

DynamOcean

Services

- Oceanographic and Positioning Equipment Rental
- Meteorological and Oceanographic Surveys
- Data Analysis and Characterisation
- Marine Energy Resource Assessment
- Real-Time Monitoring

Founded in 2010, DynamOcean is an independent consultancy in physical oceanography based in Brittany.

Our oceanographers have an in-depth knowledge, theoretical and practical, of the wave and tidal dynamics within the offshore, coastal and estuarine environments.

We are involved in French and European R&D projects on turbulence and waves characterisation.

Our MetOcean surveys and analysis studies have been carried out in France, Europe and around the World.

DynamOcean also offers a comprehensive pool of Oceanographic survey equipment for rental.

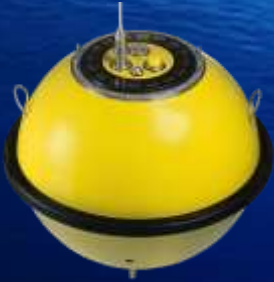
Added values

- Full consultancy services: project management, vessel hire, health and safety, site supervision, risk assessment, surveys, data analysis and interpretation, marine energy resource assessment
- Stringent quality assurance and quality control
- Fast responding and flexible organisation
- R&D backed measurements and analysis of waves and turbulence
- ADP and wave buoy expertise

Sectors

- Tidal Stream Energy
- River Current Energy
- Wave Energy
- Offshore Wind Energy
- Coastal and Freshwater
- Ports and Harbours
- Offshore Oil & Gas





WAVES, TIDES and WEATHER

- Wave and MetOcean Buoys
- Tide Gauges
- Weather Stations

VELOCITY PROFILERS & METERS

- Acoustic Doppler Profilers (ADP: 3 to 8 beams)
- Acoustic Doppler Velocimeters (ADV)



MOORINGS

- Robust seabed frames
- Acoustic releases and surface commands
- Subsea buoyancy (Syntactic foam buoys)

POSITIONNING AND NAVIGATION

- Global Navigation Satellite Systems
- Inertial Navigation Systems
- USBL Systems



USBL, ARGOS and Pingers

- ARGOS and IRIDIUM beacons
- Pingers with tilt monitor
- USBL Transponders
- Mini ROV

DATA TELEMETRY AND COMMUNICATIONS

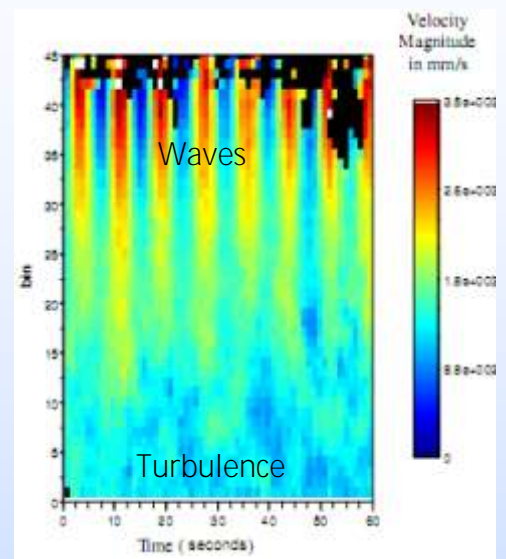
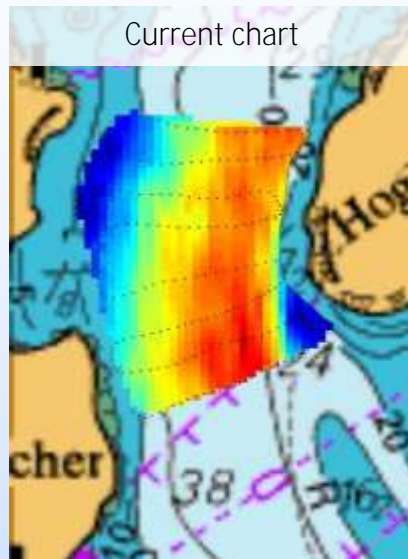
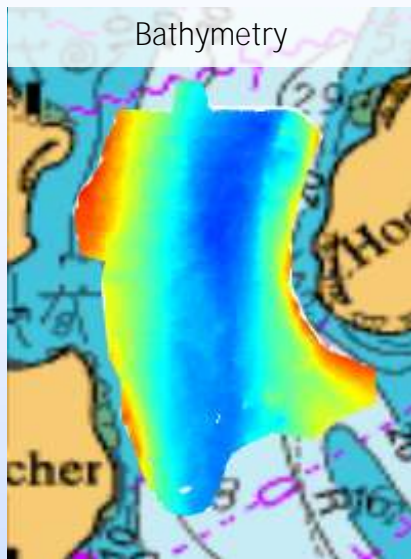
- Underwater Acoustic Modems
- HF Radio Modems
- Satellite phones



