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Data Report: Summary and Assessment of CTD Data from MDBC Expeditions aboard NOAA Ship *Pisces*, R/V *Point Sur*, and R/V *Pelican* October 2021–October 2023

Coral Propagation Technique Development Project and Habitat Assessment and Evaluation Project

Authors

Kassidy L. Lange[1] and Peter J. Etnoyer[2]

[1] *CSS, Inc., under contract to NOAA, National Ocean Service, National Centers for Coastal Ocean Science*
[2] *NOAA, National Ocean Service, National Centers for Coastal Ocean Science*

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For more information on MDBC Restoration, please visit:

https://coastalscience.noaa.gov/project/scientific-support-for-mesophotic-and-deep-benthic-community-restoration-in-the-gulf-of-america/

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Or direct questions and comments to:
Kassidy L. Lange
CSS Inc., under contract to NOAA
kassidy.lange@noaa.gov

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Deepwater Horizon **Mesophotic and Deep Benthic Communities Restoration**

This report is part of the NOAA Mesophotic and Deep Benthic Communities (MDBC) Series of publications that share the results of work conducted by the Deepwater Horizon MDBC restoration projects.

The 2010 *Deepwater Horizon* oil spill was an unprecedented event. Approximately 3.2 million barrels of oil were released into the deep ocean over nearly three months. The plume of oil moved throughout the water column, formed surface slicks that cumulatively covered an area the size of Virginia, and washed oil onto at least 1,300 miles of shoreline habitats. More than 770 square miles (2,000 square kilometers) of deep benthic habitat were injured by the oil spill, including areas surrounding the *Deepwater Horizon* wellhead and parts of the mesophotic reef complex located at the edge of the Mississippi–Alabama continental shelf.

Under the Oil Pollution Act, state and federal natural resource trustees conducted a Natural Resource Damage Assessment (NRDA). The Trustees assessed damages, quantifying the unprecedented injuries to natural resources and lost services. They also developed a programmatic restoration plan to restore injured resources and compensate the public for lost services.

In April 2016, a settlement was finalized that included up to $8.8 billion in funding for the Deepwater Horizon Trustees to restore the natural resource injuries caused by the oil spill as described in their programmatic restoration plan, Final Programmatic Damage Assessment and Restoration Plan and Final Programmatic Environmental Impact Statement. The Deepwater Horizon Open Ocean Trustee Implementation Group is responsible for restoring natural resources and their services within the Open Ocean Restoration Area that were injured by the oil spill. The Open Ocean Trustees include NOAA, U.S. Department of the Interior, U.S. Environmental Protection Agency, and U.S. Department of Agriculture.

In 2019, the Open Ocean Trustee Implementation Group committed more than $126 million to implement four restoration projects to address the injury to MDBC. The MDBC projects are: Mapping, Ground-Truthing, and Predictive Habitat Modeling; Habitat Assessment and Evaluation; Coral Propagation Technique Development; and Active Management and Protection. NOAA and the Department of the Interior are implementing the projects, in cooperation with a range of partners, over eight years.

Together, the projects take a phased approach to meet the challenges involved in restoring deep-sea habitats. Challenges to restoration include a limited scientific understanding of these communities, limited experience with restoration at the depths at which these communities occur, and remote locations that limit accessibility.

More information about *Deepwater Horizon* restoration and the MDBC restoration projects is available at: https://www.gulfspillrestoration.noaa.gov

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Executive Summary

This environmental data summary report provides visualization and interpretation of all shipboard conductivity, temperature, and depth (CTD) data collected during eight expeditions aboard three vessels between October 2021 and 2023— two aboard NOAA Ship *Pisces*, five aboard R/V *Point Sur*, and one aboard R/V *Pelican*. The expeditions characterized biotic and abiotic aspects of the mesophotic zone on the Texas–Louisiana Continental Shelf, Mississippi–Alabama Continental Shelf/Slope, and West Florida Continental Shelf. The results of this assessment will be applied to in situ and ex situ propagation trials. The trials are intended to support benthic habitat restoration and inform laboratory-based husbandry of gorgonian octocorals. Parameters of interest for these applications include temperature, salinity, and light levels. CTD sensor data were used to calculate in situ water column properties including the mixed layer depth across all of the areas visited and the 10% and 1% surface irradiance on the Mississippi–Alabama Continental Shelf. These properties were used to make comparisons between areas and seasons that can be used to better understand the oceanography in the region and draw connections to the biology of the octocorals present.

1. Introduction

Multiple expeditions aboard the vessels NOAA Ship *Pisces*, R/V *Point Sur*, and R/V *Pelican* collected mesophotic environmental data from October 2021 to October 2023. The expeditions conducted were in support of the Mesophotic and Deep Benthic Communities (MDBC) Coral Propagation Technique Development project and Habitat Assessment and Evaluation project, which were selected as part of the Final Open Ocean Restoration Plan 2 (Open Ocean Trustee Implementation Group, 2019) to restore communities injured by the 2010 *Deepwater Horizon* oil spill. The work was performed across the continental shelf from Texas to Florida and continental slope offshore Mississippi and Alabama.

Table 1. Table of expeditions from 2021–2023 that provide sensor data for this analysis. The expeditions were conducted to support restoration and characterization of Mesophotic and Deep Benthic Communities (MDBC). AL = Alabama; LA = Louisiana; MS = Mississippi; TX = Texas; WFL = West Florida.

MDBC Expedition Metadata			Physiographic Setting					
Dates	Cruise ID	Vessel	WFL		MS–AL		TX–LA	
			Shelf	Slope	Shelf	Slope	Shelf	Slope
10/04–08/2021	PS-22-08	R/V *Point Sur*	-	-	X	-	-	-
06/01–10/2022	PS-22-22	R/V *Point Sur*	-	-	X	-	-	-
06/30–07/25/2022	PC-22-01	NOAA Ship *Pisces*	X	-	X	X	-	-
10/03–13/2022	PS-23-10	R/V *Point Sur*	-	-	X	-	-	-
05/17–24/2023	PS-23-23	R/V *Point Sur*	-	-	X	-	-	-
06/13–07/29/2023	PC-23-02	NOAA Ship *Pisces*	X	-	X	X	-	-
06/21–29/2023	PE-23-26	R/V *Pelican*	-	-	-	-	X	-
10/09–18/2023	PS-24-10	R/V *Point Sur*	-	-	X	-	-	-

This report describes data collected from sensors on conductivity, temperature, and depth (CTD) rosettes, across the eight MDBC expeditions. The purpose of this report is to visualize and interpret the environment from the CTD casts (see the illustration in Figure A1). Visualization is part of a quality assessment/quality control process that results in more reliable information. It will also help to provide a clear depiction of change in oceanographic parameters across depths and seasons. The report uses and gives access to raw and processed CTD data files in archives maintained by NOAA's National Centers for Environmental Information (Table 2).

Table 2. The DOI links available to the public for CTD data packages archived by NCEI. NCEI = National Centers for Environmental Information.

Cruise ID	Vessel	NCEI DOI Link	Citation
PS-22-08	R/V *Point Sur*	https://doi.org/10.25921/zt5z-aj64	Etnoyer et al., 2024a
PS-22-22	R/V *Point Sur*	https://doi.org/10.25921/z4jm-q780	Etnoyer et al., 2024b
PC-22-02	NOAA Ship *Pisces*	In progress - To be updated upon completed archival	
PS-23-10	R/V *Point Sur*	https://doi.org/10.25921/jxdk-5f81	Etnoyer and Lange, 2024
PS-23-23	R/V *Point Sur*	https://doi.org/10.25921/ckz3-9x65	Etnoyer and Lange, 2025a
PC-23-02	NOAA Ship *Pisces*	In progress - To be updated upon completed archival	
PE-23-26	R/V *Pelican*	https://doi.org/10.25921/ya9d-vf12	Gardner, 2025
PS-24-10	R/V *Point Sur*	https://doi.org/10.25921/9t08-hg06	Etnoyer and Lange, 2025b

2. CTD Data Collection

2.1. Methods

CTD casts were performed during the field season between October 2021 and October 2023. The vessels in this report collected data in May, June, July, and October. Casts were conducted aboard the NOAA Ship *Pisces*, R/V *Point Sur*, and R/V *Pelican* using procedures shared by ship technicians aboard these platforms. The purpose of the work was to characterize the water column structure including identifying the mixed layer depth (MLD) and the depth of the 10%/1% surface irradiance (SI) used to specify the depths of the mesophotic zone. The CTD rosettes on each vessel were equipped with a Sea-Bird 32 Carousel Water Sampler with either an SBE 9/11+ SeaCat Profiler or an SBE 19plus v2 SeaCat Profiler.

The CTD rosette was deployed to the maximum accessible depth, typically less than 150 m, and within 5 m of the bottom at each site. Parameters for temperature, conductivity (from which salinity and density were derived in the Seasave v7 software from Sea-Bird Scientific), oxygen concentration, and pressure were measured in each cast. Photosynthetically active radiation (PAR) was measured aboard the R/V *Point Sur* only as it was the only vessel equipped with a PAR sensor. The data were collected using sensors indicated in Table 3.

Table 3. Parameters and units reported by the CTD software. CTD = conductivity, temperature, and depth; PAR = photosynthetically active radiation. * SBE 19plus v2 used on R/V Point Sur PS-24-10.

Parameter	Units	Sensor
Temperature	degrees in Celsius (ITS-90)	SBE 9/11+ SeaCat Profiler*
Salinity	PSU	SBE 9/11+ SeaCat Profiler*
Oxygen Concentration	mg/L	SBE 43
Density	kg/m^3	Derived from Temperature and Salinity
PAR	µmol photons/cm^2/s	LI-COR LI-192

The raw data collected from the CTD were uploaded into SeaSoft v2 SBE data processing software from Sea-Bird Scientific and converted into 1-m bin averaged depth values in .cnv files and two plots using a shared data processing protocol (see example in Figure A1). These data were then analyzed to determine the MLD and the 1% and 10% SI. The MLD was calculated using the sigma-theta density, temperature data, and a standard threshold method for individual casts. The surface was defined as 5 m, and the MLD was defined as the depth in which the density deviated by 0.125 kg/m^3 and temperature deviated by 0.5°C from the surface values (Monterey and Levitus, 1997). The .cnv files were then uploaded into Ocean Data View software to further visualize the MLD at two representative sites on the Mississippi–Alabama (MS–AL) continental shelf.

