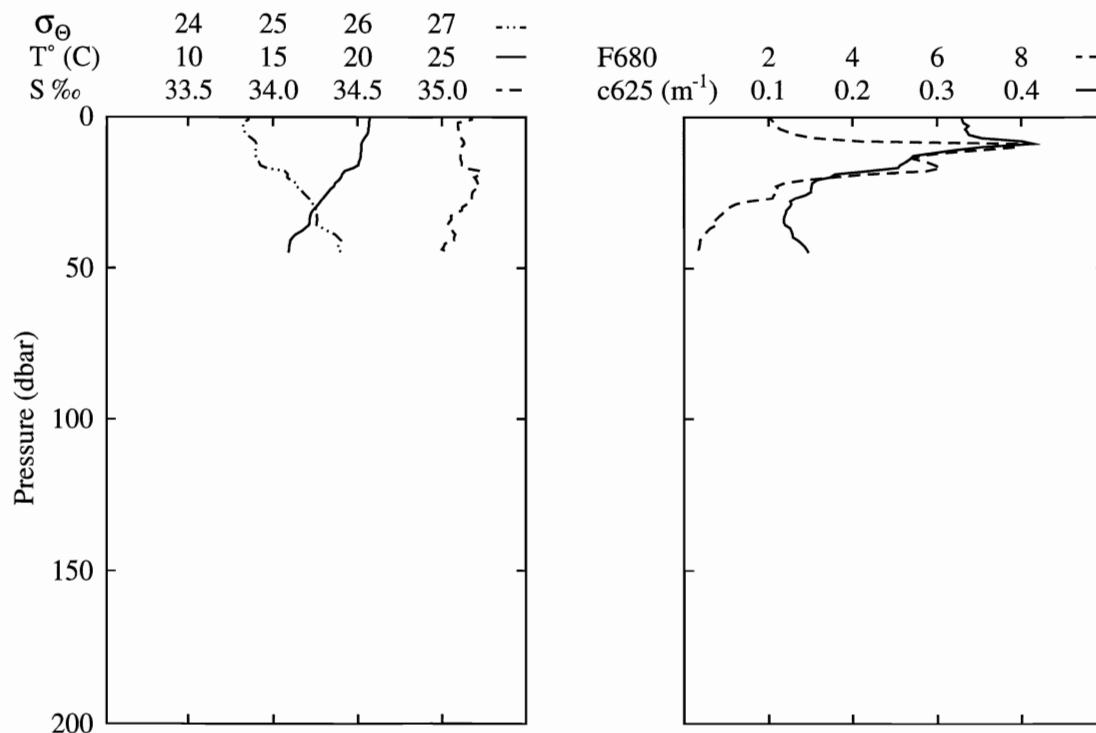
DATE: 18:00 (GMT) 05 Apr 1993

POSITION: 26° 50.5' N 110° 07.6' W

CTD # 18005043

Wind 6 kts; Waves 2 ft; Sky clear

Secchi: 7 m Munsell: 5G 7/6



## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma CTD # 18005043  
 STATION: 07 Punta Santa Lugarda Wind 6 kts; Waves 2 ft; Sky clear  
 DATE: 18:00 (GMT) 05 Apr 1993 Secchi: 7 m Munsell: 5G 7/6  
 POSITION: 26° 50.5' N 110° 07.6' W

Press db	Temp °C	Theta °C	Salin PSU	Sigma-θ g/l	c(625) 1/m	Fluor (680)
0	20.71	20.71	35.18	24.71	0.330	2.05
5	20.65	20.65	35.10	24.67	0.336	2.43
10	20.23	20.23	35.12	24.79	0.354	7.95
15	20.09	20.09	35.12	24.83	0.263	5.76
20	19.01	19.01	35.20	25.17	0.173	3.50
25	18.26	18.25	35.18	25.35	0.151	2.22
30	17.55	17.54	35.12	25.48	0.125	1.07
35	17.15	17.14	35.04	25.51	0.118	0.69
40	16.18	16.18	35.07	25.76	0.129	0.43
45	15.90	15.89	35.04	25.81	0.148	0.36

