



2016-IPR-H-000-7231

**Measurements of atmospheric greenhouse
gas concentrations and their isotopic
composition**

Position for:	<u>Short description of activity:</u>
Trainee	<p>As the science and knowledge service of the Commission, the mission of DG Joint Research Centre is to support EU policies with independent evidence throughout the whole policy cycle.</p> <p>With 7 Scientific Institutes, 3 Corporate Directorates and the DG/DDG Office, the JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at: http://www.jrc.ec.europa.eu.</p> <p>The 'Air and Climate Unit' (H02) of the Institute for Environment and Sustainability (IES) offers a Trainee position related to the research activities of the Unit, giving support to the greenhouse gas measurements group. The Unit operates the Atmosphere - Biosphere - Climate Integrated monitoring Station (ABC-IS) at Ispra, including measurements of the long lived atmospheric greenhouse gases (GHGs) CO₂, CH₄, N₂O, and SF₆. Recently, these measurements were complemented by analyses of the stable isotopes of CH₄ (¹³CH₄, CH₃D), providing important additional information on the regional sources (e.g. allow to distinguish CH₄ emission from natural gas leaks from agricultural CH₄ emissions).</p> <p>The objective of this study is (1) to further analyse the CH₄ isotope measurements and (2) to support the setup of a new GHG measurements system.</p> <p>It is foreseen that the trainee will:</p> <ul style="list-style-type: none">- carry out a literature survey on the isotopic characterisation of the major atmospheric CH₄ sources- assist in the interpretation of the ¹³CH₄, CH₃D measurements at Ispra- assist in the setup of a new instrument for measurements of CO₂, CH₄, and CO (based

	<p>on cavity ring-down spectroscopy)</p> <ul style="list-style-type: none"> - assist in the setup of the gas sampling and calibration system. - provide a final documentation and presentation of the results. <p>Qualifications: <u>Essential.</u> This type of training is for individuals who wish to gain work experience following the award of a university degree, Master's degree or Ph.D, in the field of atmospheric physics and / or atmospheric chemistry. Good knowledge of English language (level B1). <u>Desirable</u> - some basic knowledge of GHG measurement techniques and isotope analyses.</p> <p><u>For general eligibility requirements, please read the rules governing the traineeship scheme of the JRC:</u></p> <p>https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/jrc-trainees</p>
Institute/Directorate Unit	<p>Institute for Environment and Sustainability H02 – Air and Climate</p> <p>Further information: https://ec.europa.eu/jrc/en/institutes/ies</p>
Indicative duration	5 months
Preferred starting date	16/06/2016
JRC Site	Ispra
Country	Italy
<u>JRC contact details</u>	<p>For any technical problems with your application, please contact: JRC-ESRA@ec.europa.eu</p>