THE 23RD ANNUAL HAROLD I. SCHIFF LECTURE

FACULTY OF SCIENCE

Presented by:

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Forschungszentrum Jülich and

University of Cologne

Chemistry Climate Interactions: Biogenic Emissions and their Contribution to Secondary Organic Aerosol

Thursday, October 31st, 2013

2:30 p.m.

103 Life Science Building

York University

***Abstract**: Atmospheric aerosols impact climate directly by scattering and absorbing solar radiation and indirectly by acting as ice and cloud condensation nuclei. Secondary organic aerosols (SOA) comprise an important component of atmospheric aerosols. Biogenic volatile organic compounds (BVOC) emitted by vegetation are a major source of SOA. It is known that BVOC emissions depend on climate, specifically on temperature and light. Therefore it is to be expected that a chemistry-climate interaction exists, in which climate change induces changes in BVOC emissions and thereby SOA formation, which feeds back to climate. The presentation details the state of the art knowledge on biogenic SOA and its climate relevance. The question whether climate induced changes in biogenic SOA formation may attenuate or amplify* climate change is addressed based on experiments conducted in the Jülich Plant Atmosphere Chamber.

Organized by the York University Centre for Atmospheric Chemistry. Email: cac@yorku.ca

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TENTANDA VIA