The values for 1% SI (z_{eu}, the bottom of the euphotic zone) and the 10% SI (z_m, the midpoint of the euphotic zone) were calculated using PAR data from CTD casts performed midday on calm, clear days (Kirk, 2011; Hinderstein et al., 2010) on the MS–AL Continental Shelf. PAR was measured using a calibrated PAR Biospherical LI-COR LI-192 quantum sensor (LI-COR, USA). Scalar irradiance was used to measure irradiance at a given depth (Kirk, 2011). The uniformity of the water column was tested using the logarithmic PAR value plotted against depth ($R^2 > 0.975$). Assuming uniformity throughout the water column, vertical attenuation coefficients for scalar irradiance (K_d) were calculated from the downcasts of the CTD profiles using the following formulation of Beer's Law, where z represents depth, E_z represents the irradiance at depth z, K_d represents the attenuation coefficient, and E_0 is the irradiance at the surface (Kirk, 2011):

$$E_z = E_0 \times e^{-K_d z}$$

SI and complete curves were extrapolated from 0 to 80 m using the collected CTD data, and then a mean curve was derived for PAR attenuation at different time points for two sections of the MS–AL Continental Shelf (east and west of longitude 87.4). Using these curves, the 1% SI was calculated by dividing the constant of 4.6 described in Kirk (2011) by the mean attenuation coefficient value, and the 10% SI was calculated by dividing the constant of 2.3 by the mean attenuation coefficient value.

2.2. CTD Cast Locations

A total of 250 CTD casts were performed on eight expeditions, across the MS–AL Continental Shelf, MS–AL Continental Slope, West Florida (WFL) Continental Shelf, and Texas–Louisiana (TX–LA) Continental Shelf. Data were collected over 100 total field days (Table A1).

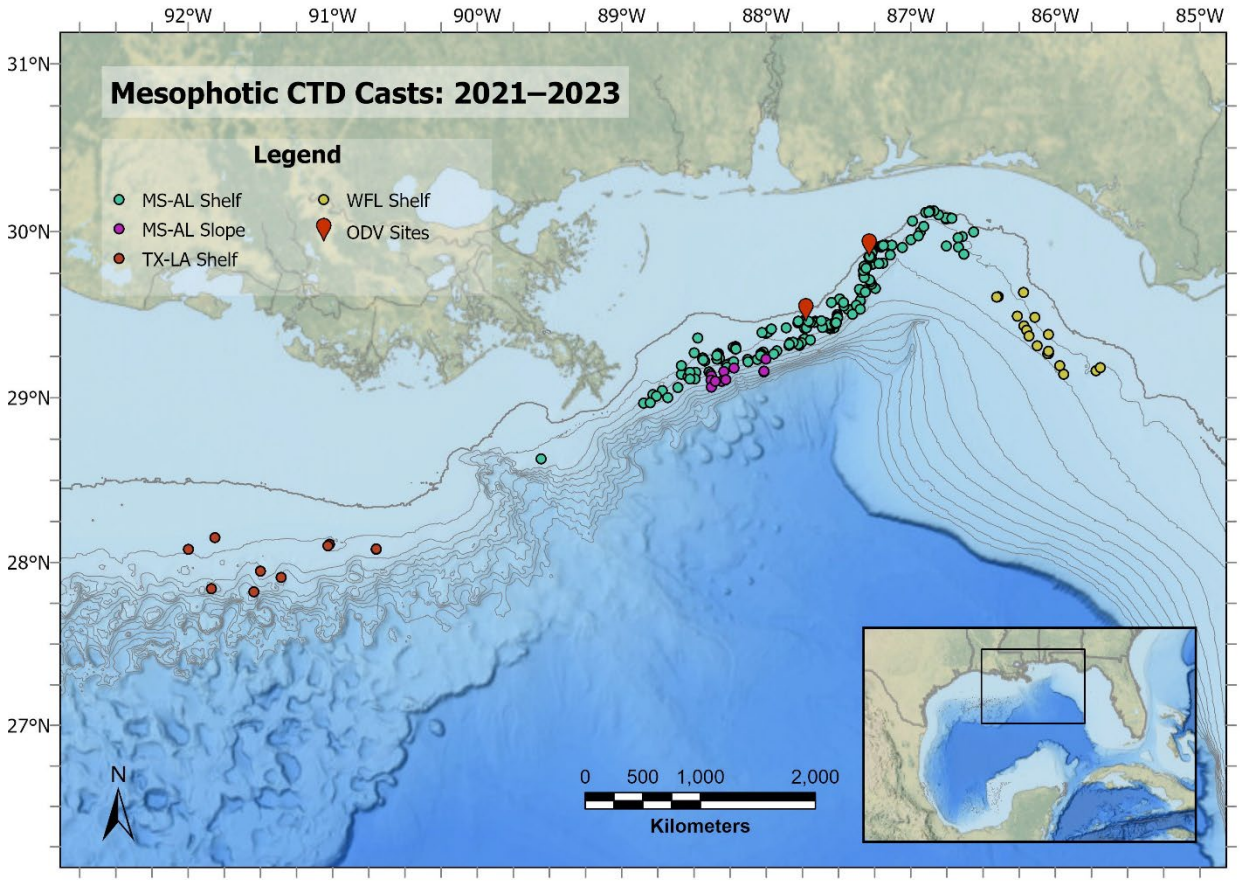

Figure 1. Locations of CTD deployments on Mesophotic and Deep Benthic Communities restoration project expeditions on the NOAA Ship *Pisces*, R/V *Point Sur*, and R/V *Pelican* that sailed over two years from October 2021–October 2023. Thick contour line is 50 m. Thin contours increase at intervals of 100 m. AL = Alabama; CTD = conductivity, temperature, and depth; LA = Louisiana; MS = Mississippi; TX = Texas; WFL = West Florida; ODV = Ocean Data View.

3. CTD Data Analysis

3.1. Mixed Layer Depth

The mixed layer is a vertical, relatively homogenous region of the water column characterized by changes in density, temperature, and salinity with depth determined by ocean circulation, wind, and surface buoyancy forcing. The MLD varies seasonally, typically with shallower MLDs in the spring and summer (Jang et al., 2011). The MLD was assessed for 234 CTD casts to compare across seasons and physiographic settings. Erroneous casts were discluded. Data were collected to determine the average MLD (± SE) in spring (May 2023), summer (June 2022/2023 and July 2022/2023), and fall (October 2021/2022/2023) across the TX–LA Shelf, MS–AL Continental Shelf/Slope, and the WFL Continental Shelf (Table 4).

Table 4. Average MLD ± SE in meters across seasons and physiographic settings. Spring includes data from May 2023. Summer includes data from June 2022/2023 and July 2022/2023. Fall includes data from October 2021/2022/2023. Averages represent all CTD casts. AL = Alabama; CTD = conductivity, temperature, and depth; MLD = mixed layer depth; MS = Mississippi; TX = Texas; LA = Louisiana; WFL = West Florida.

	MLD ± SE (m)				
	WFL	Eastern MS–AL	Western MS–AL	TX–LA	**Average**
Spring	-	5.42 ± 1.66	6.5 ± 0	-	***5.5 ± 1.62***
Summer	9.72 ± 2.58	12.91 ± 2.83	12.34 ± 5.10	14.96 ± 10.85	***12.24 ± 4.96***
Fall	-	41.21 ± 7.08	39.46 ± 5.43	-	***40.37 ± 6.28***

The MS–AL Continental Shelf/Slope was visited across all three sampling seasons. The TX–LA Continental Shelf and WFL Continental Shelf were visited only during summer. Due to the large sample size, data from the MS–AL Continental Shelf/Slope were further divided based on longitude (east/west of −87.4°). The average seasonal MLD did not vary substantially between physiographic settings, but it did vary between seasons (Figure 2). The MLD was shallowest in the spring, and then it became progressively deeper moving into summer and fall.

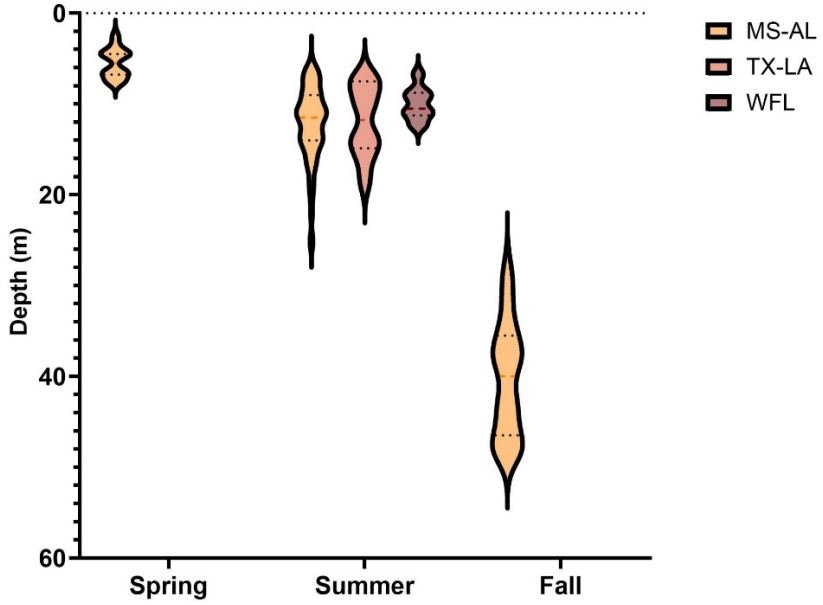

Figure 2. The seasonality of the mixed layer depth compiled from multiple MDBC expeditions. AL = Alabama; LA = Louisiana; MS = Mississippi; TX = Texas; WFL = West Florida.

