



UNOLS-MATE MARINE TECHNICAL INTERNSHIP PROGRAM



**Funded by the National Science Foundation
OCE AWARD 2241369**

**Maria Osiadacz, Program Manager
Athena Abrahamsen, 2024 Intern**



University-National Oceanographic Laboratory System

Marine Advanced Technology Education (MATE)

University of Washington, 4300 Roosevelt Way NE, Seattle, WA 98105

Planning the 2025 Program

- Accepting applications for 2025 program - DUE JAN 6
- Feel free to share the announcement
- Looking forward to planning new opportunities:
 - At-sea internships and loading/unloading between cruises
 - Combine sea time with land-based technical support
 - Dockside/shipyard projects with sea trials or no sea time
- Contact me to discuss internships, selection process
- Fill out the [INTERN REQUEST FORM](#)
- Plan soon for internships starting JAN-MAR 2025

maria@unols.org

www.marinetech.org/internships

Resources for Mentors

PLEASE JOIN ME TODAY

Mentor Training Breakout Session

2:15 PM, Piscataqua Room

Engage in some fun, interactive exercises!!

**IMPROVE COMMUNICATION STRATEGIES AND
ENSURE A RESPECTFUL TEAM ENVIRONMENT**

Anyone who works with new team members can benefit!

**Please join us, listen in and share your insights!
Your ideas will help me compile a Mentor Resource Guide**

RV SIKULIAQ

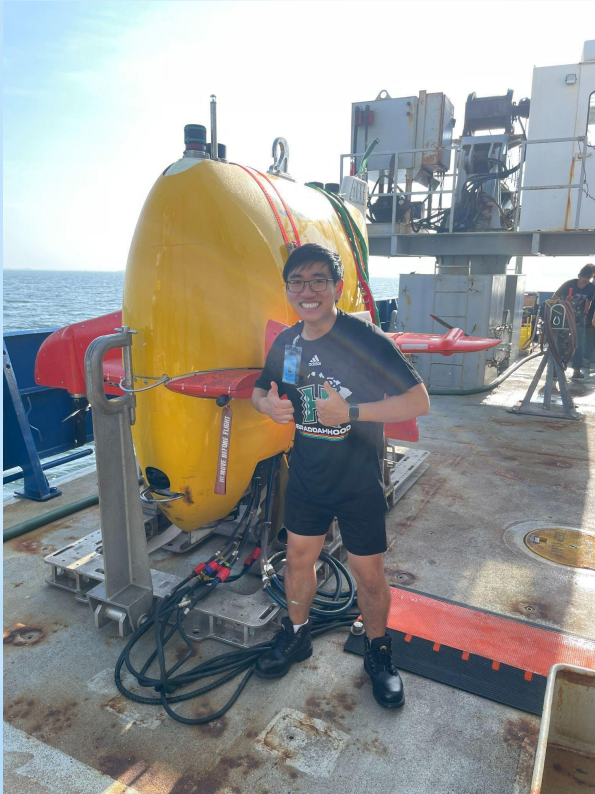
University of Alaska, Fairbanks
Mentor: Ethan Roth



SARAH GISLER

WHOI National Deep Submergence Facility

EMILIA TOPP-JOHNSON
Alvin Team, RV ATLANTIS
Mentor: Rick Sanger



NORMAN CHUNG
Sentry Team, RV REVELLE
Mentor: Sean Kelley



NOAH BOURASSA
Alvin Team, RV ATLANTIS
Mentor: Nick Osadcia

RV MARCUS LANGSETH ~ Cruise 1
Lamont-Doherty Earth Observatory
Mentor: Cody Bahlau



RACHAEL BYRD, RAYMOND BARRETT & COLTON BORRESEN

RV MARCUS LANGSETH ~ Cruise 2

Lamont-Doherty Earth Observatory

Mentor: Aaron Martin



AYSE MACKNIGHT
ELEANOR DUVA ('Wave!')
CHAI LAYNE-NEUBAUER

Ship-based Technical Support in the Arctic

SCRIPPS, USCGC HEALY



KRISTEN CARROLL ('Wave')
GABRIELA RODEZNO-WILSON

Mentors: Max Hughes & Brendon Mendenhall

RV ENDEAVOR

University of Rhode Island



JOSIE ADAMS
Mentor: Bonny Clarke

Louisiana Universities Marine Consortium

ATHENA ABRAHAMSEN

RV PELICAN

Mentor: Maggie Gaspar



**KRISTINE
PRADO-CASILLAS**

RV PT. SUR

Mentor: Grace Fulton

Hawaii Ocean Time-Series University of Hawaii RV KILO MOANA

Mentors: Angel White, Carolina Funkey, Dan Fitzgerald
Fernanda Henderikx Freitas, Tully Rohrer



