# JOB DESCRIPTION

## Job Title:
Term postdoctoral research associate in Atmospheric Greenhouse Gas Measurement.

## Department / Unit:
Earth Sciences

## Job type
PDRA

## Grade:
7

## Accountable to:
Dr D Lowry

## Accountable for:
Research in atmospheric chemistry.

## Purpose of the Post
This post will provide term-limited staffing to carry out contracted research (UN and NERC) projects, with an expectation of publication of the findings.

## Key Tasks

The appointee will be expected to work unsupervised and carry out research into atmospheric methane emissions from aircraft surveys of the North Sea and vehicle surveys of UK ground sources, and also to contribute to studies in methane removal from the atmosphere, and into the global methane budget. The appointee will also be tasked with maintaining the data files of the RHUL methane group.

**Research tasks will include:**
1. Flight campaigns over the North Sea and then analysis of samples and results
2. Vehicle campaigns at onshore oil and gas terminals and in UK cities
3. Participation in design and execution of methane-removal experiments, including analysis of air samples for CH₄ and $^{13}$C in CH₄
4. Maintenance of the group's data records and submission to UK National Data bases.

The appointee would be expected to participate fully in the Greenhouse Gas Laboratory, playing a major role in:
1. Mobile measurement campaigns on aircraft and vehicle platforms.
2. Methane removal research.
3. MOYA (the UK’s Global methane program, which is led from Royal Holloway).

The appointee will be expected to have specific skills:
1. Flight experience in aircraft campaigns for atmospheric measurement.
2. Vehicle measurement experience using cavity-enhanced optical spectroscopy (CEOS - Picarro and LGR equipment).
3. Analytical experience with CEOS, including instrument testing and calibration.
4. Experience in analysis of $^{13}$C in CH₄ by GC-CF-IRMS methods.
5. Spatial interpretation of data using ARC-GIS or similar package
6. Skills at data interpretation, trend analysis and data management.

**Other Duties**

The duties listed are not exhaustive and may be varied from time to time as dictated by the changing needs of the College. The post holder will be expected to undertake other duties as appropriate and as requested by his/her manager.

The appointee would play a role in supporting day-to-day tasks of the greenhouse gas laboratory.

The post holder may be required to work at any of the locations at which the business of Royal Holloway is conducted.

**Internal and external relationships**

The following list is not exhaustive but the post holder will be required to liaise with:

1. UK Global Methane consortium (MOYA), led from Royal Holloway
2. British Antarctic Survey (BAS)
3. UK Facility for Aircraft Atmospheric Management (FAAM)
4. UN World Meteorological Organisation Global Atmosphere Watch
5. EU MEMO2 consortium, led from Utrecht Univ.