

# The WAVY drifters and their role in Ocean Observation

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## MELOA Project Outputs

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# MELOA | Family of ocean surface drifters - WAVY

Low-cost

Easy-to-handle

Wave Resilient

Multi-sensor

Extra-light



For use in all water environments: deep-sea, inland waters, coastal areas, river plumes and surf zones.

## Key Features:

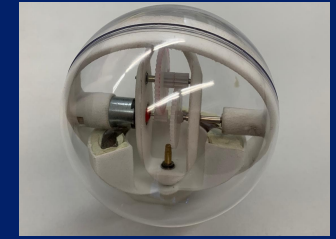
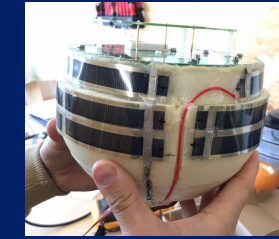
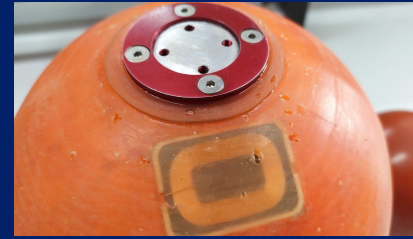
- Small size, easy-to-handle
- Optimized buoyancy, reduced direct wind effect
- Minimized pendular motion, facilitating the WAVY position detection

# The WAVY family

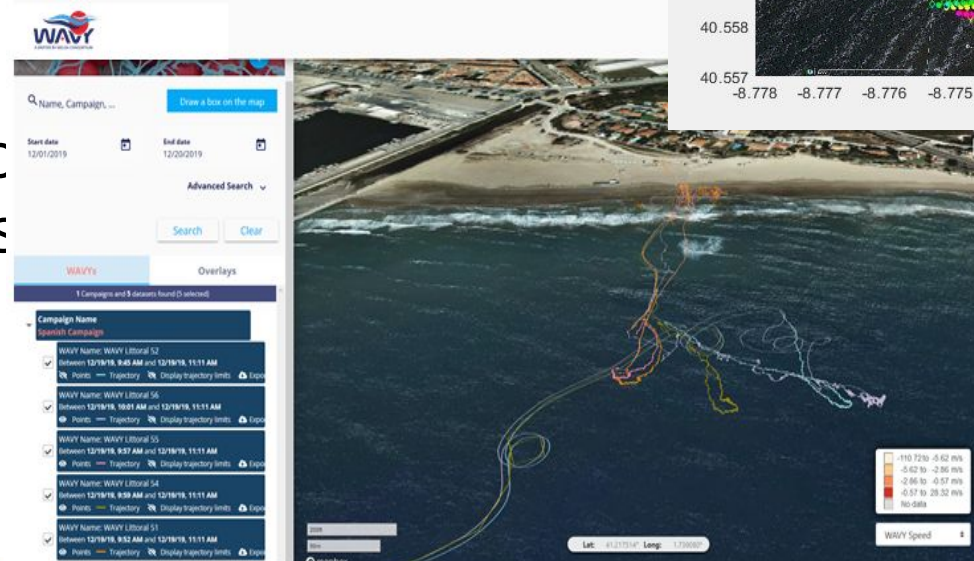
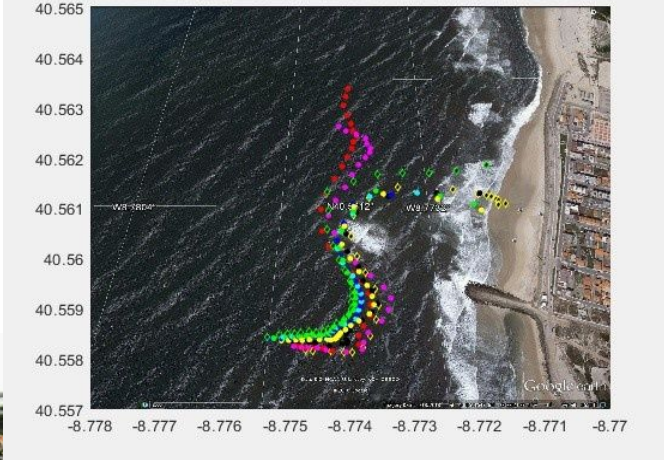
Model	GNSS	GSM	Sat	IMU	T	Atm Press	PV	KEH	Ballast	Suggested applications
<b>Basic (WB)</b>	X	X			1					Nearshore studies, citizen-science projects, fresh water inland applications
<b>Littoral (WL)</b>	X	X		X						Nearshore and littoral studies, wave-induced currents, surf zone studies, citizen-science applications, coastal studies, river and estuarine studies
<b>Ocean (WO)</b>	X		X	X	2		X		X	Global ocean circulation studies, regional or global ocean wave studies, satellite data validation, GOC model validation, air-sea interaction studies
<b>Ocean-plus (WP)</b>	X		X	X	2		X	X	X	Global ocean circulation studies, regional or global ocean wave studies, satellite data validation, GOC models validation, air-sea interaction studies
<b>Ocean-Atmo (WA)</b>	X		X	X	4 (2 sea, 2 air)	X	X	X	X	Global ocean circulation studies, regional or global ocean wave studies, satellite data validation, climate models validation, air-sea interaction studies



