JOB DESCRIPTION

Vacancy reference:	SRF14673-R
Post Title:	Post-Doctoral Researcher
Grade:	Grade 6
School/Department:	Department of Meteorology
Reports to:	Dr David Ferreira
Responsible for:	N/A

Purpose

We are looking for a post-doctoral researcher to work on a 3-year NERC-funded project investigating the variability of ocean heat transport and how it influences the sea surface temperature and climate.

Main duties and responsibilities

All Ocean Heat Transport (OHT) changes are not equally important. Some changes only affect heat content in subsurface without any signature in the upper ocean mixed layer. Others have an signature on the Sea Surface Temperature (possibly with a lag in time) and so have a pathway to influencing climate. It is unclear how much of the OHT variability falls into each category.

The aim of this work is to investigate what distinguishes these two types of OHT changes and how much of the OHT variability truly has an impact on the surface climate.

Many studies have focused on how heat (or carbon) penetrates into the ocean, here we will explore the opposite pathway: how are ocean interior heat anomalies transported to the surface? The project will focus of the dynamical processes that link changes in OHT, heat content anomalies, and their surface expression.

To address, this questions the successful applicant will use a mix of analysis of observation datasets (ARGO, ocean re-analysis) and numerical simulations with a General Circulation Model in both idealized and realistic configurations.

Supervision received

The work will be carried out in Reading under the supervision of Dr David Ferreira, in collaboration with Dr Arnaud Czaja at Imperial College, London.

Supervision given

N/A

Contact

For more information please contact directly David Ferreira (d.g.ferreira@reading.ac.uk) or Arnaud Czaja (a.czaja@imperial.ac.uk).

Terms and conditions

This is a full time position for up to 3 years.

This document outlines the duties required for the time being of the post to indicate the level of responsibility. It is not a comprehensive or exhaustive list and the line manager may vary duties from time to time which do not change the general character of the job or the level of responsibility entailed.

Date assessed:

PERSON SPECIFICATION

Job Title	School/Department
Post-Doctoral Researcher	**Department of Meteorology**

Criteria	Essential	Desirable
Skills Required	• Skills with a data-analysis software (such as matlab/python) • Skill in statistical analysis • Good communication, presentation, and writing skills	• Coding in Fortran
Attainment	• A PhD in physical oceanography or closely related field	
Knowledge	• Knowledge of large scale physical oceanography	• Knowledge of geophysical fluid dynamics • Experience with EOF, SVD analysis or similar approaches
Relevant Experience	• Experience with analysis of large data sets Or • Familiarity with numerical modelling of the ocean	• Experience with Unix system • Experience with EOF, SVD analysis or similar approaches
Disposition	• Ability to carry out independent research work • Strong motivation and good willingness to learn new techniques relevant to the project	
Other	• Good communication, presentation, and writing skills	

Completed by:	Date: