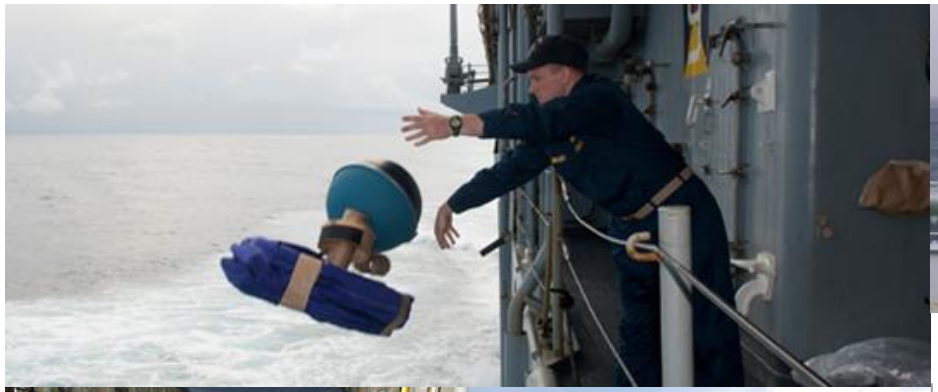
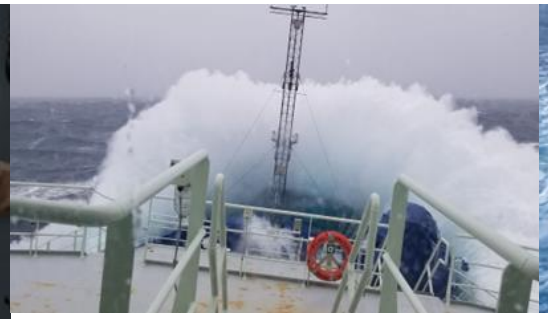
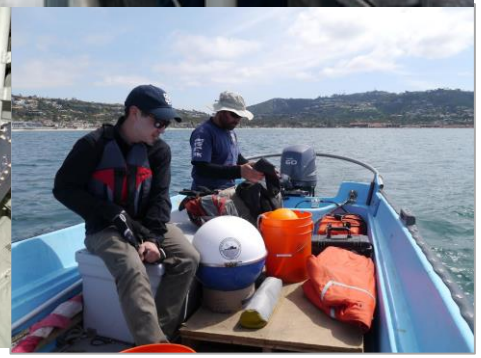
Global Drifter Program
WIS2.0 Pilot

OCG-15

Victoria, Canada

13-17 May, 2024

Presented By
Mr. Lance Braasch
Research and Development Engineer IV
Lagrangian Drifter Laboratory
Scripps Institution of Oceanography

DBCP Vice-Chair, DBCP TT-Data Management Co-Chair



Scripps Institution of Oceanography's
LAGRANGIAN DRIFTER LABORATORY

The Lagrangian Drifter Lab

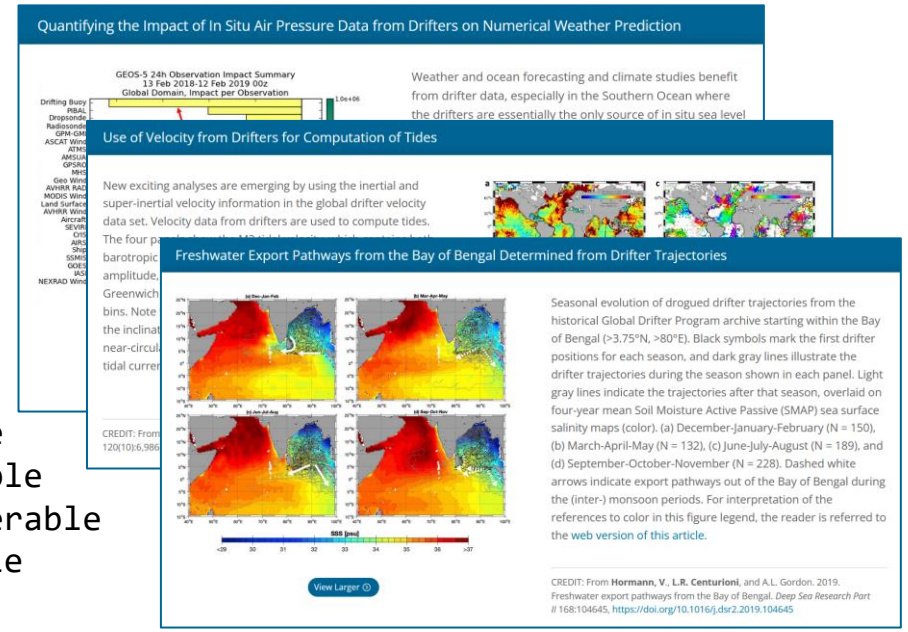
Director: Dr. Luca Centurioni, PI of the Global Drifter Program

The Lagrangian Drifter Laboratory (LDL) is a team of Scientists, Engineers, Technicians, Coordinators, students and external collaborators in support of the end-to-end use of Lagrangian Drifter Technology and for promoting the advancement of air-sea interaction science (1,200+ paper published resulting from the FAIR-O data approach)