April 1995

## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

STATION: 08 Isla Altamura

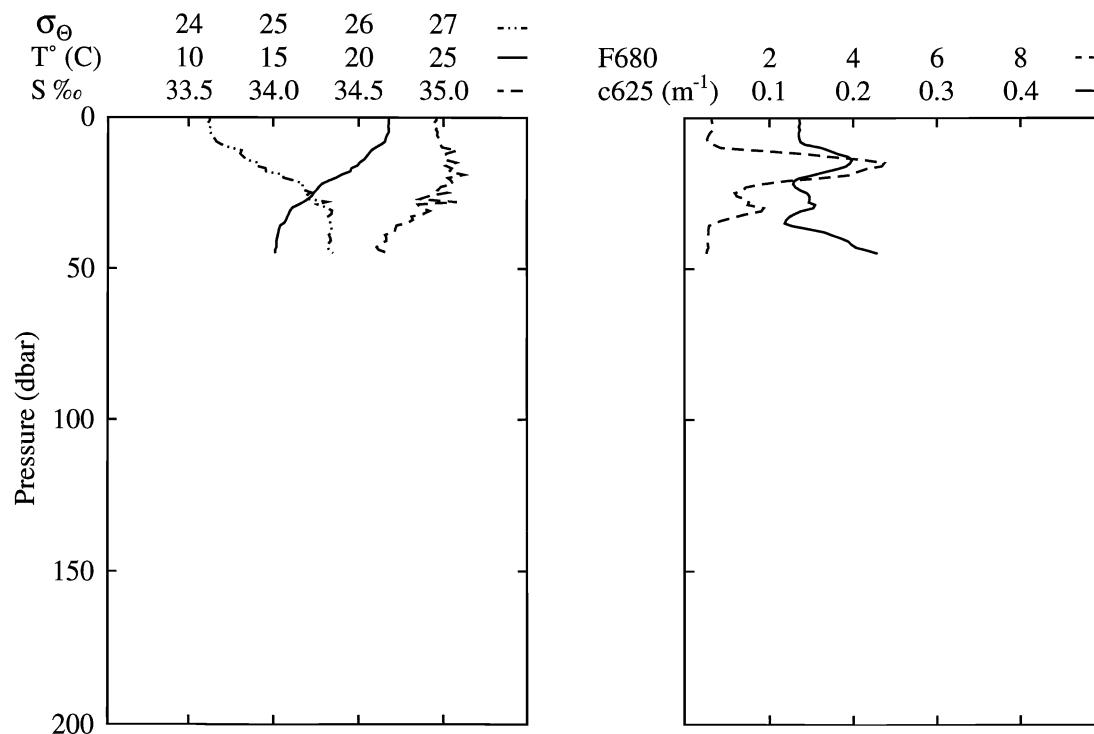
DATE: 18:05 (GMT) 06 Apr 1993

POSITION: 24° 42.8' N 108° 11.2' W

CTD # 18006043

Wind 5 kts; Waves 3 ft; Sky clear

Secchi: 17 m Munsell: 5BG 7/6



## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: E1 Puma CTD # 18006043  
 STATION: 08 Isla Altamura Wind 5 kts; Waves 3 ft; Sky clear  
 DATE: 18:05 (GMT) 06 Apr 1993 Secchi: 17 m Munsell: 5BG 7/6  
 POSITION: 24° 42.8' N 108° 11.2' W

Press db	Temp °C	Theta °C	Salin PSU	Sigma-θ g/l	c(625) 1/m	Fluor (680)
0	21.78	21.78	34.96	24.25	0.135	0.63
5	21.77	21.77	34.97	24.26	0.135	0.61
10	21.02	21.02	34.99	24.49	0.162	0.84
15	20.08	20.08	35.08	24.80	0.196	4.74
20	18.69	18.69	35.03	25.12	0.135	3.15
25	17.40	17.40	35.02	25.44	0.145	1.17
30	16.12	16.11	34.86	25.62	0.153	1.87
35	15.65	15.64	34.79	25.67	0.118	0.67
40	15.22	15.21	34.66	25.67	0.185	0.54
45	15.10	15.10	34.67	25.70	0.229	0.51

April 1995

## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

STATION: 09 Mazatlan

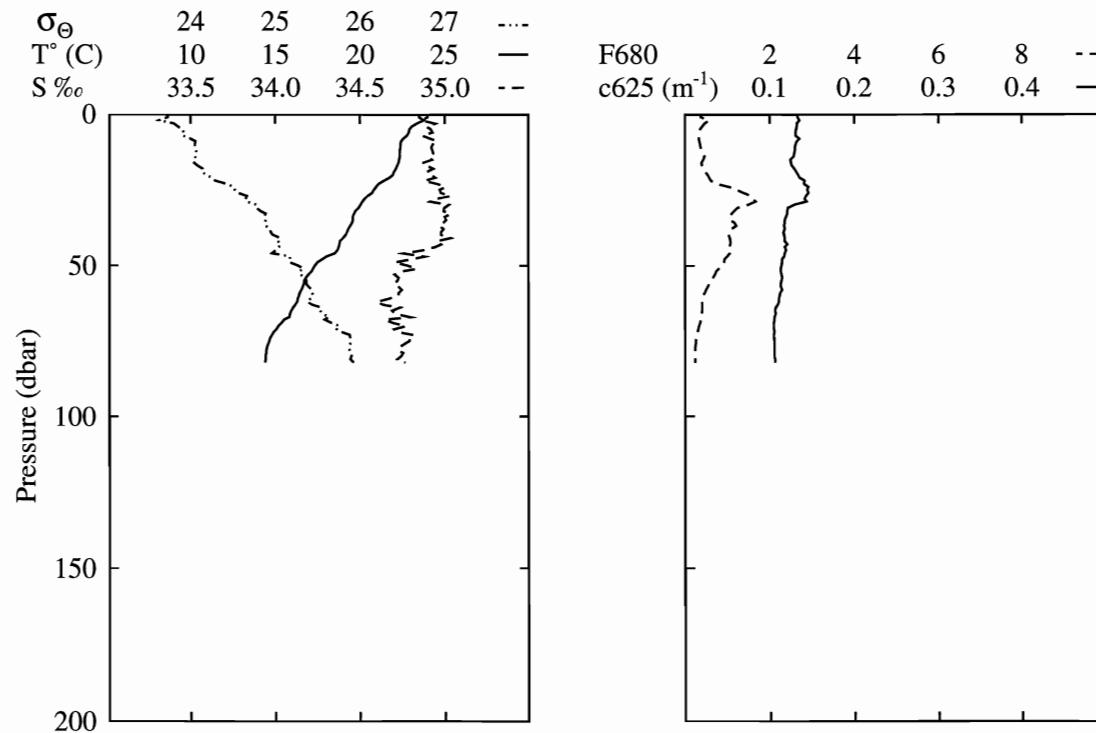
DATE: 17:48 (GMT) 07 Apr 1993

POSITION: 23° 10.3' N 106° 39.8' W

CTD # 17807043

Wind 0 kts; Waves 0 ft; Sky clear

Secchi: 22 m Munsell: 10G 7/6



## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma CTD # 17807043  
 STATION: 09 Mazatlan Wind 0 kts; Waves 0 ft; Sky clear  
 DATE: 17:48 (GMT) 07 Apr 1993 Secchi: 22 m Munsell: 10G 7/6  
 POSITION: 23° 10.3' N 106° 39.8' W

Press db	Temp °C	Theta °C	Salin PSU	Sigma-θ g/l	c(625) 1/m	Fluor (680)
0	23.48	23.48	34.90	23.72	0.133	0.37
5	22.93	22.93	34.92	23.89	0.131	0.36
10	22.41	22.41	34.93	24.05	0.130	0.35
15	22.31	22.31	34.92	24.07	0.124	0.43
20	21.92	21.92	34.92	24.18	0.133	0.54
25	20.83	20.83	34.97	24.52	0.144	1.21
30	20.02	20.02	35.02	24.78	0.129	1.50
35	19.57	19.56	35.01	24.88	0.117	1.06
40	19.17	19.16	34.98	24.96	0.117	1.02
45	18.67	18.66	34.87	25.01	0.119	1.08
50	17.36	17.35	34.78	25.26	0.113	0.86
55	16.71	16.70	34.72	25.37	0.113	0.62
60	16.41	16.40	34.73	25.45	0.111	0.42
65	15.93	15.92	34.69	25.53	0.106	0.40
70	15.20	15.19	34.77	25.75	0.105	0.33
75	14.65	14.63	34.79	25.89	0.105	0.26
80	14.42	14.41	34.74	25.90	0.105	0.23
82	14.40	14.39	34.77	25.93	0.106	0.23

