



Project: **The role of small-scale ocean processes in the uptake of heat and carbon in a changing climate**

Research topic: **Ocean & Earth Sciences**

Swedish Institution: **Göteborgs universitet**

French Institution: **École Normale Supérieure - PSL**

Dates of mobility: **15/10/2024 to 04/11/2024**

Program: **SFVE-A**



PRESENTATION

Solange Coadou-Chaventon is following a Joint PhD program between the Laboratoire de Météorologie Dynamique at the [Geosciences Department](#) of [École Normale Supérieure – PSL](#) in Paris and the [Marine Science Department](#) at Göteborgs universitet within the [Polar Gliders group](#). Her PhD aims to look at ocean fine-scales across contrasting regions, making use of high-resolution observations undertaken by autonomous platforms (Saildrones & Gliders) and the new SWOT satellite mission. The first chapter of her PhD focused on the Northwestern tropical Atlantic, a region strongly influenced by the large freshwater inputs from the Amazon River, creating very strong salinity fronts. She is now exploring the Cape Basin, a highly energetic region where the Agulhas current is bringing Indian Ocean warm and saline waters into cooler and fresher Atlantic waters, leading to intense temperature gradients.

ACTIVITIES IN SWEDEN

The main objective of Solange Coadou-Chaventon's visit in Sweden was to give her mid-term seminar entitled *The ocean fine-scale circulation as revealed by high-resolution field observations and SWOT altimetry*. It was followed by a meeting with [Prof. Sebastiaan Swart](#) - her PhD supervisor - and [Prof. Fabien Roquet](#) – her examiner, to evaluate the progress made so far and discuss future plans. During her stay, she followed regular weekly meetings of the Polar Gliders group through which [Sabrina Speich](#) gave a talk on water masses transformation in the Cape Basin. While she was in Sweden, [Dr. Romain Caneill](#), a visiting PostDoc, held a seminar entitled "Dynamics of sea ice" that she attended. She also got the chance to discuss her current and future research with different members of the Polar Glider Group (Prof. Sebastiaan Swart, [Dr. Isabelle Giddy](#), [Dr. Marcel du Plessis](#)...).

Within her French institute, Solange is actively contributing to [LMD-Climactions](#), a working group which reflects on the transformation of research practices in the face of the current climate emergency. During her stay, she gave a second seminar entitled *Environmental impacts of our research practices: thoughts and actions in a French climate research institute (IPSL)*

presenting the different actions undertaken by this group, from the monitoring of the lab's carbon footprint to action plans aiming to ensure that our activities are in line with the 2015 Paris agreement. The seminar was well received and interesting discussions emerged afterwards. |