The MLD was further visualized at one representative site that was visited across multiple seasons with the most cumulative casts within the eastern MS–AL Continental Shelf/Slope and one within the western MS–AL Continental Shelf/Slope. The eastern representative study site was Pensacola Edge 1 (PE01; n = 9), and the western representative site was Boulder Fields (BFF; n = 10). The MLD was much more prominent in October (Figure 3B/D) with a thick homogenous layer down to 35–40 m. In May/June, the MLD was much shallower, and the water column was much more stratified overall (Figure 3A/C). These patterns can be correlated to both temperature and salinity. Across all sites and seasons, there was a less saline surface layer of approximately 32–34 PSU above 5 m. In May/June, the salinity sharply increased to 36 PSU around 20 m (Figure 4A/C), whereas in October, the salinity stayed below 36 PSU until approximately 40 m (Figure 4B/D). In October, there was also a warm (26°C) surface layer at both sites that penetrated down to 35–40 m, which coincides with this halocline (Figure 5B/D).

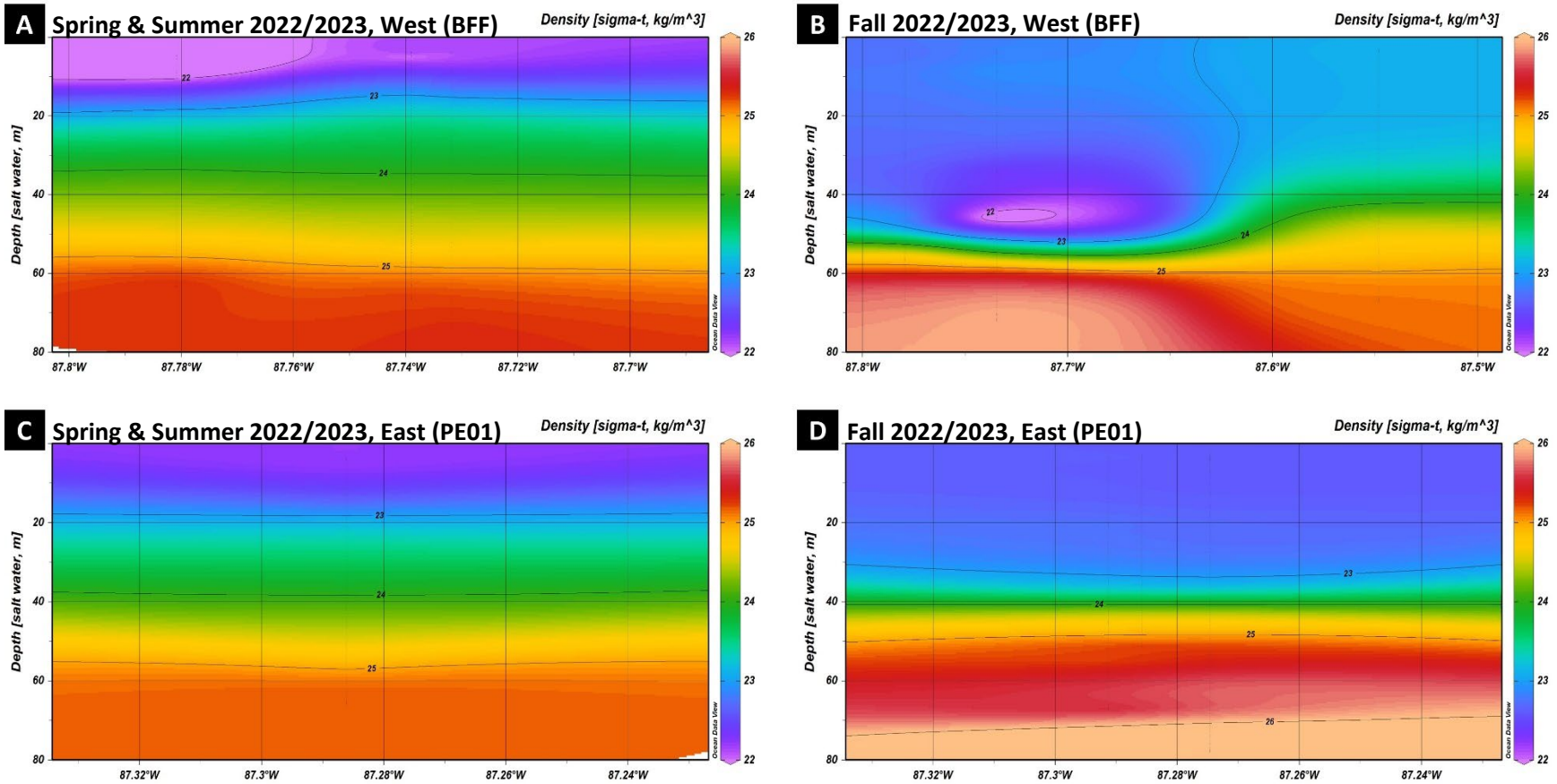

Figure 3. Section plot of the density at two sites on MS–AL Continental Shelf. (A) Section plot of the density at Boulder Fields (BFF) site on the western MS–AL Continental Shelf in June 2022/May 2023; (B) Section plot of the density at BFF site in October 2022/2023; (C) Section plot of the density at Pensacola Edge 1 (PE01) site on the eastern MS–AL Continental Shelf in June 2022/May 2023; (D) Section plot of the density at PE01 site in October 2022/2023.

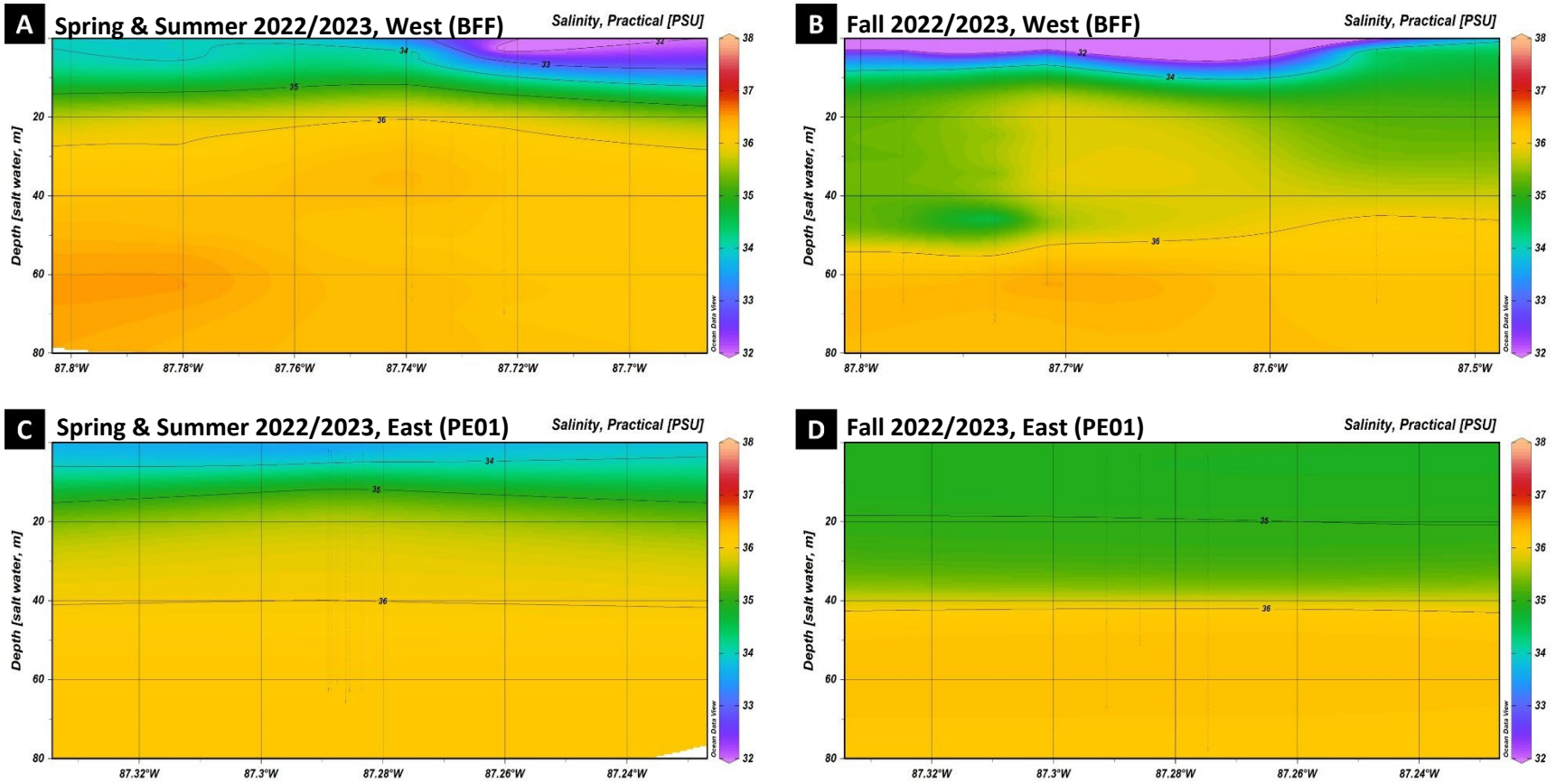

Figure 4. Section plot of the salinity at two sites on MS–AL Continental Shelf. (A) Section plot of the salinity at Boulder Fields (BFF) site on the western MS–AL Continental Shelf in June 2022/May 2023; (B) Section plot of the salinity at BFF site in October 2022/2023; (C) Section plot of the salinity at Pensacola Edge 1 (PE01) site on the eastern MS–AL Continental Shelf in June 2022/May 2023; (D) Section plot of the salinity at PE01 site in October 2022/2023.