SERGEI AVETISYAN & BRIANA PRADO

HUNTER ADAMS

2024 LONG-TERM INTERN

LEG 1

RV HUGH SHARP

University of Delaware

Mentors: Christian Kernisan
Alejandro Dominguez

LEG 2

RV ATLANTIC EXPLORER

Bermuda Institute of Ocean Sciences

Mentors: Rory O'Connell
Lydia Sgouros

LEG 3

RV KILO MOANA

HOT Team, University of Hawaii

Mentors: Tully Rohrer, Carolina
Funkey, Dan Fitzgerald, Angel White,
Fernanda Henderikx Freitas



Thank you!

- UNOLS Team for immense support
- Dedicated **interns** for enthusiasm and hard work
- Awesome participation by former interns
 - mentoring new interns
 - reviewing applications
 - networking, professional development advice
- Hosts, Marine Techs, Crew, Scientists, Faculty
 - mentors go above and beyond to help interns
 - excellent trainers; most knowledgeable
 - best professional role models
 - encourage new candidates to apply
- NSF for making this program possible

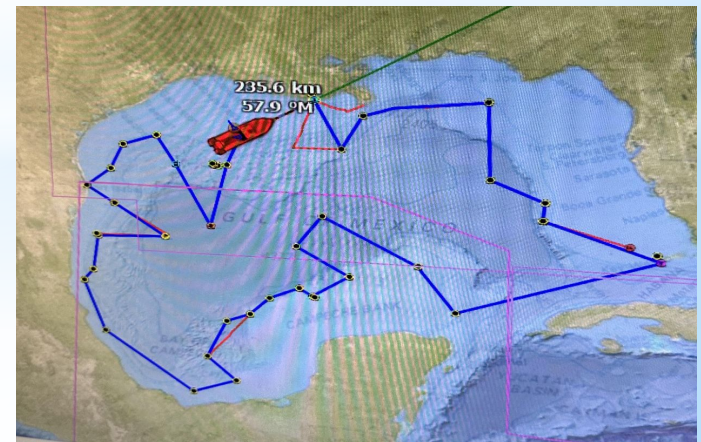
Athena Abrahamsen, 2024 MATE Intern



- Fourth-year Undergraduate Student
- Oregon State University (OSU)
- College of Earth, Ocean, and Atmospheric Sciences (CEOAS)
- B.S. in Oceanography
- June 2025

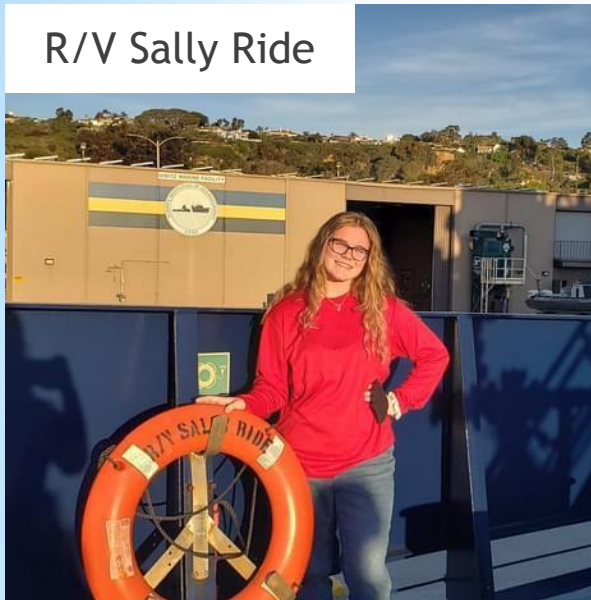
Where I completed my MATE Internship

- R/V Pelican
 - Mentor: Maggie Gaspar
- Mid-July through August
 - Shelf-wide hypoxia survey off Gulf Coast
 - Deploying passive acoustic moorings throughout the Gulf of Mexico



