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The Belgian Institute for Space Aeronomy is looking for a student for an internship

Development of a Mobile-DOAS Viewer

The Royal Belgian Institute for Space Aeronomy (BIRA-IASB) is a federal scientific institution located in Uccle (Brussels) next to the Royal Meteorological Institute of Belgium and the Royal Observatory of Belgium; together they are called the Space Pole. BIRA-IASB's principal mission is the development of scientific and technological expertise in the field of aeronomy. This interdisciplinary science studies the physics and chemistry of planetary atmospheres and addresses issues of societal interest such as atmospheric composition changes and their link with climate and air quality. For more information on the institute and its activities, please visit our website at www.aeronomie.be

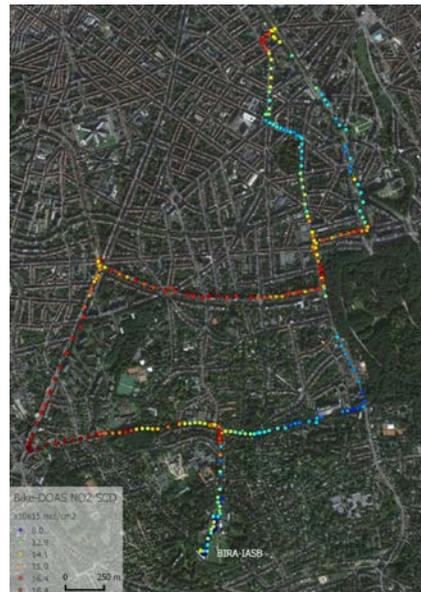
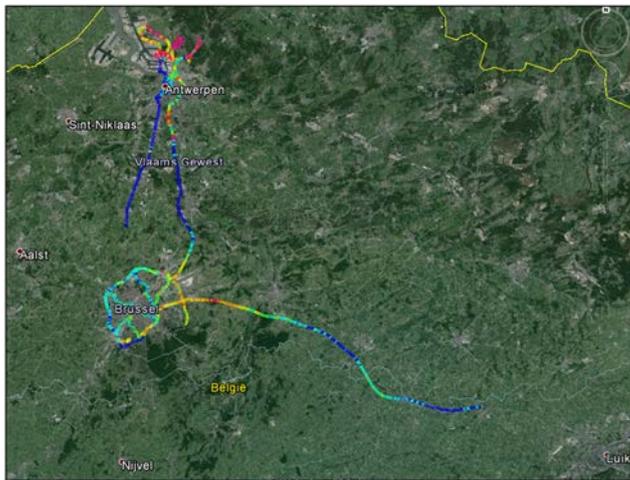
We are looking for a student to develop a server with webinterface for near real-time map visualization of mobileDOAS measurements of trace gas concentrations such as NO₂. This could be done in the framework of a thesis or internship.

The BIRA-IASB Aeromobil is a mobile remote sensing instrument, developed to measure trace gas concentrations which are strongly linked to air quality/pollution. More information about the Aeromobil can be found here: <http://aeromobil.be>. Currently the collected measurements are mapped in a post-processing step. The webinterface or viewer would be a big asset during measurement campaigns in order to detect hotspots in near real-time and would additionally be used for communication purposes, e.g. demonstration during open days. The Aeromobil PC runs a Wi-Fi hotspot, to which users can connect, and a webserver which is started automatically when the system boots. The webserver should monitor the measurements and update the interface in a browser as new results become available. For the maps, data can be used for example from OpenStreetMap, visualized using a javascript "slippy map" such as leaflet.js.

Candidate profile:

- Bachelor or Master study – ICT option
- A general interest in atmospheric chemistry/physics, air quality and/or geoscience is an asset
- Also a good understanding of English or French + Dutch is an asset
- The student can choose the starting date of his internship
- The duration should be a minimum of 1.5 months but can be extended to 3 months or even longer in the framework of a thesis

An office can be foreseen at BIRA-IASB, but the development can in principle be done from any location once a sample data set is provided.



For more information about this project you can contact:

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If you are interested, you should apply by sending an email with the **reference "D31_STUDENT"** to Frederik.tack@aeronomie.be with the copy to hr-ae@aeronomie.be