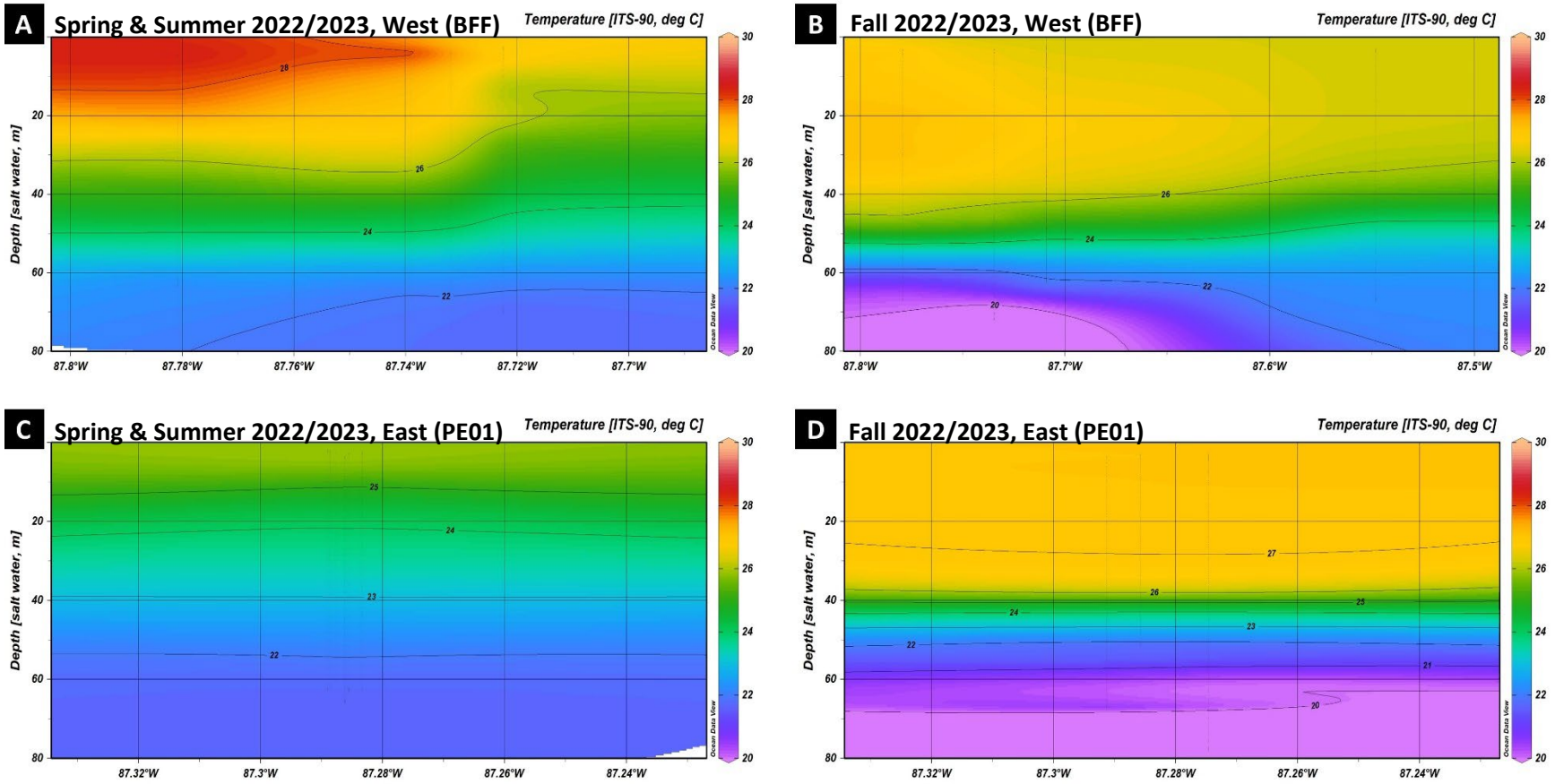

Figure 5. Section plot of the temperature at two sites on MS–AL Continental Shelf. (A) Section plot of the temperature at Boulder Fields (BFF) site on the western MS–AL Continental Shelf in June 2022/May 2023; (B) Section plot of the temperature at BFF site in October 2022/2023; (C) Section plot of the temperature at Pensacola Edge 1 (PE01) site on the eastern MS–AL Continental Shelf in June 2022/May 2023; (D) Section plot of the temperature at PE01 site in October 2022/2023.

3.2. Photosynthetically Active Radiation

Light attenuation models for spring/summer and fall were developed for the eastern and western MS–AL Continental Shelf, resulting in four models. The spring/summer models are representative of casts performed in May or June of 2022 and 2023 (n = 5 in eastern MS–AL; n = 4 in western MS–AL), and the fall models are representative of casts performed in October of 2022 and 2023 (n = 3 in eastern MS–AL; n = 6 in western MS–AL).

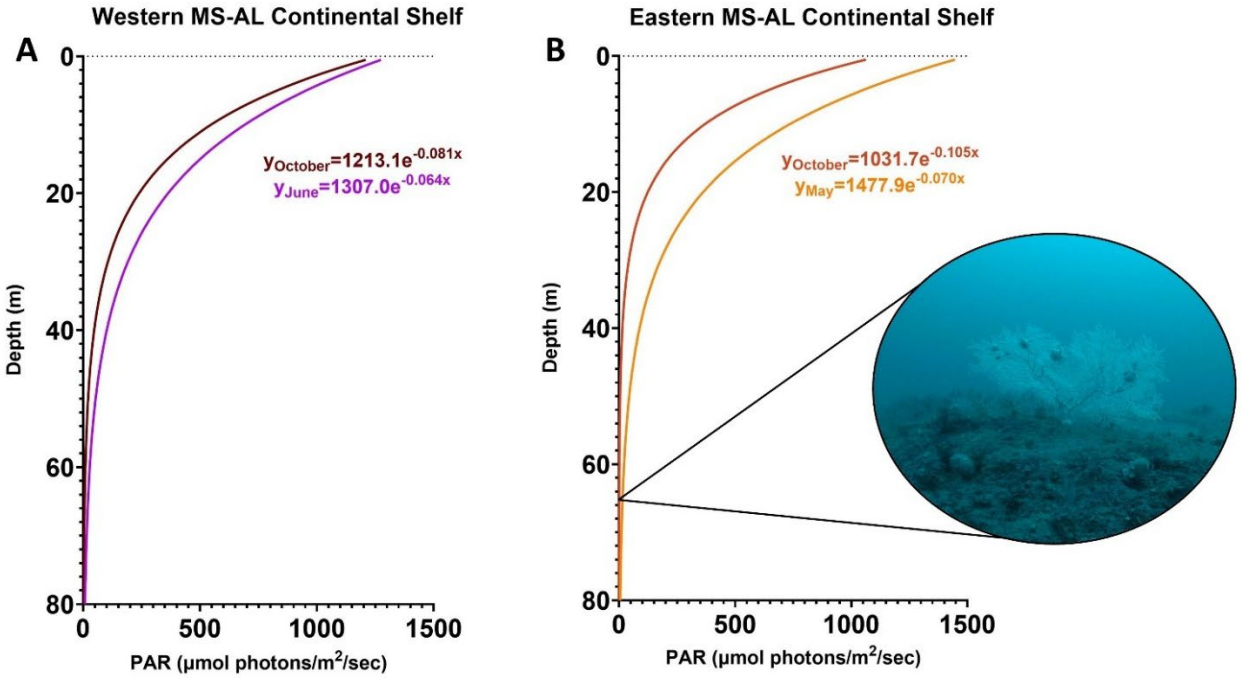

Figure 6. Photosynthetically active radiation (PAR) models for MS–AL Continental Shelf. (A) PAR models for October 2022/2023 (maroon; n = 6) and June 2022 (purple; n = 4; Lange and Etnoyer, 2024) derived from CTD casts on the western MS–AL Continental Shelf; (B) PAR models for October 2022/2023 (red; n = 3) and May 2023 (orange; n = 5) derived from CTD casts on the eastern MS–AL Continental Shelf. Image of *Muricea pendula* with no artificial lights on 10/08/2022 at 65 m, showing natural light levels received in mesophotic habitats. CTD = conductivity, temperature, and depth.

The models developed for both areas on the MS–AL Continental Shelf displayed a variation in light attenuation between seasons (Figure 6). On the eastern MS–AL Continental Shelf, the models found a K_d of 0.105 m^{-1} and 0.070 m^{-1} in October and May, respectively. In October, the 10% SI (z_m) was 21.91 m, and the 1% SI (z_{eu}) was 43.81 m. The light penetrated deeper in May with a z_m of 32.86 m and a z_{eu} of 65.71 m. This pattern was consistent on the western MS–AL Continental Shelf with K_d values of 0.081 m^{-1} and 0.065 m^{-1} in October and June, respectively. In October, the z_m was 28.40 m, and the z_{eu} was 56.79 m. Light also penetrated deeper in the spring/summer season with a z_m of 35.94 m and a z_{eu} of 71.88 m. The average light level at z_{eu} across the shelf for May/June was 14.59 ± 7.29 µmol photons/cm^2/s and for October was 12.40 ± 6.21 µmol photons/cm^2/s.

4. Conclusion

4.1. Discussion

This report provides data and observations specific to the oceanographic conditions in mesophotic habitats in the region, and data were measured with CTD casts adjacent to known aggregations of targeted coral species for restoration. Identifying the abiotic variables that are known to influence species distribution is imperative to understanding the biology and physiology needed to optimize laboratory-based propagation. Additionally, a broader understanding of these abiotic factors may help to explain and develop models of genetic connectivity, food availability, and larval behavior for the octocorals of particular interest.

The CTD data provided a temporal snapshot of conditions during spring, summer, and fall. Seasonal and annual variability (i.e., beyond the temporal extent of data analyzed herein) must be considered when interpreting these data. Nevertheless, they reflect seasonal shifts in MLD consistent with those documented by others (Jang et al., 2011). The MLD was deepest in October, due to increased surface activity and surface buoyancy forcing caused by a shift in temperature and salinity. At all sites, there was a thick, homogenous surface layer that was both warmer and less saline in fall compared to spring/summer, which drove the MLD to be deeper in fall. These results coincide with the seasonal variation of the MLD found in other hydrographic studies in the region (Portela et al., 2018; Muller-Karger et al., 2015).

An inverse relationship between MLD and light attenuation is evident in this dataset. There was a negative correlation, with z_{eu} 18.55 ± 3.35 m shallower in October when the MLD was deepest. Increased vertical mixing can lead to higher turbidity, affecting light attenuation. Previous observations in the region have shown that the z_{eu} can be as shallow as 50 m in turbid areas (Office of National Marine Sanctuaries, 2020). This dataset indicates that the value can be shallower, with a z_{eu} of 43.81 m in October on the eastern shelf of MS–AL.

Understanding the seasonality of light attenuation and MLD can provide key insights into biological processes occurring in coral habitats. This dataset supports observations made using remotely operated vehicles that show that enough light reaches the seafloor at mesophotic depths to support photosynthetic organisms such as crustose coralline algae (Figure 6). However, the amount of light available in these habitats varies seasonally, causing them to be below the compensation point during certain parts of the year. This can affect the availability of certain coral food sources such as phytoplankton. This analysis found that when light levels were lower, the MLD was deeper. A deeper MLD may increase chances for zooplankton to reach the seafloor and/or for benthic-pelagic coupling to occur, which may supplement a decline in photosynthetic food sources. In addition, warm surface water is brought to mesophotic depths in the fall. The increase in temperature could play a role as an environmental cue in the observed spawning of several mesophotic corals in this region during this time period (Johnstone et al., 2025).

4.2. Future Directions

This study provides baseline interpretations of the oceanographic characteristics of mesophotic coral ecosystems in multiple physiographic settings in spring, summer, and fall. It also adds measures of MLD to recently published data on light irradiance in the mesophotic zone habitats that were impacted by the *Deepwater Horizon* oil spill (Lange and Etnoyer, 2024). The field data help to fill knowledge gaps in the region where coral restoration is intended to occur.

Other physiographic settings and mesophotic depths in the region have yet to be sampled or analyzed in similarly systematic fashion. More work is needed to describe the light levels and mixed-layer depth changes in mesophotic reference areas on TX–LA shelf in particular. Restoration implementation would also benefit from oceanographic characterization of light, oxygen, and nutrients at deeper sites on the continental slope of MS–AL and West Florida Escarpment. Although values appear similar across mesophotic habitats regionally, there are subtle differences in depth for these thresholds (Table 5). Husbandry protocols can be refined based on knowledge of these parameters in specific physiographic settings and sites. Mesophotic corals from this region have a narrow range of suitable conditions for their survival (Silva and MacDonald, 2017). Adjusting tank systems to specific physical parameters such as light, temperature, and salinity will increase survivorship and help in optimizing propagation success.

Ongoing and future MDBC restoration work will incorporate nutrient data, particulate organic matter, flow cytometry, and environmental DNA assessments to more fully characterize the biological constituents of the water column. This study will be expanded upon with the deployments of environmental loggers and oceanic landers, which will provide a continuous dataset to further refine seasonality and oceanographic characteristics of the region such as loop current eddy separations (Hall and Leben, 2016). The CTD work presented here will also be continued and augmented, with results provided through NOAA archives.

Table 5. Light attenuation coefficients, 1% SI, and MLD from two seasons in this analysis and three additional regions containing mesophotic reefs (~60 m). K_d = light attenuation coefficients; SI = surface irradiance; MLD = mixed layer depth.

Variable	Spring/ Summer	Fall	Pulley Ridge (Annual Avg.)	Hawaii ('Au'au Channel; Annual Avg.)	Bahamas (Exuma Sound; Annual Avg.)	Citations
1% SI (m)	65.7–71.9	43.8–56.7	112.2[a]	76.7[c]	65–70[b]	[a] (Reed et al., 2019) [b] (Lesser et al., 2009) [c] (Spalding, 2012)
MLD (m)	11.61 ± 3.08	40.24 ± 6.25	-	30–120[d]	10–100[e]	[d] (Flament, 1996) [e] (Hickey et al., 2000)

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Appendix

A.1. CTD Plot Example

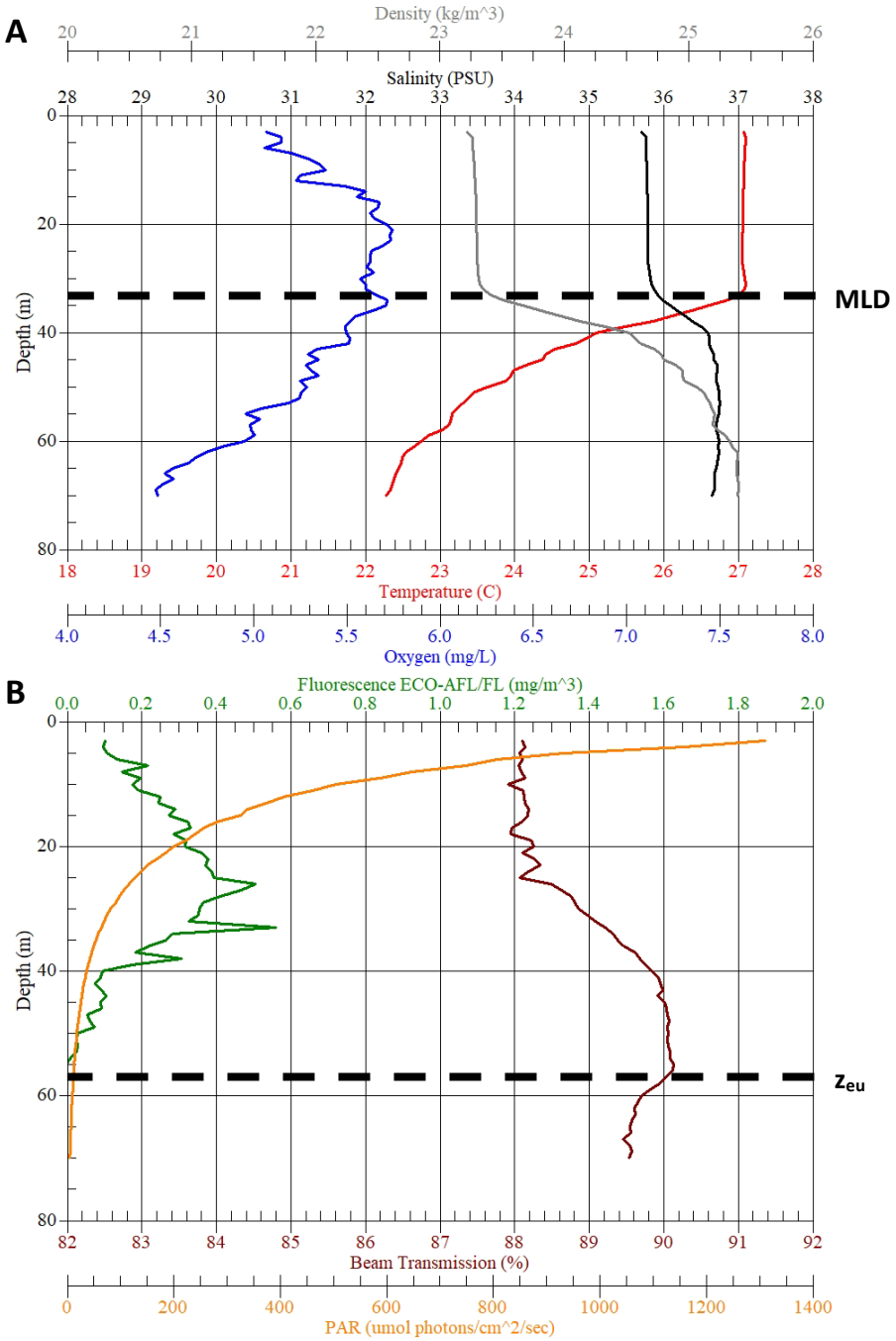

Figure A1. Example of CTD plot from an expedition aboard the R/V *Point Sur* in October 2023 (PS-24-10). (A) Plot displaying temperature, salinity, oxygen, and density with the mixed layer depth (MLD) highlighted by a dashed line; (B) Another plot from the same cast showing photosynthetically active radiation (PAR), beam transmission, and fluorescence. The 1% surface irradiance (z_{eu}) is highlighted by the dashed line. CTD = conductivity, temperature, and depth.

A.2. Positional Information and Metadata for CTD Casts 2021–2023

This table provides a full list of CTD casts from 2021–2023 MDBC expeditions in the mesophotic zone. A total of 250 casts were conducted over this time period. Of these, approximately 94% were a part of the interpretation and analysis of mixed layer depth, and 7% were useful for light levels to determine the lower limit of the photic zone.

Table A1. Location and depth information for CTD casts on the PS-22-08, PS-22-22, PC-22-01, PS-23-10, PS-23-23, PC-23-02, PE-23-26, and PS-24-10 expeditions. AL = Alabama; CTD = conductivity, temperature, and depth; MS = Mississippi; TX = Texas; WFL = West Florida.