April 1995

## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

STATION: 10 Mouth of Gulf

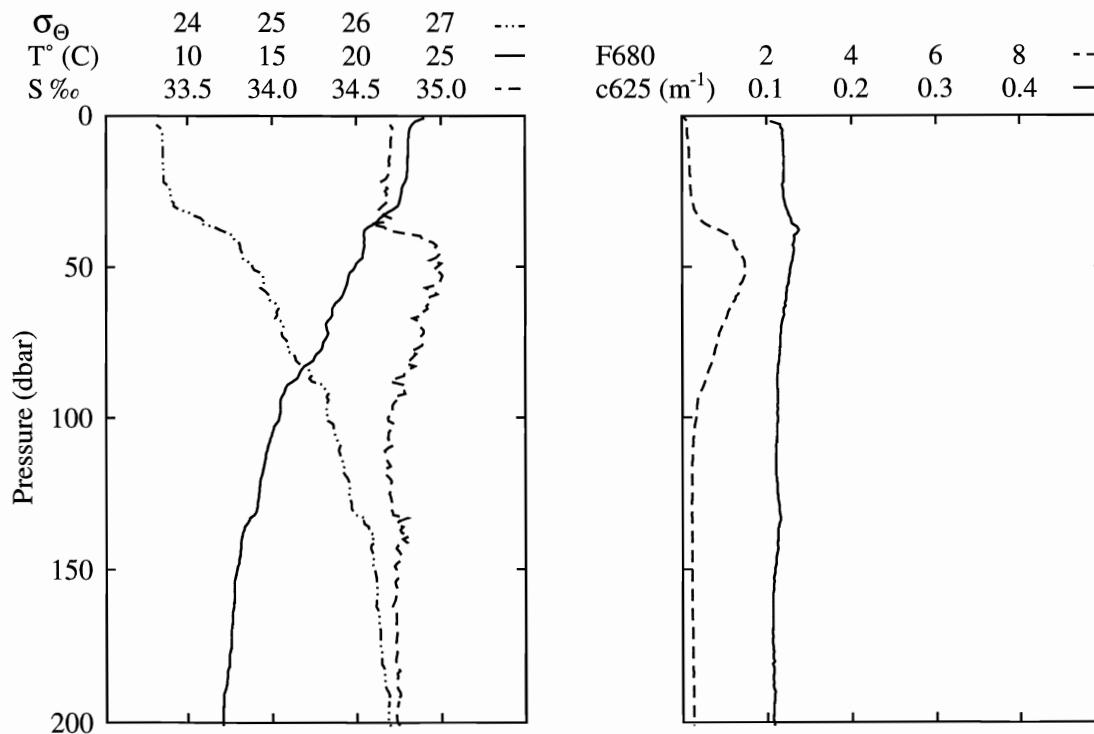
DATE: 20:43 (GMT) 10 Apr 1993

POSITION: 23° 04.9' N 107° 28.1' W

CTD # 20510043

Wind 3 kts; Waves 2 ft; Sky clear

Secchi: 35 m Munsell: 10B 7/8



## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

CTD # 20510043

STATION: 10 Mouth of Gulf

Wind 3 kts; Waves 2 ft; Sky clear

DATE: 20:43 (GMT) 10 Apr 1993

Secchi: 35 m Munsell: 10B 7/8

POSITION: 23° 04.9' N 107° 28.1' W

Press db	Temp °C	Theta °C	Salin PSU	Sigma-θ g/l	c(625) 1/m	Fluor (680)
0	23.98					0.05
5	23.16	23.16	34.71	23.67	0.119	0.12
10	23.08	23.07	34.70	23.69	0.119	0.14
15	23.04	23.04	34.70	23.69	0.120	0.16
20	23.00	22.99	34.69	23.70	0.119	0.18
25	22.69	22.68	34.67	23.78	0.120	0.20
30	22.45	22.45	34.66	23.83	0.122	0.27
35	21.25	21.25	34.69	24.19	0.129	0.47
40	20.47	20.46	34.88	24.55	0.132	1.14
45	20.42	20.41	34.97	24.63	0.132	1.33
50	19.94	19.93	34.98	24.76	0.128	1.48
55	19.47	19.46	34.99	24.90	0.126	1.42
60	19.12	19.11	34.94	24.95	0.123	1.27
65	18.56	18.55	34.89	25.05	0.120	1.08
70	18.20	18.19	34.88	25.13	0.117	0.94
75	18.04	18.02	34.89	25.18	0.116	0.83
80	17.50	17.49	34.84	25.27	0.115	0.73
85	16.62	16.61	34.78	25.44	0.112	0.60
90	15.80	15.79	34.76	25.61	0.112	0.47
95	15.50	15.48	34.73	25.65	0.112	0.35
100	15.42	15.40	34.68	25.64	0.112	0.33
105	15.00	14.99	34.69	25.74	0.112	0.27
110	14.73	14.72	34.69	25.79	0.111	0.24
115	14.53	14.52	34.69	25.84	0.110	0.23
120	14.29	14.28	34.70	25.89	0.111	0.21
125	14.21	14.20	34.69	25.91	0.112	0.21
130	14.09	14.07	34.70	25.94	0.114	0.21
135	13.50	13.48	34.73	26.09	0.115	0.22
140	13.16	13.14	34.77	26.19	0.113	0.22
145	13.09	13.07	34.76	26.20	0.111	0.22
150	12.89	12.87	34.73	26.21	0.109	0.22
155	12.75	12.73	34.73	26.24	0.107	0.22
160	12.74	12.72	34.73	26.24	0.107	0.22
165	12.63	12.61	34.74	26.27	0.107	0.23
170	12.58	12.55	34.74	26.28	0.106	0.23
175	12.55	12.52	34.73	26.28	0.107	0.24
180	12.46	12.44	34.73	26.30	0.108	0.24
185	12.33	12.31	34.74	26.33	0.107	0.24
190	12.16	12.14	34.75	26.37	0.109	0.25
195	12.09	12.06	34.74	26.38	0.107	0.25
200	12.06	12.03	34.74	26.38	0.107	0.25
201	12.06	12.03	34.75	26.39	0.108	0.25

April 1995

## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

STATION: 11 Punta Marquez

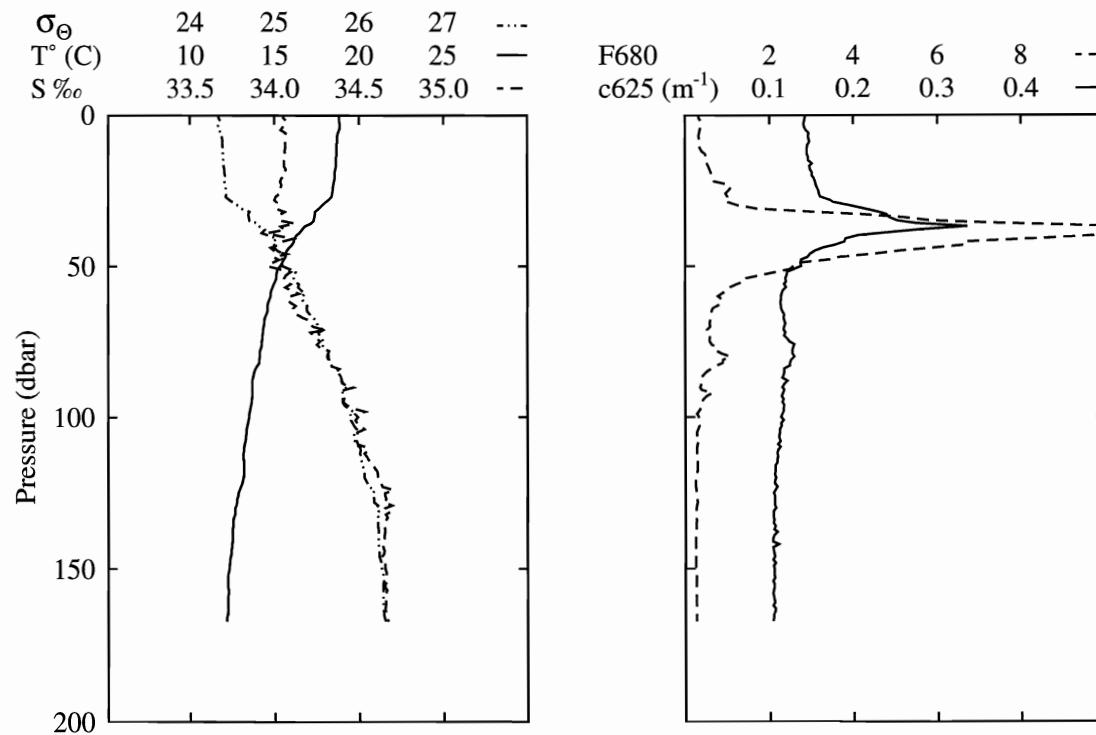
DATE: 17:21 (GMT) 11 Apr 1993

POSITION: 23° 46.6' N 111° 13.7' W

CTD # 17211043

Wind 11 kts; Waves 3 ft; Sky clear

Secchi: 20 m Munsell: 10BG 7/6



## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma CTD # 17211043  
 STATION: 11 Punta Marquez Wind 11 kts; Waves 3 ft; Sky clear  
 DATE: 17:21 (GMT) 11 Apr 1993 Secchi: 20 m Munsell: 10BG 7/6  
 POSITION: 23° 46.6' N 111° 13.7' W

Press db	Temp °C	Theta °C	Salin PSU	Sigma-θ g/l	c(625) 1/m	Fluor (680)
0	18.85	18.85	34.05	24.34	0.142	0.31
5	18.81	18.81	34.04	24.33	0.143	0.34
10	18.69	18.68	34.07	24.39	0.145	0.33
15	18.65	18.64	34.06	24.39	0.146	0.48
20	18.56	18.56	34.06	24.42	0.151	0.61
25	18.43	18.43	34.04	24.43	0.158	1.03
30	17.80	17.80	34.01	24.57	0.195	1.24
35	17.32	17.32	34.04	24.70	0.252	5.85
40	16.27	16.26	34.02	24.93	0.206	9.91
45	15.73	15.72	34.00	25.04	0.154	5.14
50	15.35	15.34	33.96	25.10	0.137	2.57
55	15.04	15.03	34.06	25.24	0.119	1.41
60	14.78	14.77	34.09	25.32	0.114	0.77
65	14.56	14.55	34.12	25.39	0.115	0.62
70	14.34	14.33	34.23	25.52	0.118	0.59
75	14.24	14.23	34.27	25.58	0.124	0.57
80	14.11	14.10	34.31	25.63	0.130	1.06
85	13.79	13.78	34.36	25.74	0.118	0.49
90	13.65	13.64	34.47	25.85	0.115	0.34
95	13.64	13.63	34.41	25.81	0.115	0.38
100	13.46	13.45	34.49	25.91	0.114	0.30
105	13.31	13.29	34.49	25.94	0.112	0.26
110	13.19	13.17	34.54	26.00	0.112	0.27
115	13.16	13.14	34.57	26.03	0.109	0.28
120	13.15	13.13	34.61	26.07	0.107	0.24
125	12.84	12.83	34.65	26.16	0.105	0.25
130	12.65	12.63	34.66	26.20	0.107	0.24
135	12.53	12.51	34.65	26.22	0.104	0.25
140	12.48	12.46	34.65	26.23	0.103	0.24
145	12.40	12.38	34.64	26.24	0.105	0.24
150	12.28	12.26	34.65	26.27	0.105	0.24
155	12.23	12.21	34.65	26.28	0.105	0.24
160	12.24	12.22	34.66	26.28	0.105	0.24
165	12.20	12.18	34.66	26.29	0.104	0.25
167	12.13	12.11	34.67	26.31	0.104	0.25

April 1995

## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

STATION: 12 Punta Abreojos

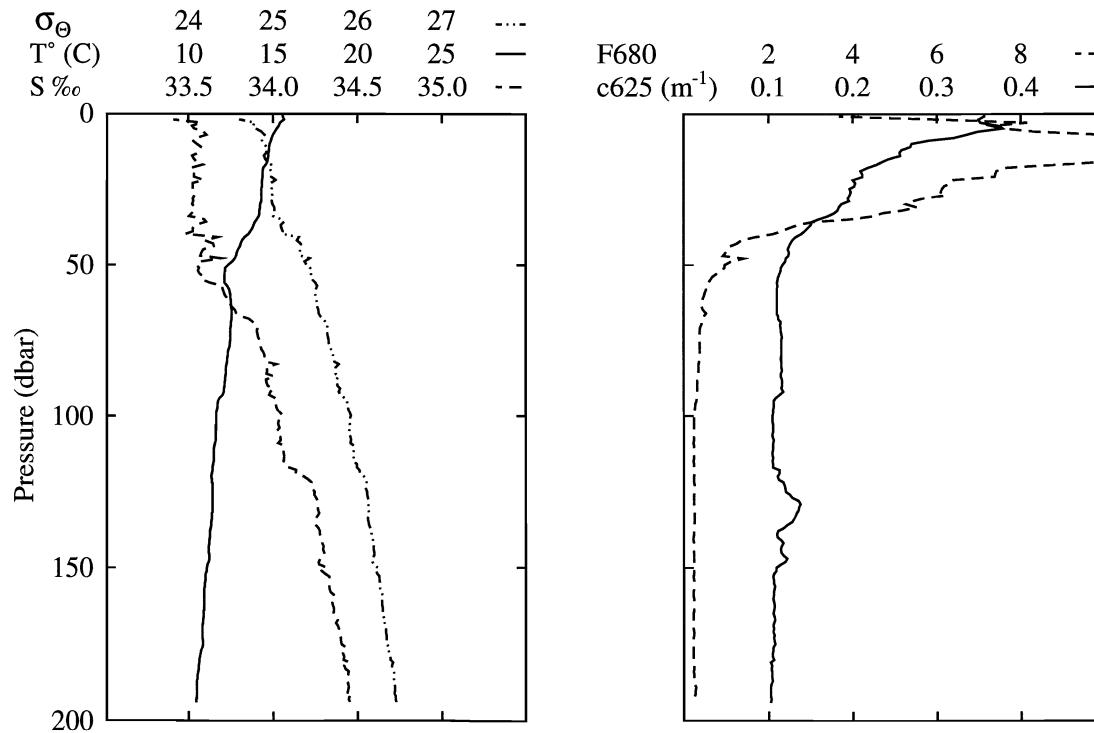
DATE: 17:04 (GMT) 12 Apr 1993

POSITION: 26° 30.6' N 114° 00.3' W

CTD # 17012043

Wind 10 kts; Waves 4 ft; Overcast

Secchi: 8 m Munsell: 10GY 7/6



## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: E1 Puma CTD # 17012043  
 STATION: 12 Punta Abreojos Wind 10 kts; Waves 4 ft; Overcast  
 DATE: 17:04 (GMT) 12 Apr 1993 Secchi: 8 m Munsell: 10GY 7/6  
 POSITION: 26° 30.6' N 114° 00.3' W