My love for being at-sea led me to **MATE:**

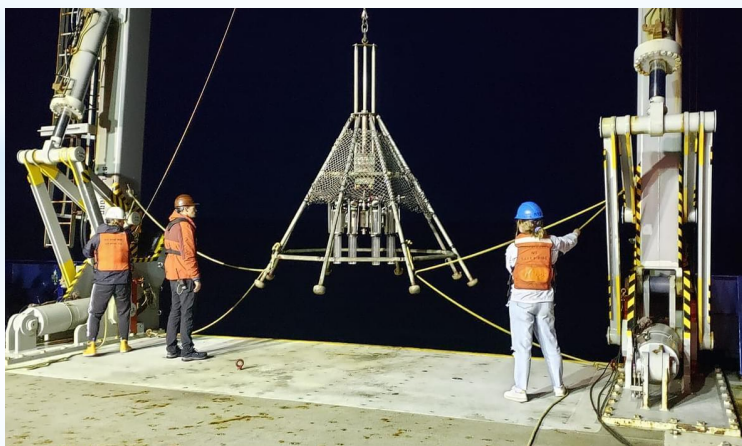
R/V Sally Ride



R/V Sikuliaq

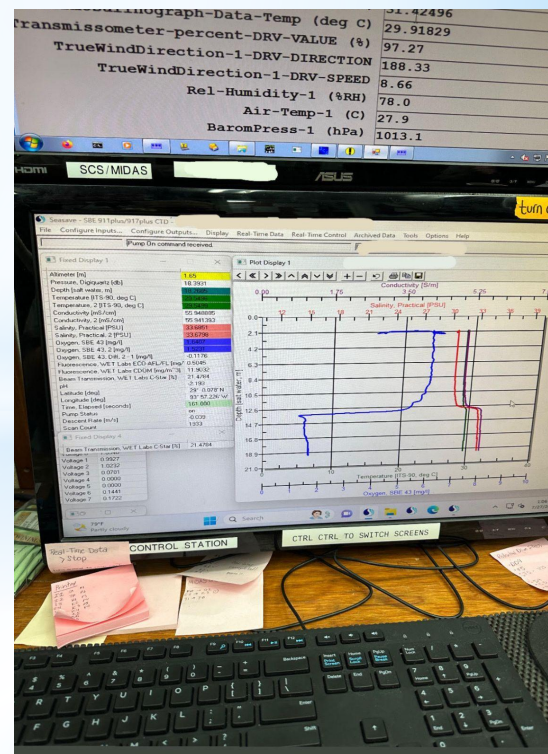


R/V Atlantis



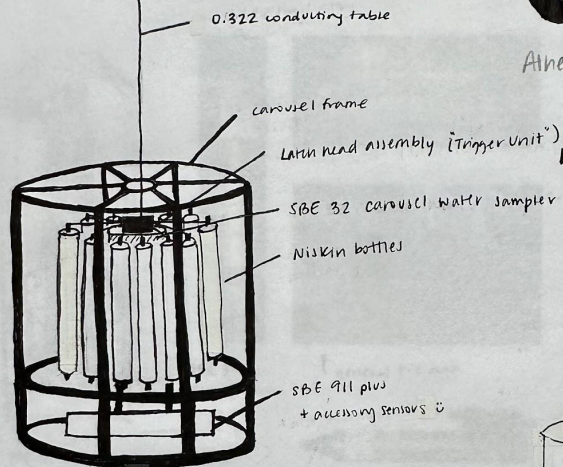
Some of my favorite takeaways:

- In-depth understanding of the hardware and software components of CTD
 - Operating SeaSave (also SBE Data Processing)
 - Reconfiguring instruments on CTD frame and in SeaSave
 - Troubleshooting



