

# MSM123 “BELS”

Halifax – St. John’s

23 November – 27 December 2023

## 1st Weekly Report (20.11. 2023 - 26.11.2023)

After a slow start waiting for shipments from all corners of the world, work on board MSM123 began!

We have scientists from Canada, USA, UK, and Germany participating, hunting for storms, waves, and winds. Our goal is to investigate the role of bubbles on air-sea interactions, and more specifically on gas transfer of oxygen and climate-active trace gases. With any luck, we will be able to examine the relevant processes and quantify them for future parameterizations.



*Figure 1. Deployment of the bubble buoy.*

The first operations of the cruise were largely tests, so far. We completed our first station at approximately 45.6°N, 56.4°W. During this station, we deployed the bubble buoy (Figure 1) and 2 REMUS AUVs (Figure 2) for the first time. Given that none of these instruments had been previously in the water, their performances were better than expected! Deployment and recovery went off without any hitches, especially because the crew has a wealth of experience in these types of operations. Their expertise and tactile know-how are crucial for the success of this research program.



*Figure 2. Recovery of one REMUS AUV.*

We are now on the way to the OSNAP array (west) to calibrate the oxygen sensors on the moorings. These stations will be used, additionally, as final tests for other equipment on board. Afterwards, our storm chasing adventures will begin!

Greetings from the Labrador Sea,

Christa Marandino

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