

Introducing the new Autonomous Vertical Profiler (AVP)

DESCRIPTION

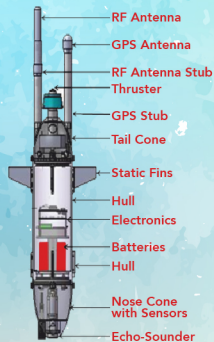
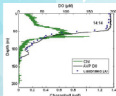
The AVP offers a fast, cost effective, optimized approach to profiling in coastal waters. It consists of a handsfree, motor driven in-situ robot profiler that requires no operator skill or deployment gear, while fulfilling the requirements of repetitive sampling in coastal waters. It uses standard oceanographic sensors to measure vertical structure at high resolution in water as shallow as 5m and as deep as 200m. It has also been used in water bodies like dams, lakes and estuaries.

UNIQUE FEATURES

- Profile decoupled from perturbations caused by ship motion.
- Repetitive dives offer adequate statistics of the profiles shape variability.
- Control system on the AVP enables hover at any Set Depth.
- Ease Operation and One-Man Deployable.

APPLICATIONS

- Water Quality Monitoring in Fresh Water bodies & Coastal Seas. (Profiles of Chlorophyll & DO obtained during 200m dive in Arabian sea.)
- Long-Term Deployment at Dams & Lakes for Time Series Data. (AVP moored at Tillari Dam for one month performing 2 profiles a day)
- Imaging of Coral Reefs using Bottom Tracking Capability of AVP. (Coral Reef Image obtained at Grand Island, Goa)



USERS

- Central Marine Fisheries Research Institute, Kochi.
- Space Application Centre, ISRO, Ahmedabad.
- National Institute of Oceanography, Goa.
- Regional Centre, NIO, Vizag.
- Bhabha Atomic Research Centre (BARC), Mumbai.



SPECIFICATIONS

Physical Dimensions	Length: 1.17 m Diameter: 0.18 m
Weight	13-16 kg depending on the Sensors
Rated Depth	200m (max)
Hull Material	Aluminium Alloy with Acetal End Cones
Propulsion	Single DC Thruster Propulsion
Communication	Radio Modem (2.4 Ghz) / Satellite Transmission
Battery	Lithium-Ion polymer batteries (324 Whr)
Speed	0-1m/s
Endurance	Radio communication: 4 dives/day to a depth of 100m for 7 days Satellite communication: 2dives /day to a depth of 100m for 15 days
Vehicle Payloads	GPS, Pressure Sensor, Altimeter, Pinger for Emergency Location
Specific Payloads	Chlorophyll, Conductivity, Temperature, Radiance(PAR), Dissolved Oxygen