



AUTONOMOUS UNDERWATER PROFILING DRIFTER



The Autonomous Underwater Profiling Drifter (AUPD) is a technology that enhances the real-time capability for measurement of temperature and salinity with reference to depth through the upper 2000 m of ocean depth and for deep sea observations Deep Sea AUPD is applied which can measure up to ocean depth of 5000 m. AUPD operate actively by changing the buoyancy in order to ascend or descend through the ocean.

The AUPD is common underwater platform which carries CTD (Conductivity, Temperature and Depth) sensor and profile the sea water measurement at pre-determined depth. These floats drift freely at a predetermined depth, then periodically ascend to the sea surface, report to satellite and descend again back to their parking depth for the next cycle, a typical period of 2 days. These floats are powered by Primary Lithium battery and pre-programmed for typical profiling cycles controlled by a micro controller based embedded electronics to attain the data.



AUPD is used to study the quantitative description of the evolving state of the upper ocean and the pattern of ocean climate variability, including heat, fresh water storage and transport. AUPD also utilized to enhance the value of the altimeter with sufficient coverage and resolution for interpretation of altimetry sea surface height variability and for initialization of ocean and coupled forecast models, data assimilation and dynamical model testing. It contributes to the global description of the seasonal and inter-annual variability of the upper ocean thermohaline circulation.



This technology is developed by **National Institute of Ocean Technology**, Ministry of Earth Sciences, Govt. of India and seeks to stimulate the use of technology by commercialization under Make in India Initiative and **National Research Development Corporation** will facilitate for smooth transfer and licensing of the technology with affordable Licencing terms and conditions.

Any company or organization interested in the technical know-how and to get more details about the technology please refer the contact details below.

Contact Details:

Dr. Tata Sudhakar

Scientist – G & Head

NATIONAL INSTITUTE OF OCEAN TECHNOLOGY

Velacherry-Tambaram Main Road, Narayanapuram,

Pallikaranai, Chennai - 600 100, Tamil Nadu, INDIA.

Email: tata@niot.res.in; Mobile: 9444399844 Phone: 044 - 66783525