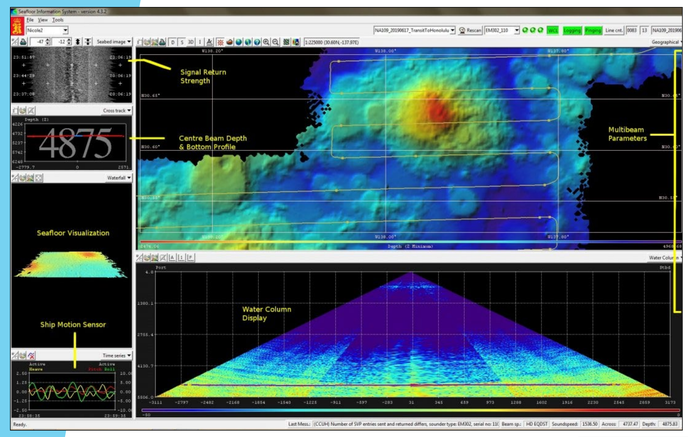
# E/V Nautilus Navigation and Mapping

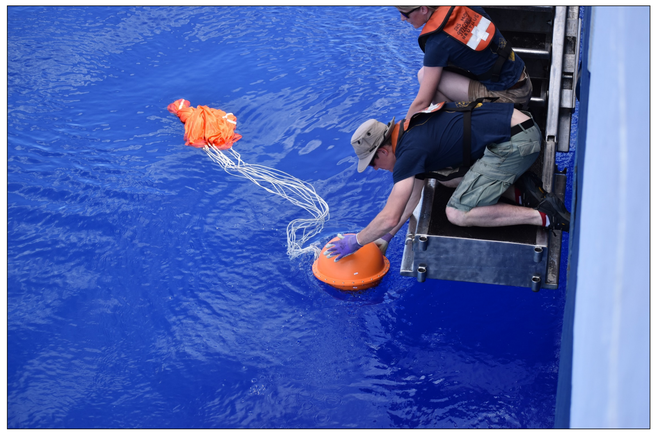
## Navigator, Honolulu to American Samoa, 22JUN19 to 22JUL19

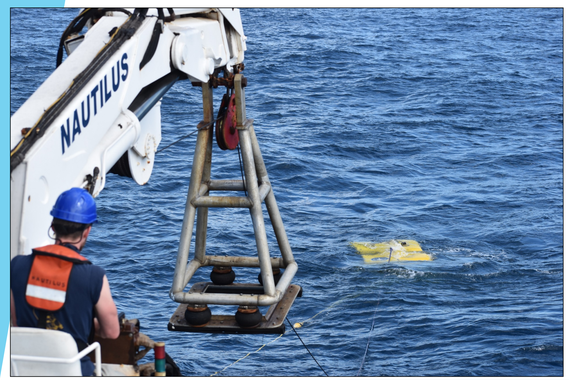
1/c Christopher B. Jaques, Class of 2020

### Introduction

**E/V Nautilus is the worlds one and only Exploration Vessel. Run by Ocean Exploration Trust, a company started and run by Dr. Robert Ballard, it journeys to the far and deep reaches of the world seeking to improve and expand our knowledge of the seafloor and what calls it home.**





### Outcomes/Challenges

- Participated in 2 cruises exploring seamounts and searching for the Samoan Clipper
- What is believed to be 5 new species were found
- **Asperoteuthis mangoldae squid seen alive for the first time**
- Narrowed down search are for Samoan Clipper (Panam Flying Boat) final resting place
- Assisted with troubleshooting and reboot after ships complete loss of power during dive
- Adapted to rapid onset of storm cells during multiple dives

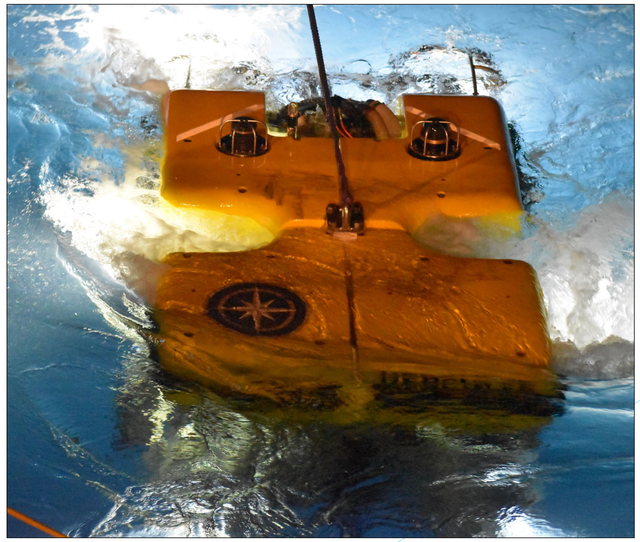
### Duties

Navigator:

- Safely navigate the ship
- Act as a liaison between the bridge and science team
- Work with ROV pilots to establish practical and safe maneuvers for ROVS
- Monitor weather, predict meteorological changes and adapt in the situation
- Manage the Dynamic Positioning System propelling the ship during dives
- Conduct Pre and Post-Dive checklists to ensure gear is operational
- Communicate with deck safety team during launch and recovery

Mapping:

- Monitor multibeam sonar software, troubleshooting and optimizing scans during transits
- Process multibeam data to create seafloor maps
- Use maps to establish safe dive routes and plans
- Conduct 2 uCTD drops each day



### Acknowledgements

**Thank you to OET and the crew of E/V Nautilus for allowing me this opportunity and taking me in as a fellow crew member. Thank you to CDR Futch, Dr. Bergondo and Professor Mrakovcich for supporting me through the process and my travels.**