Press db	Temp °C	Theta °C	Salin PSU	Sigma-θ g/l	c(625) 1/m	Fluor (680)
0	15.58				0.356	3.70
5	15.24	15.24	33.53	24.79	0.379	7.57
10	14.81	14.81	33.55	24.90	0.270	10.00
15	14.68	14.68	33.53	24.91	0.242	9.86
20	14.38	14.37	33.53	24.98	0.211	7.39
25	14.32	14.32	33.52	24.98	0.196	6.13
30	14.25	14.25	33.52	24.99	0.186	5.26
35	14.05	14.05	33.59	25.09	0.159	3.90
40	13.56	13.55	33.48	25.11	0.139	2.10
45	12.93	12.93	33.59	25.31	0.123	1.04
50	12.38	12.37	33.55	25.39	0.116	0.96
55	12.15	12.14	33.59	25.47	0.110	0.61
60	12.49	12.48	33.71	25.50	0.109	0.47
65	12.55	12.54	33.78	25.54	0.110	0.44
70	12.51	12.50	33.90	25.64	0.114	0.40
75	12.48	12.47	33.92	25.66	0.115	0.36
80	12.33	12.32	33.95	25.71	0.115	0.37
85	12.24	12.23	33.96	25.74	0.115	0.34
90	12.14	12.12	33.97	25.77	0.115	0.31
95	11.77	11.76	34.02	25.88	0.106	0.29
100	11.65	11.64	34.05	25.92	0.104	0.24
105	11.63	11.62	34.02	25.90	0.105	0.23
110	11.54	11.52	34.06	25.95	0.105	0.23
115	11.50	11.49	34.06	25.96	0.104	0.22
120	11.36	11.35	34.18	26.07	0.110	0.24
125	11.42	11.40	34.24	26.11	0.121	0.25
130	11.42	11.40	34.26	26.13	0.136	0.25
135	11.36	11.35	34.25	26.13	0.128	0.25
140	11.26	11.24	34.28	26.17	0.110	0.22
145	11.21	11.20	34.30	26.20	0.115	0.24
150	11.08	11.06	34.32	26.23	0.109	0.23
155	10.99	10.97	34.34	26.27	0.106	0.24
160	10.92	10.90	34.35	26.29	0.105	0.24
165	10.90	10.88	34.36	26.30	0.105	0.23
170	10.82	10.80	34.39	26.34	0.106	0.23
175	10.85	10.83	34.40	26.34	0.107	0.23
180	10.65	10.63	34.42	26.39	0.106	0.22
185	10.53	10.51	34.44	26.43	0.103	0.24
190	10.48	10.46	34.44	26.44	0.102	0.27
194	10.45	10.43	34.46	26.45	0.102	0.23