DynamOcean offers oceanographic surveys where the instruments are pushed to their working envelope and strong quality assurance is implemented throughout each project.

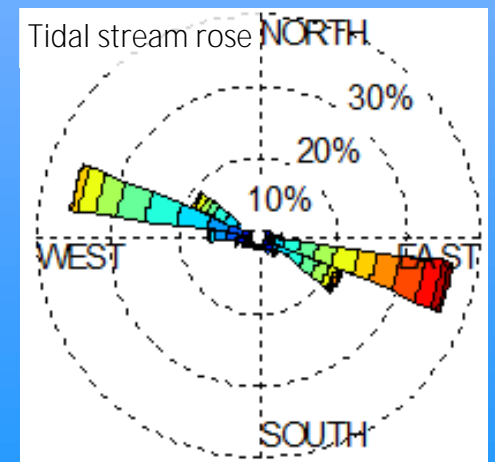
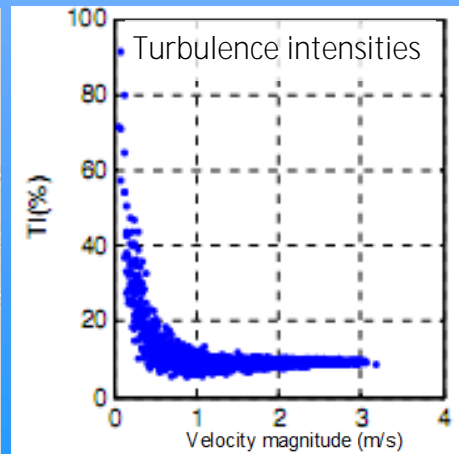
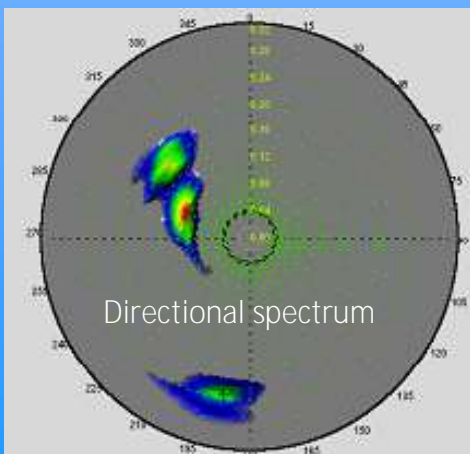
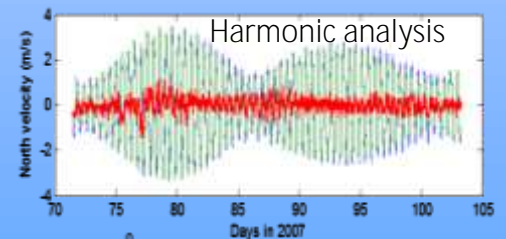
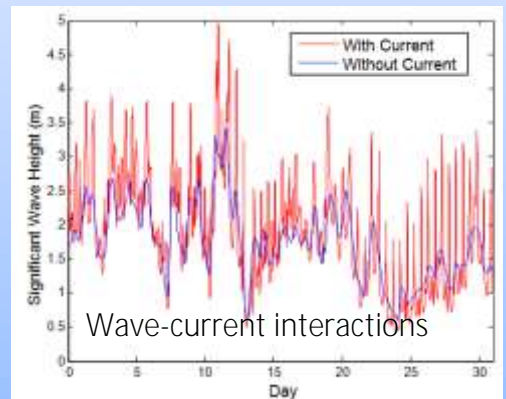
Using robust equipment and key expertise, DynamOcean is able to survey a variety of challenging sites from strong tidal races, through remote rivers, to swell-exposed coastlines.





