

THE PHYSICS COLLOQUIUM

Thursday 19 January 2023, 4:00 p.m.
Nijenborgh 4, Lecture Hall 5115.0317 (Schröderzaal)

Link between different ecosystems, clouds and climate

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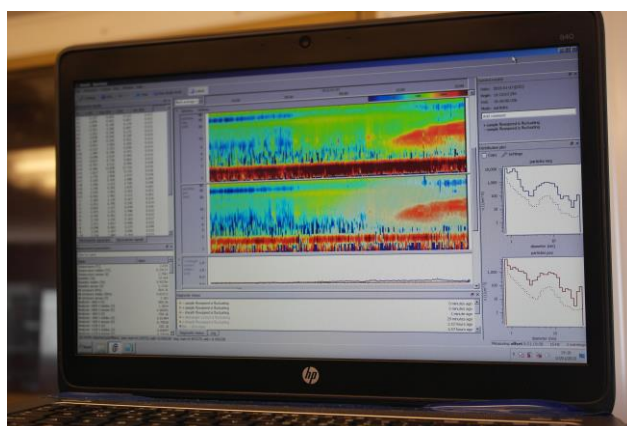
We live in a world full of aerosols, tiny particles floating in air, and witness their existence constantly.

In this talk, I will present the latest studies on how aerosol particles form from trace gases by condensation. Low-volatility compounds in the ambient air are the most important components in secondary aerosol formation and their growth to sizes that may affect cloud properties such as their reflectivity. The vapours in the atmosphere form around half of the first precursors of aerosol particles, still molecular in size.

The composition of neutral precursors is difficult to detect because they lack electric charge and their concentrations rarely exceed the detection limits of the used measurement instruments (sub-pptV). This is one of the reasons why the first steps of particle formation processes are still partly unsolved after decades of research.

During this talk, I will give an overview of the development of highly selective for the detection of acidic and highly oxygenated aerosol precursor molecules and clusters. I will also discuss the findings during various field campaigns and the CLOUD experiment at CERN, that we have utilized to solve the mysteries behind particle formation.

Lastly, I will present the future aims in particle formation studies.



Join us for coffee starting 3:30 p.m. Refreshments will be served after the lecture.

For more information contact the host: Uli Dusek (u.dusek@rug.nl)
Website: <http://www.rug.nl/research/vsi/colloquia/>