April 1995

## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma

STATION: 13 Bahia de San Quintin

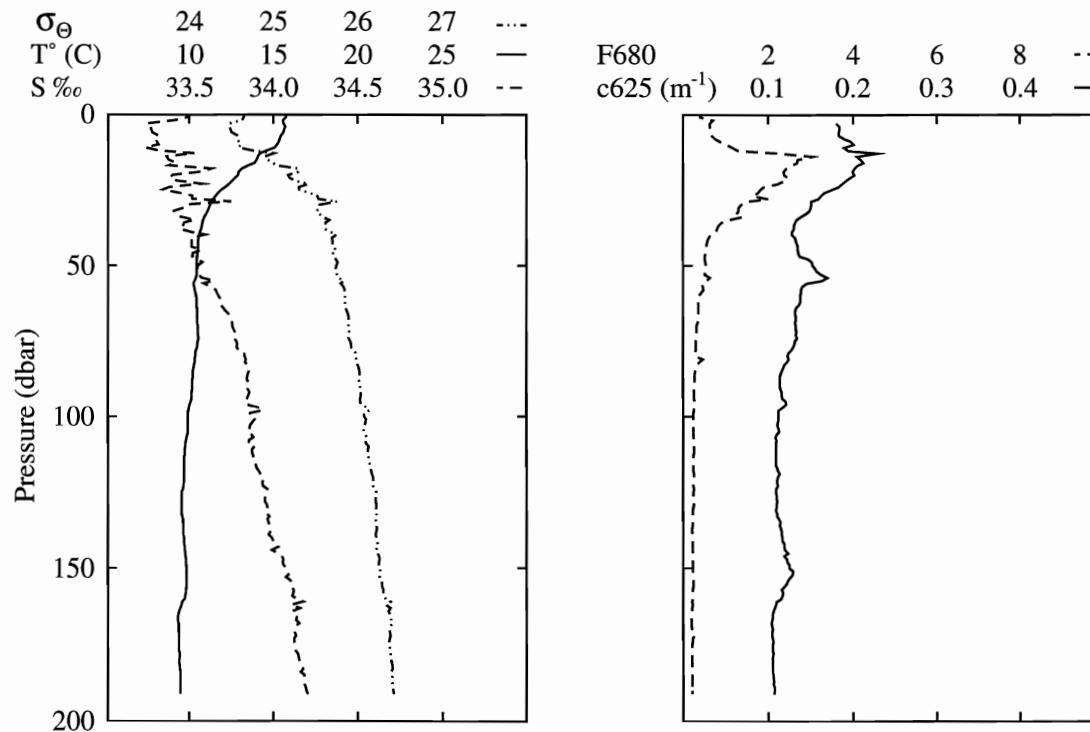
DATE: 18:52 (GMT) 13 Apr 1993

POSITION: 30° 05.3' N 116° 03.5' W

CTD # 18813043

Wind 10 kts; Waves 5 ft; High cirrus

Secchi: 12 m Munsell: 5G 7/6



## MODIS Marine Optical Characterization Experiment - II NOAA/MLML

CRUISE: MOCE-2 SHIP: El Puma CTD # 18813043  
 STATION: 13 Bahia de San Quintin Wind 10 kts; Waves 5 ft; High cirrus  
 DATE: 18:52 (GMT) 13 Apr 1993 Secchi: 12 m Munsell: 5G 7/6  
 POSITION: 30° 05.3' N 116° 03.5' W

Press db	Temp °C	Theta °C	Salin PSU	Sigma-θ g/l	c(625) 1/m	Fluor (680)
0	15.74	15.74	33.49	24.65		0.40
5	15.64	15.64	33.26	24.49	0.184	0.64
10	15.24	15.24	33.31	24.62	0.201	1.01
15	13.99	13.99	33.37	24.93	0.209	2.69
20	12.89	12.89	33.40	25.17	0.201	2.38
25	11.93	11.93	33.34	25.31	0.175	1.81
30	11.23	11.22	33.48	25.55	0.150	1.36
35	10.81	10.80	33.53	25.67	0.133	1.05
40	10.60	10.60	33.59	25.75	0.128	0.65
45	10.50	10.49	33.57	25.75	0.135	0.54
50	10.44	10.43	33.55	25.75	0.152	0.54
55	10.31	10.30	33.65	25.84	0.163	0.55
60	10.41	10.40	33.67	25.85	0.138	0.38
65	10.47	10.46	33.71	25.87	0.132	0.35
70	10.52	10.51	33.76	25.89	0.132	0.32
75	10.52	10.51	33.78	25.91	0.132	0.30
80	10.35	10.34	33.83	25.98	0.123	0.27
85	10.23	10.22	33.85	26.02	0.116	0.27
90	10.17	10.16	33.85	26.03	0.113	0.26
95	10.08	10.07	33.84	26.03	0.120	0.26
100	9.92	9.90	33.86	26.08	0.112	0.24
105	9.90	9.89	33.85	26.07	0.112	0.23
110	9.75	9.74	33.89	26.13	0.109	0.25
115	9.69	9.67	33.88	26.13	0.109	0.24
120	9.67	9.66	33.94	26.18	0.111	0.24
125	9.54	9.53	33.96	26.22	0.109	0.24
130	9.54	9.53	33.97	26.22	0.110	0.24
135	9.61	9.60	33.97	26.22	0.114	0.22
140	9.67	9.65	33.99	26.22	0.117	0.22
145	9.75	9.74	34.03	26.24	0.123	0.22
150	9.82	9.80	34.08	26.27	0.125	0.22
155	9.83	9.82	34.11	26.29	0.122	0.23
160	9.70	9.68	34.14	26.33	0.115	0.22
165	9.33	9.32	34.12	26.38	0.105	0.20
170	9.35	9.33	34.13	26.38	0.105	0.20
175	9.37	9.35	34.13	26.38	0.105	0.21
180	9.40	9.38	34.15	26.40	0.105	0.20
185	9.46	9.44	34.19	26.41	0.106	0.21
190	9.46	9.44	34.20	26.42	0.107	0.21
191	9.46	9.44	34.20	26.43	0.107	0.21

**Appendix 3. Total Suspended Material and Particulate Organic Carbon and Nitrogen.**

Explanation of Data Tables:

Depth      Pressure from CHORS VLST (m)

TSM      Total Suspended Material ( $\text{mg l}^{-1}$ )

POC      Particulate Organic Carbon ( $\mu\text{g l}^{-1}$ )

PON      Particulate Organic Nitrogen ( $\mu\text{g l}^{-1}$ )