Cruise ID	Cast	Physiographic Setting	Date	Latitude (DD.ddddd)	Longitude (DD.ddddd)	Depth (m)
PS2208	CTD-01	MS–AL Continental Shelf	10/5/2021	30.03100	–86.91133	114.6
PS2208	CTD-02	MS–AL Continental Shelf	10/5/2021	30.11733	–86.87867	56.2
PS2208	CTD-03	MS–AL Continental Shelf	10/5/2021	29.80817	–87.22167	99.6
PS2222	CTD-01	MS–AL Continental Shelf	6/1/2022	29.85083	–87.28617	66.0
PS2222	CTD-02	MS–AL Continental Shelf	6/2/2022	29.78950	–87.30450	96.3
PS2222	CTD-03	MS–AL Continental Shelf	6/2/2022	29.79350	–87.32200	68.0
PS2222	CTD-04	MS–AL Continental Shelf	6/3/2022	29.55467	–87.46383	67.7
PS2222	CTD-05	MS–AL Continental Shelf	6/3/2022	29.50300	–87.50850	68.6
PS2222	CTD-06	MS–AL Continental Shelf	6/4/2022	29.46117	–87.65983	68.1
PS2222	CTD-07	MS–AL Continental Shelf	6/4/2022	29.45783	–87.66883	68.6
PS2222	CTD-08	MS–AL Continental Shelf	6/5/2022	29.46750	–87.73900	63.2
PS2222	CTD-09	MS–AL Continental Shelf	6/6/2022	29.24033	–88.43800	103.4
PS2222	CTD-10	MS–AL Continental Shelf	6/6/2022	29.23050	–88.43767	66.1
PS2222	CTD-11	MS–AL Continental Shelf	6/7/2022	29.29500	–88.20867	92.0
PS2222	CTD-12	MS–AL Continental Shelf	6/7/2022	29.39517	–88.03033	65.8
PS2222	CTD-13	MS–AL Continental Shelf	6/8/2022	29.41583	–87.96400	73.6
PS2222	CTD-14	MS–AL Continental Shelf	6/8/2022	29.42267	–87.86167	70.8
PS2222	CTD-15	MS–AL Continental Shelf	6/8/2022	29.45883	–87.73900	66.6
PS2222	CTD-16	MS–AL Continental Shelf	6/9/2022	29.42083	–87.73183	75.1
PS2222	CTD-17	MS–AL Continental Shelf	6/9/2022	29.45317	–87.78083	63.4
PS2222	CTD-18	MS–AL Continental Shelf	6/10/2022	29.45817	–87.66833	66.2
PS2222	CTD-19	MS–AL Continental Shelf	6/10/2022	29.45517	–87.66700	67.2
PC2202L1	CTD-01	MS–AL Continental Shelf	6/30/2022	29.90933	–87.21700	56.0
PC2202L1	CTD-02	MS–AL Continental Shelf	6/30/2022	29.91100	–87.21200	53.0
PC2202L1	CTD-03	MS–AL Continental Shelf	6/30/2022	30.08117	–86.73183	56.0
PC2202L1	CTD-04	MS–AL Continental Shelf	6/30/2022	30.08217	–86.72300	56.0
PC2202L1	CTD-05	MS–AL Continental Shelf	7/1/2022	30.07617	–86.75567	65.0
PC2202L1	CTD-06	MS–AL Continental Shelf	7/1/2022	30.08283	–86.75817	59.0
PC2202L1	CTD-07	MS–AL Continental Shelf	7/1/2022	29.97133	–86.64267	96.0
PC2202L1	CTD-08	MS–AL Continental Shelf	7/1/2022	30.10188	–86.80817	78.0
PC2202L1	CTD-09	MS–AL Continental Shelf	7/1/2022	29.80550	–87.26517	86.0
PC2202L1	CTD-10	MS–AL Continental Shelf	7/1/2022	29.80633	–87.26450	86.0
PC2202L1	CTD-11	MS–AL Continental Shelf	7/2/2022	29.79467	–87.31583	83.0
PC2202L1	CTD-12	MS–AL Continental Shelf	7/2/2022	29.79267	–87.32267	83.0
PC2202L1	CTD-13	MS–AL Continental Shelf	7/2/2022	29.64317	–87.31217	114.0
PC2202L1	CTD-14	MS–AL Continental Shelf	7/2/2022	29.65083	–87.31533	94.0
PC2202L1	CTD-15	MS–AL Continental Shelf	7/3/2022	29.58283	–87.34933	103.0
PC2202L1	CTD-16	MS–AL Continental Shelf	7/3/2022	29.58667	–87.34917	100.0

Cruise ID	Cast	Physiographic Setting	Date	Latitude (DD.ddddd)	Longitude (DD.ddddd)	Depth (m)
PC2202L1	CTD-17	MS–AL Continental Shelf	7/3/2022	29.87174	–87.26981	60.0
PC2202L1	CTD-18	MS–AL Continental Shelf	7/3/2022	29.90733	–87.20734	60.0
PC2202L1	CTD-19	MS–AL Continental Shelf	7/3/2022	29.43950	–87.53150	84.0
PC2202L1	CTD-20	MS–AL Continental Shelf	7/4/2022	29.44300	–87.53683	72.0
PC2202L1	CTD-21	MS–AL Continental Shelf	7/4/2022	29.42750	–87.53283	92.0
PC2202L1	CTD-22	MS–AL Continental Shelf	7/4/2022	29.42183	–87.52933	133.0
PC2202L1	CTD-23	MS–AL Continental Shelf	7/4/2022	29.73600	–87.32550	126.0
PC2202L1	CTD-24	MS–AL Continental Shelf	7/4/2022	29.59200	–87.48933	70.0
PC2202L1	CTD-25	MS–AL Continental Shelf	7/4/2022	29.41717	–87.56100	98.0
PC2202L1	CTD-26	MS–AL Continental Shelf	7/4/2022	29.42500	–87.56600	88.0
PC2202L1	CTD-27	MS–AL Continental Shelf	7/4/2022	29.44150	–87.54083	76.0
PC2202L1	CTD-28	MS–AL Continental Shelf	7/5/2022	29.44517	–87.54767	75.0
PC2202L1	CTD-29	MS–AL Continental Shelf	7/5/2022	29.74217	–87.32150	122.0
PC2202L1	CTD-30	MS–AL Continental Shelf	7/5/2022	29.59633	–87.48967	70.0
PC2202L1	CTD-31	MS–AL Continental Shelf	7/5/2022	29.44500	–87.57917	75.0
PC2202L1	CTD-32	MS–AL Continental Shelf	7/5/2022	29.43817	–87.57700	81.0
PC2202L1	CTD-33	MS–AL Continental Shelf	7/5/2022	29.43617	–87.58167	82.0
PC2202L1	CTD-34	MS–AL Continental Shelf	7/6/2022	29.44350	–87.58650	72.0
PC2202L1	CTD-35	MS–AL Continental Shelf	7/6/2022	29.74533	–87.32617	72.0
PC2202L1	CTD-36	MS–AL Continental Shelf	7/6/2022	29.59700	–87.49383	72.0
PC2202L1	CTD-37	MS–AL Continental Shelf	7/6/2022	29.45183	–87.59500	72.0
PC2202L1	CTD-38	MS–AL Continental Shelf	7/7/2022	29.44483	–87.58933	72.0
PC2202L1	CTD-39	MS–AL Continental Shelf	7/7/2022	29.45583	–87.59200	71.0
PC2202L1	CTD-40	MS–AL Continental Shelf	7/7/2022	29.43750	–87.56600	80.0
PC2202L1	CTD-41	MS–AL Continental Shelf	7/7/2022	29.65850	–87.24500	240.0
PC2202L1	CTD-42	MS–AL Continental Shelf	7/7/2022	29.55950	–87.37583	92.0
PC2202L1	CTD-43	MS–AL Continental Shelf	7/7/2022	29.44367	–87.55250	78.0
PC2202L1	CTD-44	MS–AL Continental Shelf	7/7/2022	29.44333	–87.56083	78.0
PC2202L1	CTD-45	MS–AL Continental Shelf	7/8/2022	29.45133	–87.52550	72.0
PC2202L1	CTD-46	MS–AL Continental Shelf	7/8/2022	29.44850	–87.51783	76.0
PC2202L1	CTD-47	MS–AL Continental Shelf	7/8/2022	29.55950	–87.37583	220.0
PC2202L1	CTD-48	MS–AL Continental Shelf	7/8/2022	29.53417	–87.43483	80.0
PC2202L1	CTD-49	MS–AL Continental Shelf	7/8/2022	29.43683	–87.61650	74.0
PC2202L1	CTD-50	MS–AL Continental Shelf	7/8/2022	29.43967	–87.61800	79.0
PC2202L1	CTD-51	MS–AL Continental Shelf	7/9/2022	29.42383	–87.61150	86.0
PC2202L1	CTD-52	MS–AL Continental Shelf	7/9/2022	29.68400	–87.27050	203.0
PC2202L1	CTD-53	MS–AL Continental Shelf	7/9/2022	29.63583	–87.34150	90.0
PC2202L1	CTD-54	MS–AL Continental Shelf	7/9/2022	29.32767	–87.76800	102.0
PC2202L1	CTD-55	MS–AL Continental Shelf	7/10/2022	29.32900	–87.76817	109.0
PC2202L1	CTD-56	MS–AL Continental Shelf	7/10/2022	29.31650	–87.77100	174.0
PC2202L1	CTD-57	MS–AL Continental Shelf	7/10/2022	29.32467	–87.77317	108.0
PC2202L1	CTD-58	MS–AL Continental Shelf	7/11/2022	29.35250	–87.74283	105.0
PC2202L1	CTD-59	MS–AL Continental Shelf	7/11/2022	29.35700	–87.73567	98.0
PC2202L1	CTD-60	MS–AL Continental Shelf	7/11/2022	29.69817	–87.28033	183.0
PC2202L1	CTD-61	MS–AL Continental Shelf	7/11/2022	29.69817	–87.28033	183.0
PC2202L1	CTD-62	MS–AL Continental Shelf	7/11/2022	29.33267	–87.75583	110.0
PC2202L1	CTD-63	MS–AL Continental Shelf	7/12/2022	29.33200	–87.75700	106.0
PC2202L1	CTD-64	MS–AL Continental Shelf	7/12/2022	29.32383	–87.77733	110.0