DynamOcean offers advanced quality control, analysis and interpretation of data from surveys, analytical and numerical model results:

- Bathymetry and seabed features
- Current maps
- Tidal harmonic analysis and prediction
- Turbulence analysis from ADV and ADP data (5 to 8 beams)
- Separation of turbulence and wave orbital velocities
- Wave spectral analysis from ADP and wave buoys
- Wave-current interactions interpretation
- Statistical analyses from wave, wind and current data



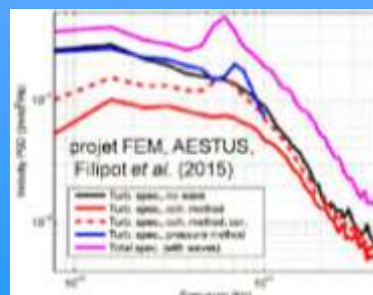
- MetOcean monitoring
- Marine energy resources monitoring
- Vessel and offshore structures positioning and dynamics
- System integration
- Marine operations support



- MOREDATAS (Method to Obtain Refined Environmental Data from the Seas)
 - 2016 - 2019
 - Quantification of the uncertainties budget
 - Development of novel analysis techniques
 - Turbulence characterisation using Acoustic Doppler Profilers (5, 7 or 8 beams)
 - Measurement of waves using a set of pings dedicated to surface tracking
 - Separation of the wave orbital velocities and turbulence velocity fluctuations



- THYMOTE (Turbulence HYdrolienne Modélisation, Observations, TEsts en bassin)
 - 2016 - 2019
 - Improve the knowledge of the turbulence processes within tidal stream sites
 - Applications: fatigue, energy yield, array optimisation





Project	Client	Date
Monitoring of waves and wind during harbour works. Port de Cannes.	 CCI MIDECÔTE D'AZUR	2018-2021
Validation of current measurements using an ADCP mounted on a floating buoy.	 KROCEAN	2018-2019
Tidal stream energy assessment in two remote sites of Indonesia (Lombok and Sape Straights).	 AFD	2018-2019
Current survey during pipe laying across the river Rance near the tidal barrage	 Eau du Pays de Saint-Malo Service public de traitement d'eau potable	2018
Tidal stream resource assessment in Cuan Sound (Scotland). Vessel Mounted ADCP and tidal gauge surveys.	 aquatera Argyll Bute	2017
Wave energy resource assessment at the Nienhagen test site. Tank testing planning and support.	 HAB BEWEGENDES AUS STAHL	2017-2018
Participation into THYMOTE project on turbulence measurement, analysis and modelling. Call for Projects ITE EMR 2015.	 FRANCE ENERGIES MARINES	2016-2019
Coordination of MOREDATAS project on turbulence measurement and analysis. Joint Call for Projects OCEAN ERA-NET 2014.	 OCEAN ENERGY TRANSIT	2016-2019
Real-time current monitoring to support offshore instrumentation trials	 ProLarge	2016
Tidal stream and wave-induced current measurement and analysis in French Polynesian Atolls.	 ADRAM	2015
Real time measurement and analysis for the performance testing of a MetOcean buoy	 SCADES MARINE	2015
Waves and current analysis from ADP data for a tidal farm	 ENGIE	2013-2014
Characterisation of the performance of Orkney-located vessels and associated services in carrying out marine renewable operations. Measurements and analysis of waves, currents and ship motion and mooring response.	 aquatera EMEC The European Marine Energy Centre Ltd	2013-2014
Waves, current and turbulence analysis from ADP data for a tidal farm	 ARR DP ENERGY	2014
Waves, current and turbulence measurement and analysis for the tidal site of Paimpol-Bréhat and the tidal-estuarine site SEENEOH. Seabed and vessel mounted ADCP and tide gauge data.	 FRANCE ENERGIES MARINES	2013
Feasibility study for the river current technology in Haiti	 IDB	2013
Current survey work on river locations in Brazil	 ORBITAL MARINE POWER	2012
Waves and current measurement and analysis at Rystraumen's tidal test site.	 aquatera	2012
Real-time monitoring of the tidal stream resource at EMEC's nursery tidal test site.	 flumill	
Methodologies for a world wide resource assessment of tidal energy: Aqua-Tidal	 aquatera	2012
Waves and current measurement and analysis at EMEC's tidal test site. Advanced turbulence analysis	 aquatera VOITH	2010-2011

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