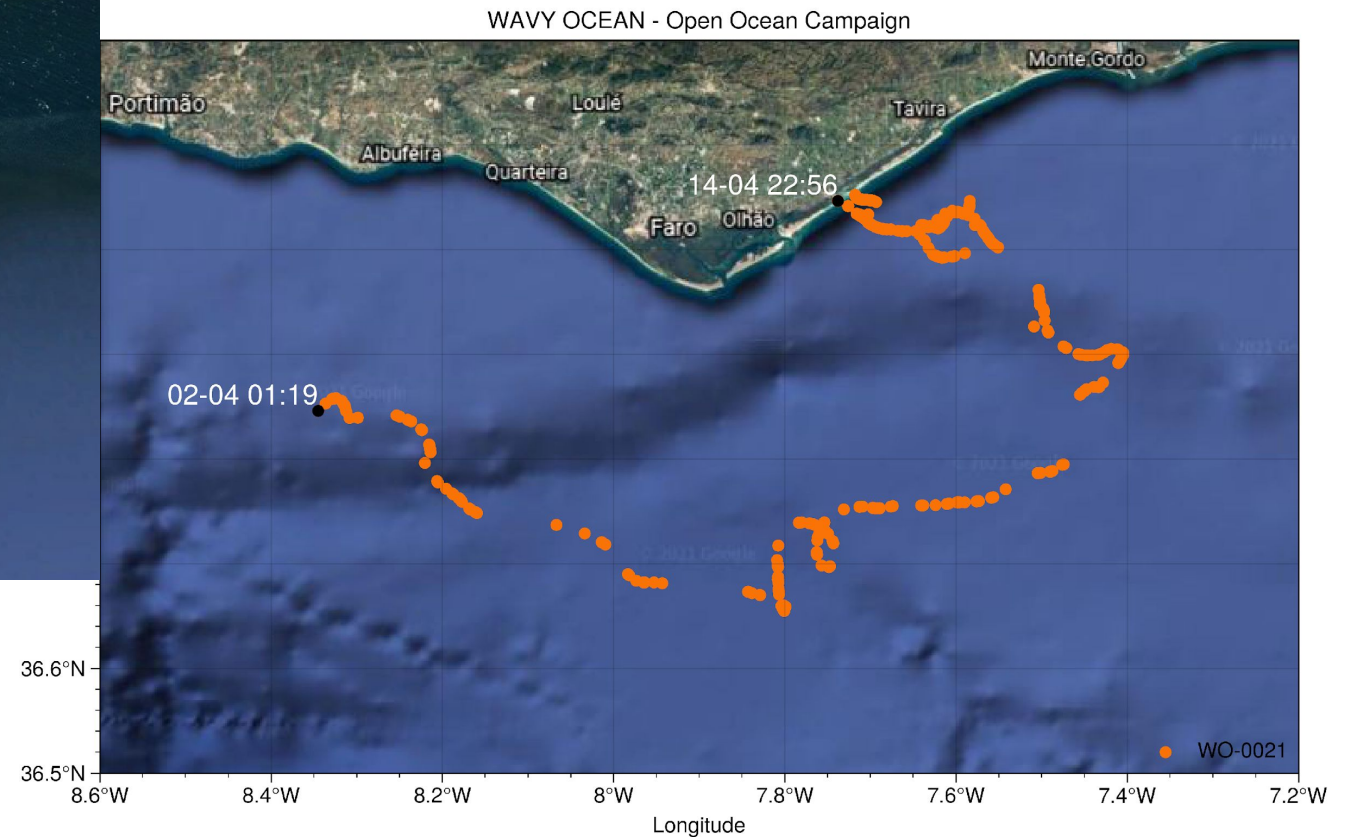
# Status



- WL undergoing extensive testing and validation
- WO have just started trials at sea
- WB prototype developed and ongoing FAT
- Currently validating:
  - Surface currents tracing
