

SNELLIUS NEWSLETTER

March 2015

Introduction

This is the first edition of the Snellius monthly newsletter. In this newsletter we list the upcoming Snellius events, the upcoming graduation ceremonies of our master and Ph.D. students and we ask a scientist to tell something about his/her research. Furthermore, Snellius just launched a new website (www.snelliusdispuut.nl), where we give information about master projects, potential internships and the current master and Ph.D. students. Finally, we'll provide information about upcoming events and the courses currently taught within the department of Geoscience and Remote Sensing.

New board

In the beginning of february Snellius had its yearly board change. Reinier and Arjan said goodbye to their responsibilities and welcomed Maarten and Quintus as new members of the board. The main focus of this year is getting Snellius to an even more professional level with a steady stream of study-related and social activities. Snellius will be a crucial link between the department and its students and will try to be a hub for interesting internships and graduation projects in companies. For the coming year Snellius will be run by the following people:

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1. Quintus Verburg - President - *"What sounds better? Chairmen or President?"*
 2. Maarten de Groot – Acquisition - *"Is it okay if I put my résumé on the Snellius site?"*
 3. Kirstin Alphenaar – Education - *"Finally I can tell teachers what they should do better!"*
 4. Julien Chimot – Treasurer - *"A nice thing of being on the board is to choose the scientist of the month."*
 5. Marcel Kleinherenbrink – Communications - *"Wait I'll draw it."*
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Upcoming activities

Thursday 5 March: Snellius bi-weekly drinks. The possibility to get to know your colleagues, have some drinks and play some billiards together.

Friday 6 March: Visit to the Dutch meteorological institute KNMI in Utrecht. An insight look into the models and methods of weather prediction.

Friday 20 March: Ice skating in the Uithof, Den Haag. Try out the sport that helped the Dutch win wars!

Thursday 2 April: Bowling at the Paardenmarkt in Gasterij 't Karrewiel. Bowling like the Big Lebowski!

Scientist of the month

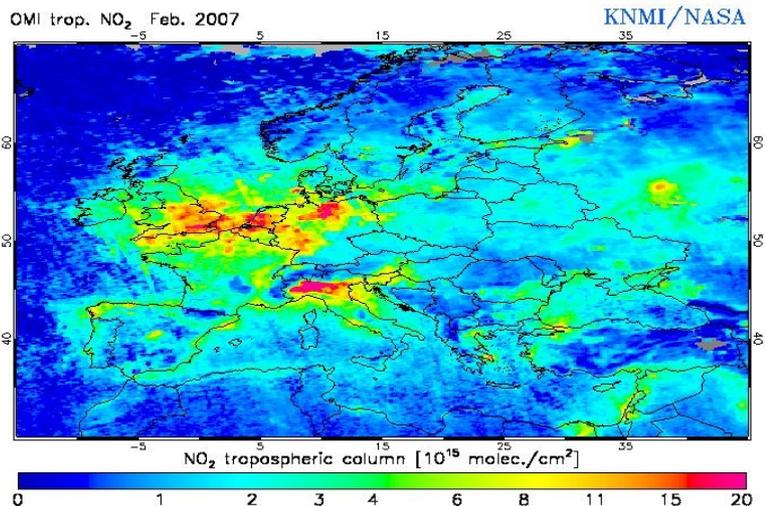
The scientist of this month is **Julien Chimot**. He is in the board of Snellius and is currently working in the group of atmosphere remote sensing. We asked him to tell us shortly about his research.

Air quality monitoring based on satellite measurements: How do the aerosols affect the OMI NO₂ measurements?

Nitrogen oxides (NO_x = NO + NO₂) play a key role in atmospheric chemistry, regulating thus our air quality. The most important effects are: change of ozone pollution, adverse health impacts, indirect perturbation greenhouse of the greenhouse gases concentrations. High NO₂ concentrations are mostly present over large industrial regions (China, USA, Western Europe) and share similar anthropogenic sources than aerosols (very fine particles). The quantification

of NO₂ concentration can be derived at the global level from satellites. OMI is a Dutch-Finnish instrument led by KNMI launched in 2004 on the NASA EOS-Aura satellite. It measures the back-scattered sunlight at the top of the atmosphere with a spatial resolution of 13x24 km². The attenuation of the light in the Visible spectral domain can be related to the NO₂ concentration. Aerosol particles affect the light path and thus the total radiances at the top of the atmosphere. Understanding the effects of the aerosols is nowadays a crucial step in view of reducing the biases on the estimated NO₂ concentrations from satellite measurements.

Research works are done on simulations and observations to understand these effects. Further information: www.temis.nl.



Master projects and internships

Below we list the new master projects and internships. For details of the projects/internships we refer to the website of Snellius: www.snelliusdispuut.nl.

Active and passive remote sensing of aerosol vertical profiles: comparison of two very different approaches.

Tim Vlemmix
KNMI/TU Delft

Using remote sensing to measure deposition of ammonia above agricultural fields.

Tim Vlemmix
RIVM

Developing a method to derive the vertical wind profile from ground-based lidar measurements.

Tim Vlemmix
RIVM

Using spectropolarimetry to derive aerosol properties (particle size) from ground-based observations with the SPEX instrument.

Tim Vlemmix
RIVM

Using smart-phones to measure aerosols.

Tim Vlemmix
SRON

Partners

