



CONTROS BY -4H-JENA ENGINEERING SENSORS · SERVICE · SOLUTIONS

2022-09-29 11th FerryBox Workshop

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CONTROS BY -4H-JENA ENGINEERING

- -4H-JENA engineering has provided equipment and services "From the sea to the stars" for 30 years
- Headquarter in Jena (Germany)
- CONTROS was acquired from Kongsberg Maritime in 2020 and is still located in Kiel

Le Commandant Charcot collects Arctic Ocean data with FerryBox



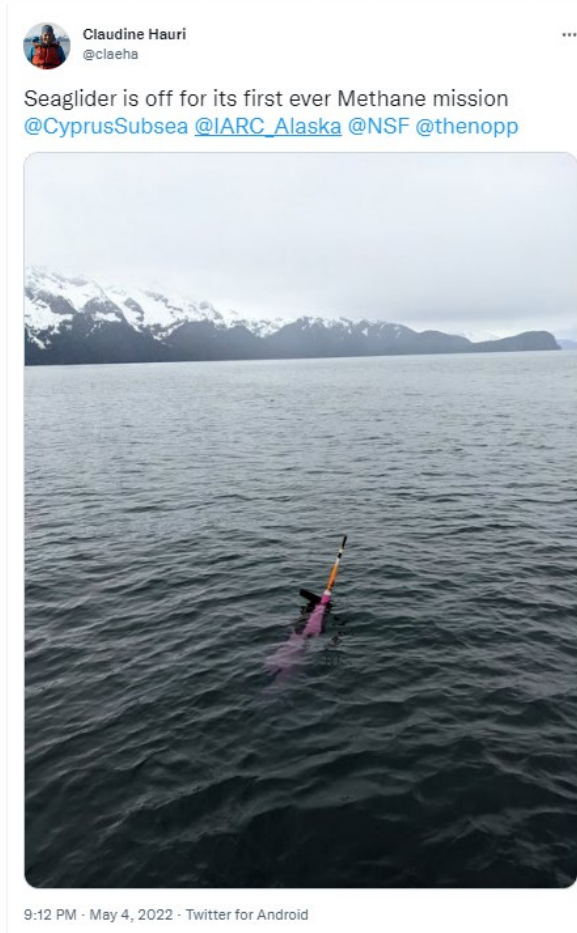
The FerryBox system onboard Le Commandant Charcot will be able to measure the conditions of the Arctic Ocean during voyages

<https://www.cruiseandferry.net/articles/le-commandant-charcot-collects-artic-ocean-data-with-ferrybox-1>

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-4H-JENA decided to incorporate CONTROS because:

- Sensors for FerryBox key parameters are built in-house
 - General upgrade for the Maritime Technologies department
 - submersible sensor systems
- “From the sea**floor** to the stars”



CARBONATE CHEMISTRY MODULE

TA, pH, pCO₂

- Combine three parameters in one device and implement algorithms for data interpretation
- Extend Bromocresol green characterization for low salinities
- Improve sample feed
- Add in-situ reference gas verification inlets for CO₂ detector
- Verification procedure for submersible pH sensors



CONTROS HydroFIA™

CARBONATE CHEMISTRY MODULE

Our aim:

- Decrease amount of data to be processed
- Increase amount of data to be published directly
- Improve accuracy for underway $p\text{CO}_2$ (results of ICOS comparison workshop)
- Improve versatility of pH, TA



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