### Appendix 3. (continued) Total Suspended Material and Particulate Organic Carbon and Nitrogen

Date (GMT)	Time (GMT)	Latitude (deg N)	Longitude (deg W)	Station Name	Depth (m)	TSM (ug/L)	POC (ug/L)	PON (ug/L)	C/N (mol)
29-Mar-93	17:54	25.8575	113.5007	1	0	510	90.2	11.6	9.1
29-Mar-93	19:49			1	0	80	62.5	10.9	6.7
30-Mar-93	05:45			Trk 1	0	550	81.3	15.6	6.1
31-Mar-93		25.2455	110.7115	2	0	280	137.3	20.5	7.8
31-Mar-93		25.2455	110.7115	2	15	580	121.2	18.8	7.5
31-Mar-93		25.2455	110.7115	2	30	340	117.9	21.7	6.3
01-Apr-93	17:15	27.6442	112.1770	3	0	370	144.0	21.0	8.0
01-Apr-93	17:15	27.6442	112.1770	3	15	290	143.2	23.3	7.2
01-Apr-93	17:15	27.6442	112.1770	3	30				
02-Apr-93	02:42	28.4817	112.3940	Trk 3	0	490	232.6	39.2	6.9
02-Apr-93	03:50	28.2750	112.5037	Trk 3	0	520	200.3	36.4	6.4
02-Apr-93	18:11	30.2310	114.2442	4	0	190	108.1	20.6	6.1
02-Apr-93	18:11	30.2310	114.2442	4	15	740	130.4	25.5	6.0
02-Apr-93	18:11	30.2310	114.2442	4	24.5	430	118.3	23.9	5.8
03-Apr-93	03:00	30.3133	114.4632	Trk 4	0	720	391.9	63.1	7.2
03-Apr-93	04:09	30.1847	114.2730	Trk 4	0	670	416.7	73.4	6.6
03-Apr-93		31.0248	114.2033	5	2	970	173.0	32.7	6.2
03-Apr-93		31.0248	114.2033	5	8	940	236.1	43.3	6.4
03-Apr-93		31.0248	114.2033	5	15	760	256.4	51.6	5.8
03-Apr-93		31.0248	114.2033	5	25	330	114.7	22.0	6.1
04-Apr-93	03:04	30.4262	114.0613	Trk 5	0	1470	257.1	44.7	6.7
04-Apr-93	04:05	30.2847	113.9897	Trk 5	0	660	317.8	55.6	6.7
04-Apr-93	16:22	28.6593	113.0062	6	2	420	185.4	37.0	5.8
04-Apr-93	16:22	28.6593	113.0062	6	8	410	308.3	61.1	5.9
04-Apr-93	16:22	28.6593	113.0062	6	15	480	203.5	40.1	5.9
04-Apr-93	16:22	28.6593	113.0062	6	25				
05-Apr-93	03:10	27.9135	112.0223	Trk 6	0	1600	169.7	33.3	5.9
05-Apr-93	04:00	27.8055	111.8633	Trk 6	0	810	177.0	30.1	6.9
05-Apr-93	16:00	26.8227	110.1153	7	1.5	860	246.3	40.1	7.2
05-Apr-93	16:00	26.8227	110.1153	7	4	840	266.0	43.9	7.1
05-Apr-93	16:00	26.8227	110.1153	7	8	870	316.8	50.9	7.3
05-Apr-93	16:00	26.8227	110.1153	7	12	1440	307.3	51.7	7.0
06-Apr-93	03:00	25.8747	109.6850	Trk 7	0	590	112.1	22.5	5.8
06-Apr-93	04:00	25.6802	109.5022	Trk 7	0	760	137.5	27.2	5.9
06-Apr-93	15:30	24.7083	108.1922	8	1.5	380	134.9	24.6	6.4
06-Apr-93	15:30	24.7083	108.1922	8	4	660	211.2	32.7	7.5
06-Apr-93	15:30	24.7083	108.1922	8	8	800	182.5	34.1	6.2
06-Apr-93	15:30	24.7083	108.1922	8	18	2600	207.9	39.8	6.1
07-Apr-93	03:00	23.9897	107.4630	Trk 8	0	1400	73.7	15.4	5.6
07-Apr-93	04:00	23.8035	107.2807	Trk 8	0	830	76.6	14.2	6.3
07-Apr-93		23.1242	106.6357	9	1	230	73.5	12.9	6.6
07-Apr-93		23.1242	106.6357	9	15	1050	52.4	10.1	6.1
07-Apr-93		23.1242	106.6357	9	33	180	20.6		
10-Apr-93		23.0658	107.4648	10	1	30	24.7	5.1	5.7
10-Apr-93		23.0658	107.4648	10	10	110	35.7	7.1	5.9
10-Apr-93		23.0658	107.4648	10	41	220	36.8	7.8	5.5
11-Apr-93	03:00	22.9820	108.6422	Trk 10	0	650	62.0	10.8	6.7
11-Apr-93	04:00	22.9598	108.8642	Trk 10	0	290	70.6	13.8	6.7
11-Apr-93	17:17	23.7758	111.2290	11	0	330	84.7	12.6	7.8
11-Apr-93	17:17	23.7758	111.2290	11	20				
11-Apr-93	17:17	23.7758	111.2290	11	49	380	155.8	29.2	6.2
11-Apr-93	22:58	24.0097	111.5087	Trk 11	0	750	364.5	53.6	7.9
12-Apr-93	03:00	24.5088	112.1547	Trk 11	0	370	112.1	20.2	6.5
12-Apr-93	16:57	26.5107	114.0057	12	0	1540			
12-Apr-93	16:57	26.5107	114.0057	12	2	790	386.6	41.1	11.0
12-Apr-93	16:57	26.5107	114.0057	12	10	930	296.3	51.7	6.7
12-Apr-93	16:57	26.5107	114.0057	12	18	1330	259.9	45.8	6.6
12-Apr-93	21:47	26.6557	114.1098	Trk 12	0	1240	546.6	78.0	8.2
13-Apr-93	01:00	27.1418	114.5208	Trk 12	0	1360	870.5	103.2	9.8
13-Apr-93	02:30	27.3510	114.7317	Trk 12	0	1610	446.5	76.5	6.8
13-Apr-93	04:13	27.6068	114.9632	Trk 12	0	900	449.4	79.6	6.6
13-Apr-93	19:24	30.0878	116.0587	13	0	560	179.3	25.5	8.2
13-Apr-93	19:24	30.0878	116.0587	13	4	360	122.1	22.4	6.4
13-Apr-93	19:24	30.0878	116.0587	13	17	2080	218.4	39.8	6.4
13-Apr-93	19:24	30.0878	116.0587	13	30	290	26.3	5.0	6.1