  - Wave parameters observatic
  - Temperature measurements
  - Communications



# Surface currents – Validation against ADCP and other current meters



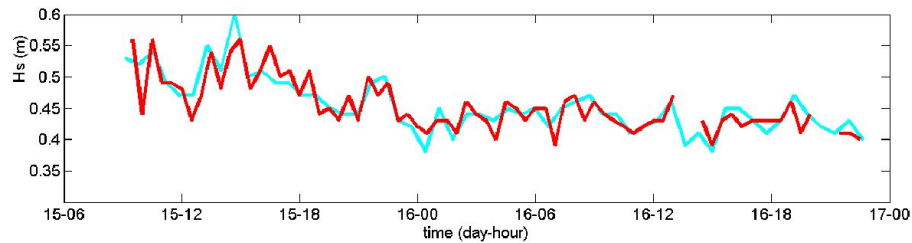
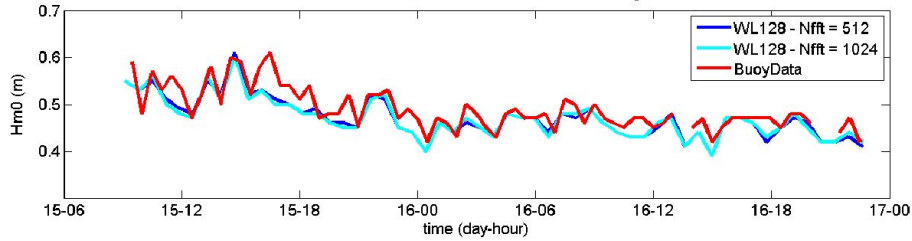