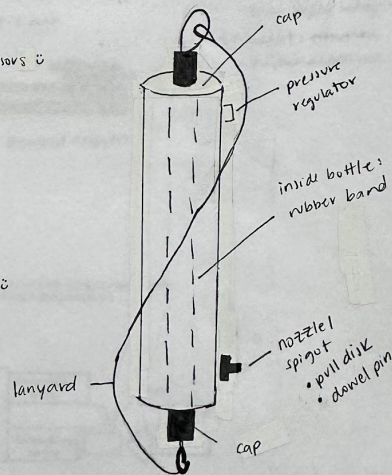
CTD

Athena Abrahamson

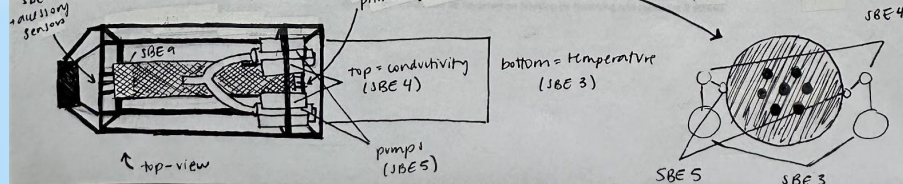


Hardware to Software Components:

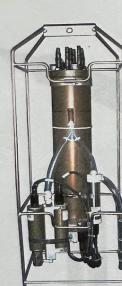
- SBE 911 plus
 - seabird CTD sea cable
 - 0.322 conducting cable
 - Slip ring
 - J-box
 - SBE 11 plus Dock Unit
 - Computer server
 - User Interface (monitor)
- ↳ displays sea save
- ↳ electrically terminated!
↳ have a walkthrough of this



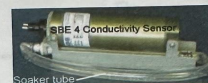
"SBE 911 Plus" (CTD)



Athena Abrahamson



↑ SBE 3: Temperature



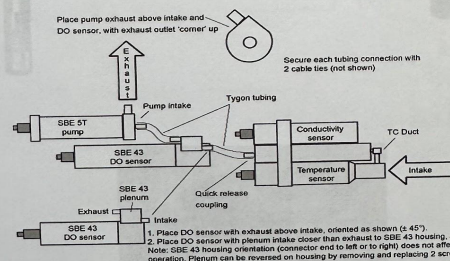
↑ general T-C duct



- SBE 5 -
- 5P (left): plastic - lower depth rating
- 5T (right): titanium - higher depth rating



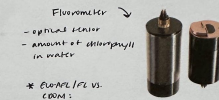
↑ SBE 43: Dissolved Oxygen



Athena Abrahamson



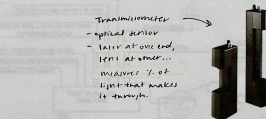
Attometer



- Fluorometer
- optical sensor
- amount of chlorophyll in water
- * compare vs. color