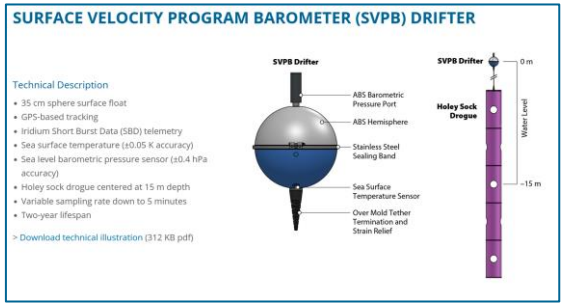
ACTIVITIES

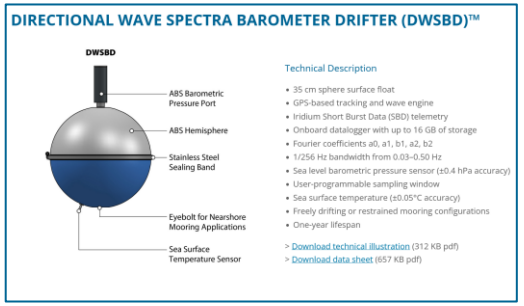
Generation of scientific publications and products; Scientific advancements and applied science; Education and Outreach

- Development of new and existing drifter technologies
- Organization of scientific field campaigns
- Data management and analysis
- Peer-reviewed publications with associated DOI and FAIR-O dataset



Findable
Accessible
Interoperable
Re-usable
Open





Scripps Institution of Oceanography's
LAGRANGIAN DRIFTER LABORATORY

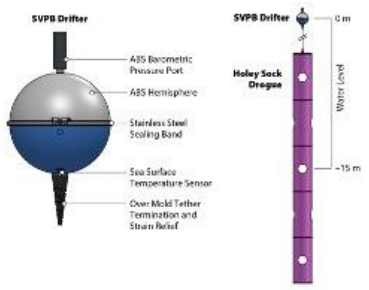
https://ldl.ucsd.edu

Scripps Institution of Oceanography's
LAGRANGIAN DRIFTER LABORATORY

What Kind of Data and Metadata?

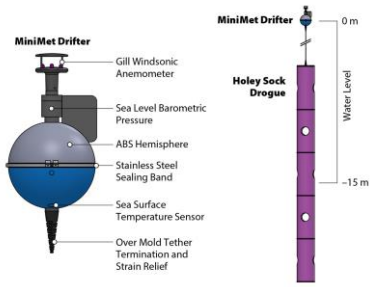
- Off-shore wave conditions
- Ocean surface velocity
- Mixed-layer structure
- Sea level pressure
- Surface winds
- Sea surface temperature

+ MORE



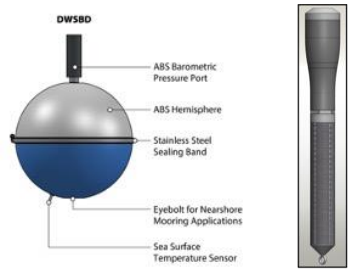
SVP and SVP-B

Atmospheric data and currents



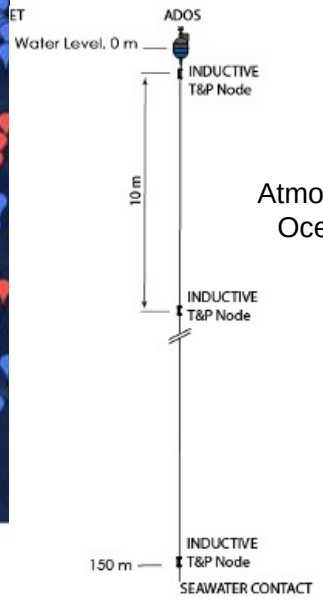
MiniMet

Atmospheric data and currents



DWSD-B and A-DWS

Atmospheric data and waves

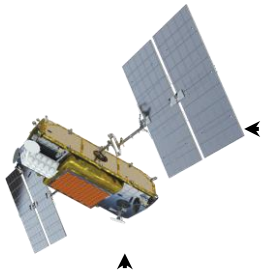


ADOS

Atmospheric and Upper Ocean Heat Content

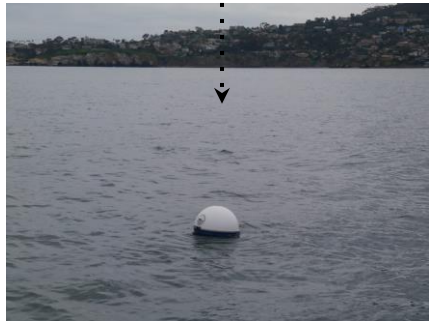
Scripps Institution of Oceanography's
LAGRANGIAN DRIFTER LABORATORY

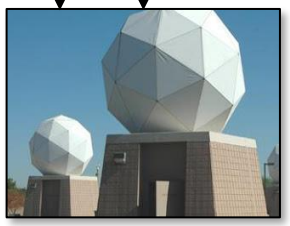
Lagrangian Drifter Lab is a Real-Time Data Assembly Center (RT-DAC) in MCDS