# Wave parameters – different forms of validation

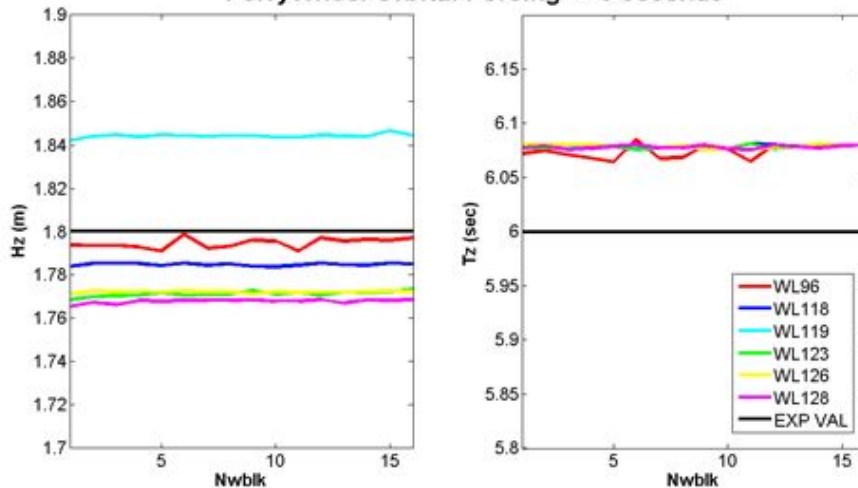


# Wave extraction algorithm

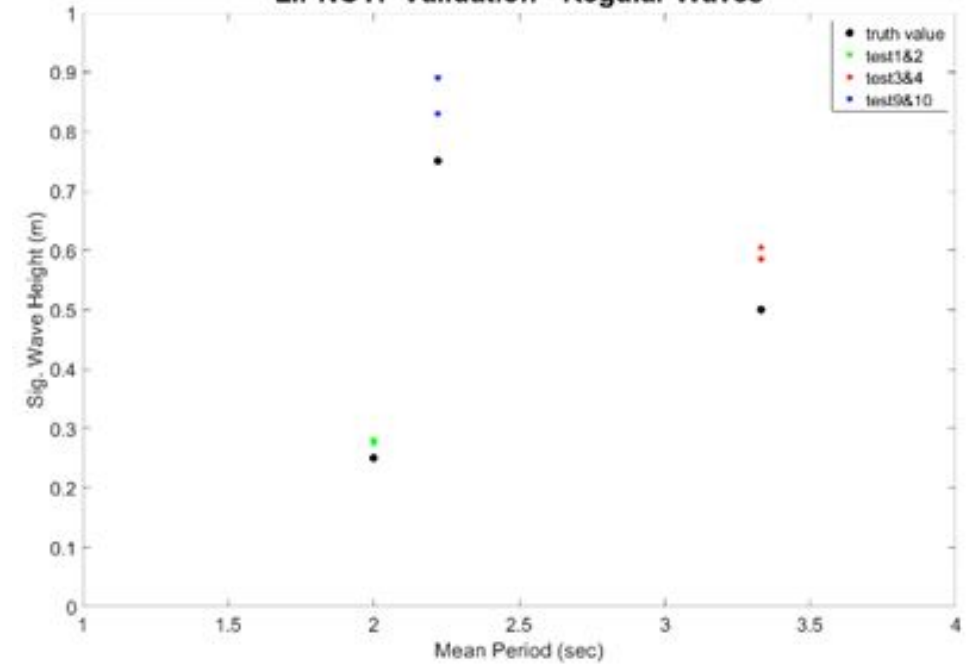
WL128 versus ADPL5 buoy



FerryWheel Orbital Forcing -> 6 seconds

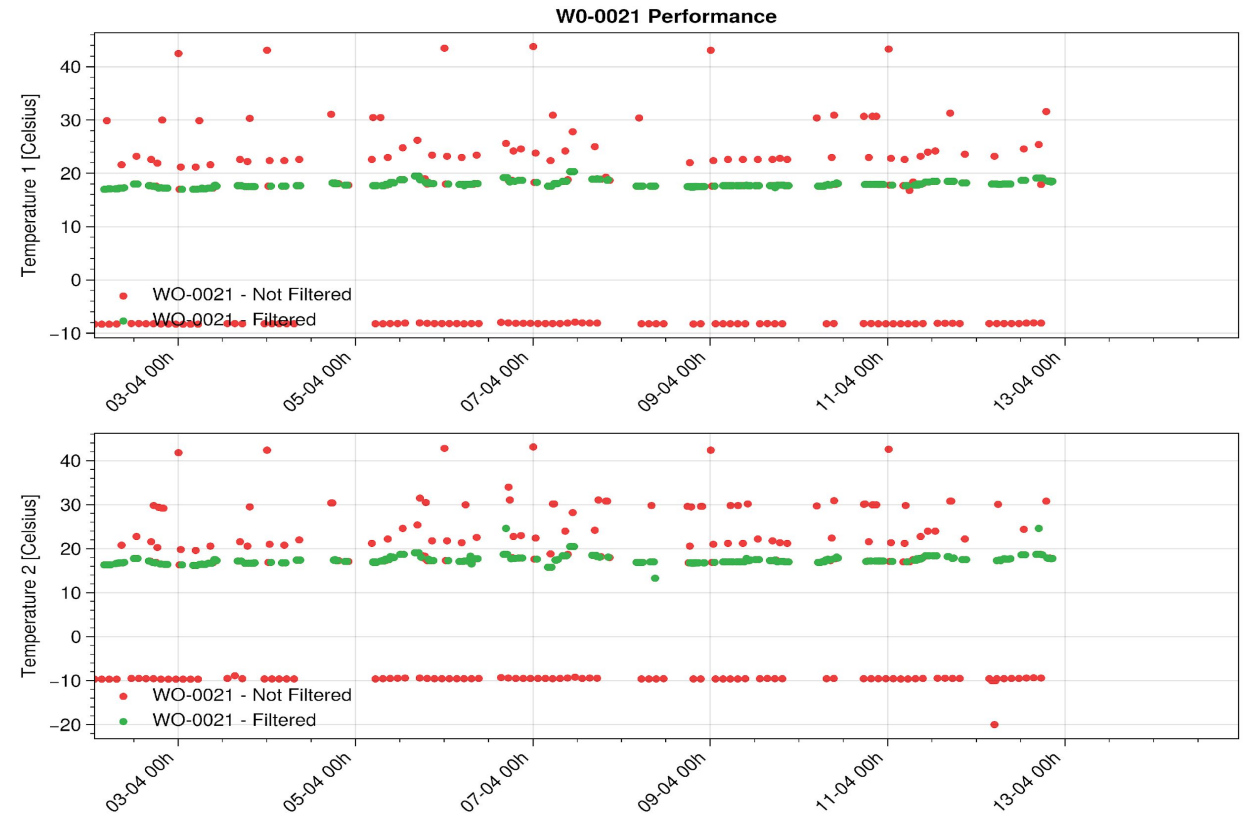
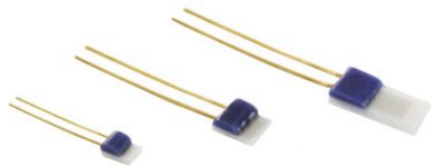


Lir NOTF Validation - Regular Waves



# Temperature observations

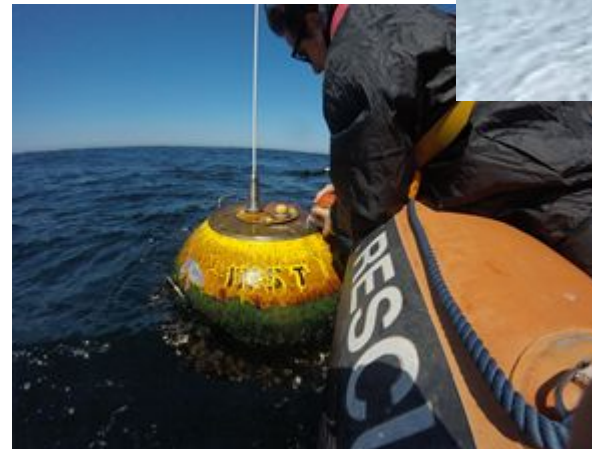
- Calibration / validation in temperature controlled baths at calibration labs (IHPT)
- Trials at sea alongside other instruments





# Conclusion: New drifters available for the Ocean Observation community!

- Final stages of development with intense effort in data validation
- Large number of field campaigns ongoing and planned for Q2/Q3 2021
- WAVY drifters available for users (just contact us at <http://ec-meloa.eu>)



# MELOA | WAVY family of ocean surface drifters

  
**Thank you! Any questions?**  
A DRIFTER BY MELOA CONSORTIUM

**Please contribute to the MELOA user/market survey**

[https://forms.office.com/Pages/ResponsePage.aspx?id=HrdKicjsD0OYZ7-HaDzuzvetsKBtJqVIp\\_oBKKUbMSeIUNIlVNTIaQVI0UEoyOTg0RjNXWFZTN1lBWi4u](https://forms.office.com/Pages/ResponsePage.aspx?id=HrdKicjsD0OYZ7-HaDzuzvetsKBtJqVIp_oBKKUbMSeIUNIlVNTIaQVI0UEoyOTg0RjNXWFZTN1lBWi4u)