Cruise ID	Cast	Physiographic Setting	Date	Latitude (DD.ddddd)	Longitude (DD.ddddd)	Depth (m)
PC2202L1	CTD-65	MS–AL Continental Shelf	7/12/2022	29.71050	–87.28400	168.0
PC2202L2	CTD-01	MS–AL Continental Shelf	7/20/2022	29.36092	–88.47285	63.0
PC2202L2	CTD-02	MS–AL Continental Shelf	7/21/2022	29.26834	–88.33130	92.0
PC2202L2	CTD-03	MS–AL Continental Shelf	7/21/2022	29.26065	–88.33893	94.0
PC2202L2	CTD-04	MS–AL Continental Shelf	7/22/2022	29.25367	–88.33867	78.0
PC2202L2	CTD-06	MS–AL Continental Shelf	7/22/2022	29.23683	–88.32367	94.0
PC2202L2	CTD-07	MS–AL Continental Shelf	7/23/2022	29.23383	–88.33450	100.0
PC2202L2	CTD-09	MS–AL Continental Shelf	7/23/2022	29.33383	–87.83500	102.0
PC2202L2	CTD-10	MS–AL Continental Shelf	7/24/2022	29.31615	–87.84199	114.0
PC2202L2	CTD-11	MS–AL Continental Shelf	7/24/2022	29.34942	–87.69471	151.0
PC2202L2	CTD-12	MS–AL Continental Shelf	7/24/2022	29.32062	–87.83725	100.0
PC2202L2	CTD-13	MS–AL Continental Shelf	7/25/2022	29.33433	–87.81450	110.0
PC2202L2	CTD-14	MS–AL Continental Shelf	7/25/2022	29.65492	–87.35392	80.0
PS2310	CTD-01	MS–AL Continental Shelf	10/3/2022	29.84350	–87.27467	78.1
PS2310	CTD-02	MS–AL Continental Shelf	10/3/2022	29.85017	–87.28583	51.4
PS2310	CTD-03	MS–AL Continental Shelf	10/4/2022	29.23383	–88.34267	114.1
PS2310	CTD-04	MS–AL Continental Shelf	10/4/2022	29.25450	–88.34150	91.0
PS2310	CTD-05	MS–AL Continental Shelf	10/5/2022	29.46317	–87.77933	66.9
PS2310	CTD-06	MS–AL Continental Shelf	10/6/2022	29.32367	–87.83950	106.0
PS2310	CTD-07	MS–AL Continental Shelf	10/7/2022	29.42083	–87.73450	72.1
PS2310	CTD-08	MS–AL Continental Shelf	10/7/2022	29.46450	–87.61933	63.6
PS2310	CTD-09	MS–AL Continental Shelf	10/7/2022	29.46417	–87.62050	62.1
PS2310	CTD-10	MS–AL Continental Shelf	10/8/2022	29.84950	–87.29133	67.3
PS2310	CTD-11	MS–AL Continental Shelf	10/10/2022	30.08100	–86.71700	65.0
PS2310	CTD-12	MS–AL Continental Shelf	10/11/2022	29.49150	–87.50800	68.2
PS2310	CTD-13	MS–AL Continental Shelf	10/12/2022	29.48650	–87.50567	70.5
PS2310	CTD-14	MS–AL Continental Shelf	10/12/2022	29.57583	–87.54883	67.3
PS2310	CTD-15	MS–AL Continental Shelf	10/13/2022	29.57417	–87.54817	67.3
PS2323	CTD-01	MS–AL Continental Shelf	5/17/2023	29.85117	–87.28900	63.0
PS2323	CTD-02	MS–AL Continental Shelf	5/18/2023	29.78033	–87.30983	101.1
PS2323	CTD-03	MS–AL Continental Shelf	5/18/2023	29.85100	–87.28750	60.7
PS2323	CTD-04	MS–AL Continental Shelf	5/18/2023	29.85083	–87.28550	63.3
PS2323	CTD-05	MS–AL Continental Shelf	5/19/2023	29.84933	–87.28850	62.3
PS2323	CTD-06	MS–AL Continental Shelf	5/19/2023	29.85333	–87.28333	62.6
PS2323	CTD-07	MS–AL Continental Shelf	5/21/2023	30.11867	–86.87250	60.6
PS2323	CTD-08	MS–AL Continental Shelf	5/21/2023	30.12383	–86.83917	60.2
PS2323	CTD-09	MS–AL Continental Shelf	5/21/2023	30.12450	–86.86750	50.8
PS2323	CTD-10	MS–AL Continental Shelf	5/22/2023	30.11633	–86.89267	57.8
PS2323	CTD-11	MS–AL Continental Shelf	5/22/2023	30.11517	–86.89550	57.8
PS2323	CTD-12	MS–AL Continental Shelf	5/22/2023	30.12117	–86.86683	45.4
PS2323	CTD-13	MS–AL Continental Shelf	5/22/2023	30.12167	–86.86717	55.4
PS2323	CTD-14	MS–AL Continental Shelf	5/24/2023	29.42267	–87.72250	70.2
PC2302L1	CTD-01	MS–AL Continental Shelf	6/13/2023	29.31033	–88.21550	87.0
PC2302L1	CTD-02	MS–AL Continental Shelf	6/13/2023	29.31000	–88.21167	87.0
PC2302L1	CTD-03	MS–AL Continental Shelf	6/13/2023	29.20750	–88.24567	193.0
PC2302L1	CTD-04	MS–AL Continental Shelf	6/13/2023	29.27633	–88.02133	190.1
PC2302L1	CTD-05	MS–AL Continental Shelf	6/14/2023	29.30383	–88.22883	87.3
PC2302L1	CTD-06	MS–AL Continental Shelf	6/14/2023	29.30367	–88.21217	88.7

Cruise ID	Cast	Physiographic Setting	Date	Latitude (DD.ddddd)	Longitude (DD.ddddd)	Depth (m)
PC2302L1	CTD-07	MS–AL Continental Shelf	6/14/2023	29.20767	–88.23117	202.9
PC2302L1	CTD-08	MS–AL Continental Shelf	6/14/2023	29.23150	–88.12867	224.8
PC2302L1	CTD-09	MS–AL Continental Shelf	6/15/2023	29.21800	–88.12750	257.1
PC2302L1	CTD-10	MS–AL Continental Shelf	6/15/2023	29.19983	–88.27367	202.7
PC2302L1	CTD-11	MS–AL Continental Shelf	6/15/2023	29.21733	–88.22667	164.5
PC2302L1	CTD-12	MS–AL Continental Shelf	6/15/2023	29.18450	–88.27250	249.7
PC2302L1	CTD-13	MS–AL Continental Shelf	6/15/2023	29.15750	–88.39500	253.1
PC2302L1	CTD-14	MS–AL Continental Shelf	6/16/2023	29.14283	–88.58733	156.2
PC2302L1	CTD-15	MS–AL Continental Shelf	6/16/2023	29.04450	–88.72083	199.3
PC2302L1	CTD-16	MS–AL Continental Shelf	6/16/2023	29.12783	–88.54150	226.1
PC2302L1	CTD-17	MS–AL Continental Shelf	6/17/2023	29.23017	–88.43683	62.1
PC2302L1	CTD-18	MS–AL Continental Shelf	6/17/2023	29.22283	–88.42567	140.4
PC2302L1	CTD-19	MS–AL Continental Shelf	6/17/2023	29.15350	–88.48717	215.4
PC2302L1	CTD-20	MS–AL Continental Shelf	6/17/2023	29.11450	–88.49417	284.7
PC2302L1	CTD-21	MS–AL Continental Shelf	6/17/2023	29.06217	–88.61233	278.9
PC2302L1	CTD-22	MS–AL Continental Shelf	6/18/2023	29.15367	–88.52817	192.0
PC2302L1	CTD-23	MS–AL Continental Shelf	6/18/2023	29.11367	–88.52917	262.2
PC2302L1	CTD-24	MS–AL Continental Shelf	6/18/2023	29.02017	–88.78533	199.5
PC2302L1	CTD-25	MS–AL Continental Shelf	6/19/2023	29.01150	–88.75867	228.2
PC2302L1	CTD-26	MS–AL Continental Shelf	6/19/2023	28.96900	–88.84783	227.6
PC2302L1	CTD-27	MS–AL Continental Shelf	6/19/2023	28.97050	–88.80183	272.7
PC2302L1	CTD-28	MS–AL Continental Shelf	6/20/2023	29.00217	–88.68050	298.2
PC2302L1	CTD-29	MS–AL Continental Shelf	6/20/2023	29.14550	–88.38400	284.9
PC2302L1	CTD-30	MS–AL Continental Slope	6/20/2023	29.18050	–88.22450	300.8
PC2302L1	CTD-31	MS–AL Continental Shelf	6/21/2023	29.23150	–88.43800	63.6
PC2302L1	CTD-32	MS–AL Continental Slope	6/21/2023	29.13417	–88.37933	315.6
PC2302L1	CTD-33	MS–AL Continental Slope	6/21/2023	29.23350	–88.00167	302.2
PC2302L1	CTD-34	MS–AL Continental Shelf	6/22/2023	29.23083	–88.06200	274.1
PC2302L1	CTD-35	MS–AL Continental Shelf	6/22/2023	29.24850	–88.00800	257.3
PC2302L1	CTD-36	MS–AL Continental Shelf	6/22/2023	29.25350	–88.03850	228.6
PC2302L1	CTD-37	MS–AL Continental Shelf	6/22/2023	29.28350	–87.92683	194.6
PC2302L1	CTD-38	MS–AL Continental Shelf	6/22/2023	29.26833	–88.03617	197.6
PC2302L1	CTD-39	MS–AL Continental Shelf	6/23/2023	29.41050	–87.97067	76.4
PC2302L1	CTD-40	MS–AL Continental Shelf	6/23/2023	29.38933	–88.00100	78.5
PC2302L1	CTD-41	MS–AL Continental Shelf	6/23/2023	29.25683	–88.03200	226.1
PC2302L1	CTD-42	MS–AL Continental Shelf	6/23/2023	29.15883	–88.29467	314.0
PC2302L1	CTD-43	MS–AL Continental Slope	6/23/2023	29.07013	–88.37595	410.3
PC2302L1	CTD-44	MS–AL Continental Slope	6/24/2023	29.09933	–88.36017	388.4
PC2302L1	CTD-45	MS–AL Continental Shelf	6/24/2023	29.25667	–88.04133	220.3
PC2302L1	CTD-46	MS–AL Continental Shelf	6/25/2023	29.26467	–87.94867	235.7
PC2302L1	CTD-47	MS–AL Continental Slope	6/25/2023	29.09983	–88.30850	475.7
PC2302L1	CTD-48	MS–AL Continental Slope	6/25/2023	29.10983	–88.28117	474.9
PC2302L2	CTD-49	MS–AL Continental Shelf	7/4/2023	29.25450	–88.33683	87.2
PC2302L2	CTD-50	MS–AL Continental Shelf	7/5/2023	29.29633	–88.21533	76.5
PC2302L2	CTD-51	MS–AL Continental Shelf	7/6/2023	29.39633	–87.98933	74.4
PC2302L2	CTD-52	MS–AL Continental Shelf	7/7/2023	29.19517	–88.58667	77.4
PC2302L2	CTD-53	MS–AL Continental Shelf	7/8/2023	29.24017	–88.32367	91.6
PC2302L2	CTD-54	MS–AL Continental Slope	7/9/2023	29.10650	–88.38333	324.7