~ 24 SBD/day

~ 30,000 SBD/day





Lagrangian Drifter Lab

Iridium Processing Server

Database Server

WIS2BOX

Data Processing Server

GTS Server

Metadata Server

Web Server

Graphical Data Viewer

ERDDAP Endpoint

URL based Data requests

WIS2.0 Global Broker

National Weather Service

OSCAR/Surface

Project Scientists

Delayed Mode-DAC

Drifter Data Acquisition

Iridium Ground Station

Server-Side Data Collection and Distribution

Data End Users

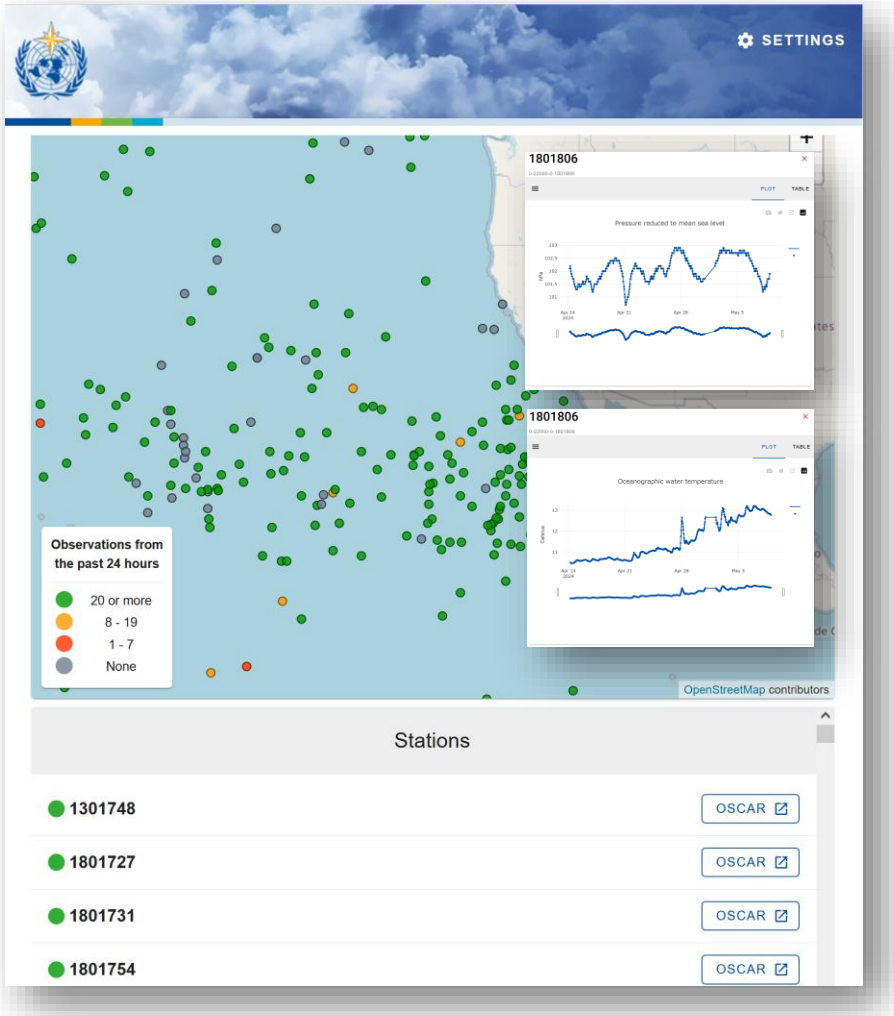
WIS2BOX Pilot lessons learned

Benefits

- Open-source tool kit for data sharing on WIS2 network
- Community engagement and capacity building
- Empowers data providers to share data
- Dashboard to view platform data on WIS2 and platform metadata on OSCAR/Surface

Work for the Networks

- High bar of entry for new users without platform templates
  - Templates exist for Moorings (TM315008), Drifters (TM315009) and First5 Waves (TM315010) data on GTS. Templates needed for their WIGOS metadata.
  - DBCP TT-DM Pilot for interactions with OSCAR/Surface and OSCAR/Surface metadata schema template for BUOY platforms
- Detailed platform metadata needed in OSCAR/Surface
  - DBCP GHRSST Pilot highlighted need for detailed platform metadata and its ability to improve the value of existing datasets



https://wis2.ldl.ucsd.edu

SETTINGS

HOME DOCUMENTATION

Welcome to WIS 2.0 in a box!

LDL's drifting marine station core data (BUOY) (us-ucsd-scripps-ldl)

Topic: origin/a/wis2/us-ucsd-scripps-ldl/data/core/weather/experimental/surface-based-observations/buoy

EXPLORE OBSERVATIONS DISCOVERY METADATA

LDL's drifting marine station recommended data (BUOY) (us-ucsd-scripps-ldl)

Topic: origin/a/wis2/us-ucsd-scripps-ldl/data/recommended/weather/experimental/surface-based-observations/buoy

EXPLORE OBSERVATIONS DISCOVERY METADATA

https://wis2.ldl.ucsd.edu