SBE 29: pH/DOX



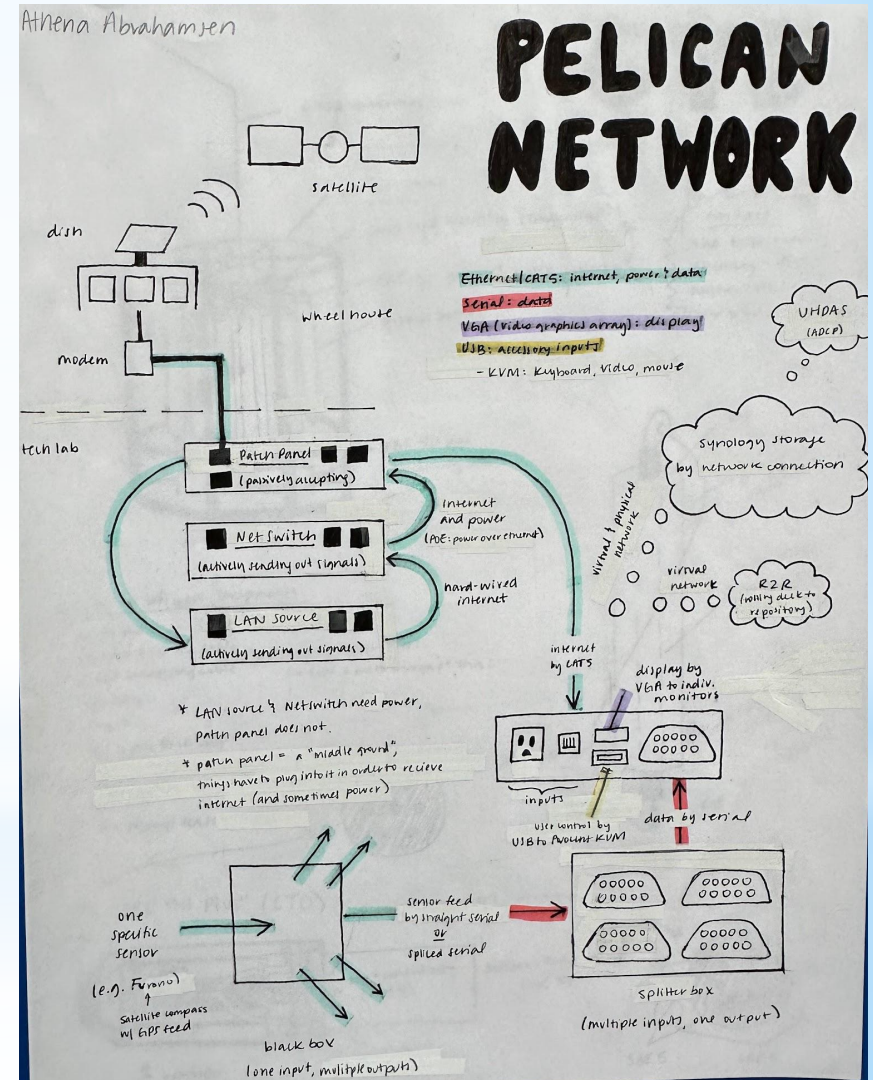
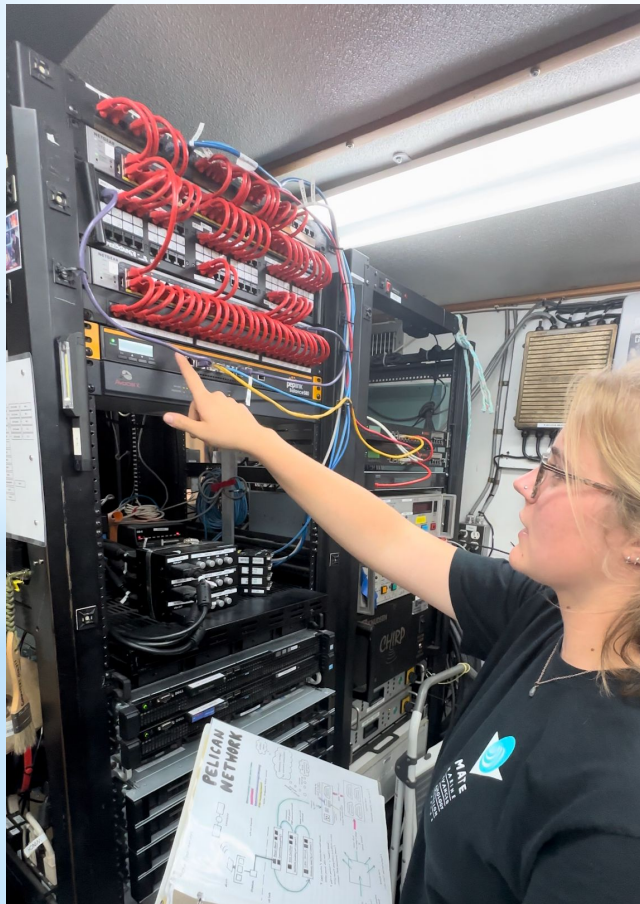
- Transmittance
- optical sensor
- laser at one end, lens at other
- measures % of light that makes it through



↑ PAR sensor (Photophotometry Active Radiation)