Cruise ID	Cast	Physiographic Setting	Date	Latitude (DD.ddddd)	Longitude (DD.ddddd)	Depth (m)
PC2302L2	CTD-55	MS–AL Continental Slope	7/10/2023	29.06567	–88.37900	494.1
PC2302L2	CTD-56	MS–AL Continental Slope	7/11/2023	29.10050	–88.35183	400.8
PC2302L2	CTD-57	MS–AL Continental Slope	7/11/2023	29.15633	–88.01533	483.1
PC2302L2	CTD-58	MS–AL Continental Slope	7/11/2023	29.15567	–88.01583	493.5
PC2302L3	CTD-59	MS–AL Continental Shelf	7/17/2023	29.63817	–87.31550	93.1
PC2302L3	CTD-60	MS–AL Continental Shelf	7/17/2023	29.50400	–87.40483	162.9
PC2302L3	CTD-61	MS–AL Continental Shelf	7/17/2023	29.53500	–87.34967	195.4
PC2302L3	CTD-62	MS–AL Continental Shelf	7/18/2023	29.78533	–87.31833	84.2
PC2302L3	CTD-63	MS–AL Continental Shelf	7/18/2023	29.81117	–87.19383	112.7
PC2302L3	CTD-64	MS–AL Continental Shelf	7/18/2023	29.72383	–87.32350	130.0
PC2302L3	CTD-65	MS–AL Continental Shelf	7/19/2023	29.76800	–87.32850	80.6
PC2302L3	CTD-66	MS–AL Continental Shelf	7/19/2023	29.86150	–87.14183	101.3
PC2302L3	CTD-67	MS–AL Continental Shelf	7/19/2023	29.99783	–86.93517	136.6
PC2302L3	CTD-68	MS–AL Continental Shelf	7/19/2023	29.95267	–86.99917	149.2
PC2302L3	CTD-69	MS–AL Continental Shelf	7/20/2023	30.06300	–86.98750	73.8
PC2302L3	CTD-70	MS–AL Continental Shelf	7/20/2023	29.90500	–87.05800	156.3
PC2302L3	CTD-71	MS–AL Continental Shelf	7/20/2023	29.97600	–86.94817	149.2
PC2302L3	CTD-72	MS–AL Continental Shelf	7/21/2023	30.12317	–86.87067	51.0
PC2302L3	CTD-73	MS–AL Continental Shelf	7/22/2023	29.99900	–86.56633	64.7
PC2302L3	CTD-74	MS–AL Continental Shelf	7/22/2023	29.96417	–86.67250	108.4
PC2302L3	CTD-75	MS–AL Continental Shelf	7/23/2023	29.90633	–86.67133	119.1
PC2302L3	CTD-76	MS–AL Continental Shelf	7/23/2023	29.86550	–86.63133	117.8
PC2302L3	CTD-77	MS–AL Continental Shelf	7/23/2023	29.91367	–86.75267	131.9
PC2302L3	CTD-78	WFL Continental Shelf	7/24/2023	29.63550	–86.22133	64.2
PC2302L3	CTD-79	WFL Continental Shelf	7/24/2023	29.61100	–86.39417	135.0
PC2302L3	CTD-80	WFL Continental Shelf	7/24/2023	29.60733	–86.40650	138.9
PC2302L3	CTD-81	WFL Continental Shelf	7/24/2023	29.49200	–86.26200	133.3
PC2302L3	CTD-82	WFL Continental Shelf	7/25/2023	29.48650	–86.14067	91.7
PC2302L3	CTD-83	WFL Continental Shelf	7/25/2023	29.43383	–86.21633	139.8
PC2302L3	CTD-84	WFL Continental Shelf	7/25/2023	29.40783	–86.19800	145.9
PC2302L3	CTD-85	WFL Continental Shelf	7/26/2023	29.38200	–86.04800	88.6
PC2302L3	CTD-86	WFL Continental Shelf	7/26/2023	29.26633	–86.04683	178.4
PC2302L3	CTD-87	WFL Continental Shelf	7/26/2023	29.14250	–85.94117	194.7
PC2302L3	CTD-88	WFL Continental Shelf	7/27/2023	29.16450	–85.71733	78.8
PC2302L3	CTD-89	WFL Continental Shelf	7/27/2023	29.19383	–85.96950	188.9
PC2302L3	CTD-90	WFL Continental Shelf	7/27/2023	29.26667	–86.05383	180.2
PC2302L3	CTD-91	WFL Continental Shelf	7/27/2023	29.31333	–86.12517	179.0
PC2302L3	CTD-92	WFL Continental Shelf	7/28/2023	29.18250	–85.68883	86.9
PC2302L3	CTD-93	WFL Continental Shelf	7/28/2023	29.28067	–86.04683	168.9
PC2302L3	CTD-94	WFL Continental Shelf	7/28/2023	29.37400	–86.18183	161.3
PC2302L3	CTD-95	MS–AL Continental Slope	7/29/2023	29.16217	–88.01667	453.9
PC2302L3	CTD-96	MS–AL Continental Shelf	7/29/2023	29.27083	–88.49917	71.7
PE2326	CTD-01	MS–AL Continental Shelf	6/21/2023	28.62933	–89.55917	61.6
PE2326	CTD-02	TX–LA Continental Shelf	6/22/2023	28.08017	–90.69983	123.9
PE2326	CTD-03	TX–LA Continental Shelf	6/23/2023	28.08133	–90.69900	125.7
PE2326	CTD-04	TX–LA Continental Shelf	6/24/2023	28.10983	–91.02217	65.0
PE2326	CTD-05	TX–LA Continental Shelf	6/25/2023	28.10033	–91.03300	60.4
PE2326	CTD-06	TX–LA Continental Shelf	6/26/2023	27.90833	–91.35750	154.5

Cruise ID	Cast	Physiographic Setting	Date	Latitude (DD.ddddd)	Longitude (DD.ddddd)	Depth (m)
PE2326	CTD-07	TX–LA Continental Shelf	6/27/2023	27.94667	–91.50050	136.8
PE2326	CTD-08	TX–LA Continental Slope	6/28/2023	27.81933	–91.54417	277.0
PE2326	CTD-09	TX–LA Continental Shelf	6/28/2023	27.83833	–91.83817	87.2
PE2326	CTD-10	TX–LA Continental Shelf	6/29/2023	28.08017	–91.99817	79.1
PE2326	CTD-11	TX–LA Continental Shelf	6/29/2023	28.15133	–91.81583	71.7
PS2410	CTD-01	MS–AL Continental Shelf	10/9/2023	29.85050	–87.28617	59.6
PS2410	CTD-02	MS–AL Continental Shelf	10/9/2023	29.91167	–87.19817	70.5
PS2410	CTD-03	MS–AL Continental Shelf	10/10/2023	29.91717	–87.18433	80.0
PS2410	CTD-04	MS–AL Continental Shelf	10/10/2023	29.91950	–87.17300	88.8
PS2410	CTD-05	MS–AL Continental Shelf	10/10/2023	29.92017	–87.13067	98.6
PS2410	CTD-06	MS–AL Continental Shelf	10/10/2023	29.91967	–87.19267	52.7
PS2410	CTD-07	MS–AL Continental Shelf	10/11/2023	29.91617	–87.19033	65.2
PS2410	CTD-08	MS–AL Continental Shelf	10/13/2023	29.57600	–87.46484	70.3
PS2410	CTD-09	MS–AL Continental Shelf	10/14/2023	29.48633	–87.50933	65.4
PS2410	CTD-10	MS–AL Continental Shelf	10/14/2023	29.48250	–87.50733	65.8
PS2410	CTD-11	MS–AL Continental Shelf	10/15/2023	29.45617	–87.69466	66.2
PS2410	CTD-12	MS–AL Continental Shelf	10/16/2023	30.11817	–86.87600	56.1
PS2410	CTD-14	MS–AL Continental Shelf	10/17/2023	29.46133	–87.70900	62.6
PS2410	CTD-15	MS–AL Continental Shelf	10/18/2023	29.45950	–87.69900	28.6
PS2410	CTD-16	MS–AL Continental Shelf	10/18/2023	29.45233	–87.51700	65.6


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