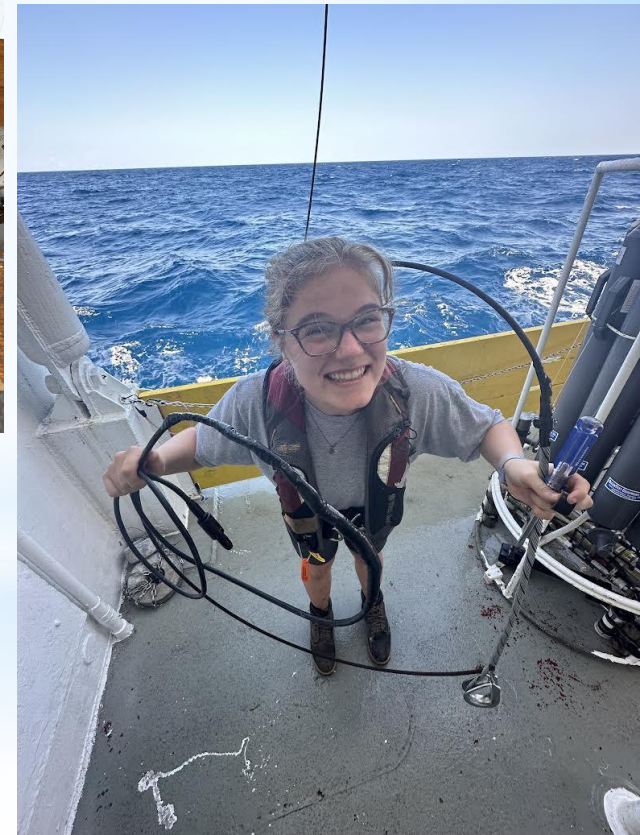
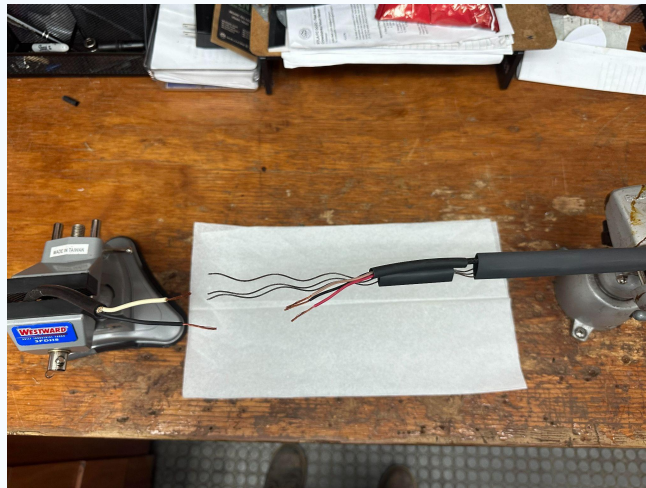
Some of my favorite takeaways cont.:

- Learning more about Computer Networks



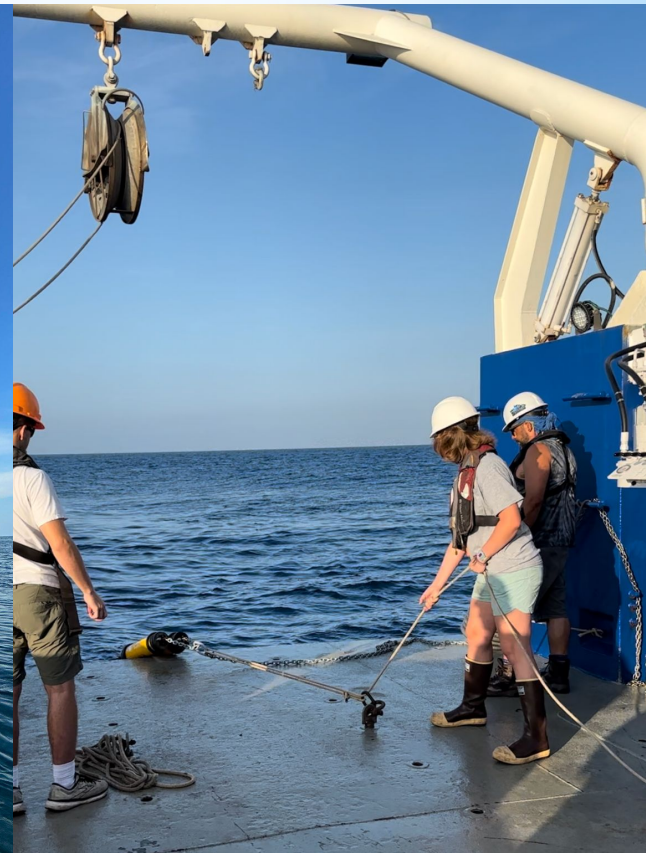
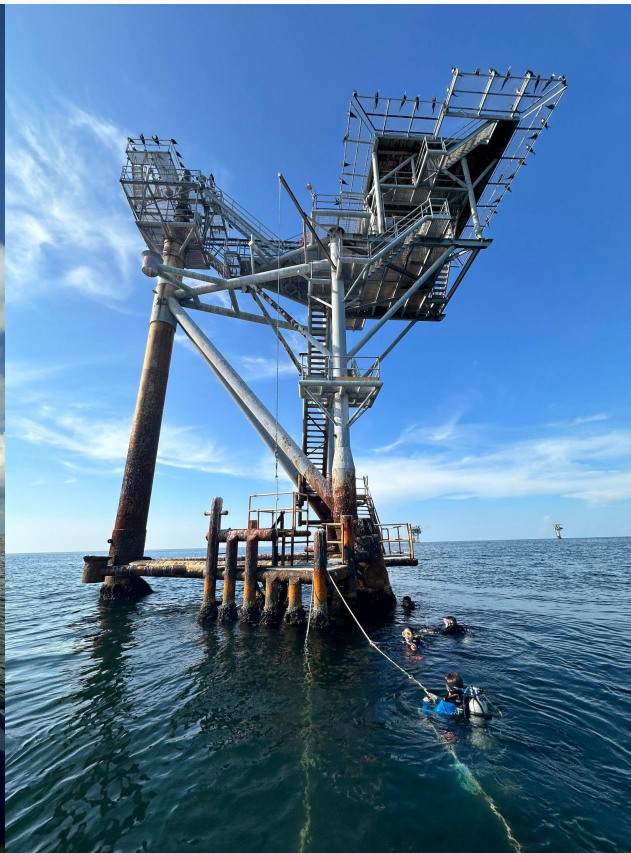
Some of my favorite takeaways cont.:

- Completing a successful .322 Wire Termination (Electrical and Mechanical)



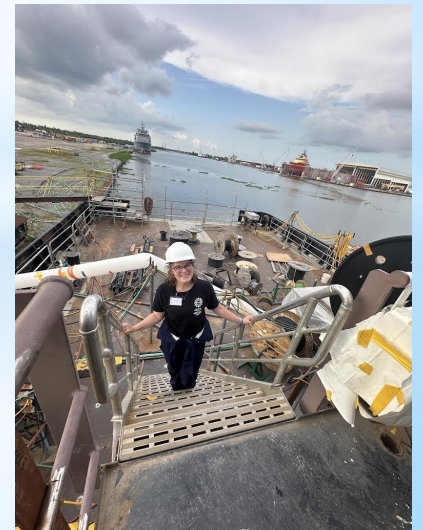
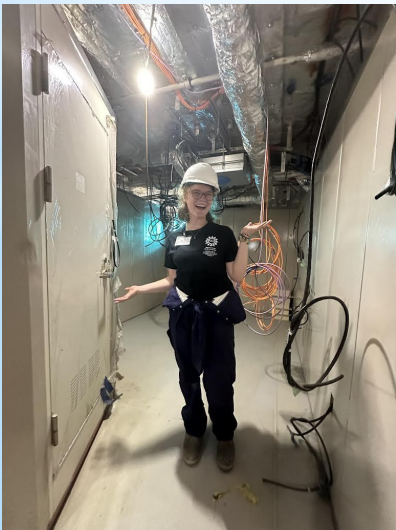
Some of my favorite takeaways cont.:

- Small Boat and other Deck Ops!
 - Inspired me to complete Scientific Boating Safety Association (SBSA) Motorboat Operating Training Course (MOTC)



Career Goal: be a Marine Technician!

- The MATE Internship was a formative experience, my love for working at-sea has grown!
 - I want to continue developing my skills and knowledge, and contribute to the furtherment of ocean research.
- If you'd like to learn more about me and my experience:
athenaabrahamsen@gmail.com



Thank you to the people who have supported me!

- OOI Coastal Endurance Array Team:
 - Alex Wick
 - Raelynn Heinitz
- MATE Support:
 - Maria Osiadacz
 - Maggie Gaspar
 - Meegan Corcoran
- Kristin Beem (RCRV)
- Miguel Goñi
- Kylie Welch
- My family and friends





QUESTIONS?