CURRICULUM VITAE

Ulrich Platt

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URL: https://www.iup.uni-heidelberg.de/en/research/atmosphere/troposphere-free-radicals-and-volcanic-emissions
Birth: 1949 in Eberbach, Germany.

Education and Academic Positions

1974 - Diploma degree in physics at the University of Heidelberg

1974 - Research on dry deposition of atmospheric trace gases

1977 - PhD received from the University of Heidelberg, Title of the thesis: Mikrometeorologische Bestimmung der SO_2-Abscheidung am Boden. (Micrometeorological Determination of the SO_2 Deposition to the Ground.)

1977 - Joined the Institute for Atmospheric Chemistry of the Nuclear Research Center at Jülich (KFA). Research on spectroscopic detection of atmospheric trace gases, (OH-radicals, nitrous acid, NO_3 radicals) development of a long path optical spectrometer (DOAS principle).

1980 - Visiting scientist at the Statewide Air Pollution Research Center (SAPRC), University of California/Riverside. Set up and use of a long path (DOAS) spectrometer at Riverside, first detection of nitrate radicals in the troposphere.

1981 - 1982 Statewide Air Pollution Research Center/UC-Riverside. Field and laboratory (smog chamber), research on nitrate radical chemistry.

1984 - 'Habilitation' in geophysics at the university of Cologne, title of habilitation-thesis: New Results on the Chemistry of Nitrogen Oxides in the Atmosphere.

1989 - Chair at the University of Heidelberg in experimental physics.

1990 – 2015 Director at the Institut für Umweltphysik (Institute for Environmental Physics), University of Heidelberg.

2015 - today Retired

Research Topics

Understanding transformation-, transport-, and mixing processes in our environment, in particular in the atmosphere.

Tropospheric chemistry of free radicals, in particular of reactive halogen species and their role in the O_3 budget and oxidation capacity of the atmosphere. Spectroscopic measurements of atmospheric constituents, e.g. halogen oxides (ClO, BrO, IO, ...), NO_3, OH, and RO_2 radicals. Chemistry of oxidised nitrogen species in the atmosphere (NO_X, NO_3, HONO etc.). Study of reactions in polluted areas.

Remote sensing of atmospheric parameters, Differential Optical Absorption Spectroscopy (DOAS), Satellite and aircraft observations of trace gas distributions in the atmosphere, analysis of spectral signatures of trace gases (BrO, NO_2, SO_2, CH_2O, CHOCHO, O_3, O_4, ...), Multi-Axis DOAS.

Radiation transport in the atmosphere. The role of aerosol and clouds in the radiation- and energy balance of the atmosphere.

Quantification of volcanic gas emissions (by remote sensing and other techniques) and their reactions in the atmosphere.

Study of renewable energy and "Climate Engineering" techniques.

Memberships,prices, and official positions, Ulrich Platt

Dean of the faculty of Physics of the University of Heidelberg (1995-1996 and 2012-2013). Director at the Institut für Umweltphysik (Institute for Environmental Physics) of the University of Heidelberg, an institution with about 120 employees since 1990.

Member of the IGAC (International Global Atmospheric Chemistry) Scientific Steering Committee (SSC) (2001-2006)

Member of the SOLAS (Surface Ocean and Lower Atmosphere Studies) Scientific Steering Committee. (2002-2007)

Member of the GOME (Global Ozone Monitoring Experiment on the ESA satellite ERS-2) Science Advisory Committee (since 1994).

Member of the SCIAMACHY (SCanning Imaging Absorption spectroMeter for Atmospheric CHartographY on ESA satellite ENVISAT) Science Advisory Committee.

Visiting professor at the Gwangju Institute of Science and Technology (GIST), Gwangju, Korea

Member of the OMI (Ozone Monitoring Instrument) for the NASA EOS AURA mission Sci. Team.

Member of the Science Advisory Committee for the „High Altitude and Long Range Aircraft“ (HALO)

Member of DPG (Deutsch Physikalische Gesellschaft), speaker of the section 'Physics of the Environment' ('Umweltphysik') (2003-2008), vice speaker 2008-2016).

Member of Academia Europaea, section EARTH & COSMIC SCIENCES (since 1995).

External scientific member of the Max-Planck Society (since 1999)

Co-Editor of the Springer - series „Environmental Physics and Space Environment“

Member of the German National Committee on Global Change Research (NKGCF) (2008-2012)

Member of the Heidelberger Akademie der Wissenschaften (Heidelberg Academy of Sciences) (since 2009).

Robert-Wichard-Pohl-Preis price of the German Physics Society (DPG), 2010

Member of the Editorial Board of the Journal of Atmospheric and Environmental Optics (ISSN 1673-6141, gk@aiofm.ac.cn), Science Press, Beijing, China.

Member of the DFG Fachkollegiums 313, "Ocean and Atmosphere" (2008 - 2012)

Member of the IUPAP subcommittee C13 "Physics for Development" (2011-2017)

Member of the National Academy of Sciences "Leopoldina" (since 2014)

Reviewer in the BMBF program “Validierung des technologischen und gesellschaftlichen Innovationspotenzials wissenschaftlicher Forschung - VIP+” (2016-2022)

Member of the Scientific Advisory Board of the Transregio 172 (AC^3) 'Arctic Amplification' (2016-today)

Doctoral (Ph.D.) Students supervised:

Total of 90

Summary of other relevant activities:

Service as reviewer for many scientific journals (J. Geophys. Res., Geophys. Res. Lett., Applied Physics, Atmospheric Environment, Atmospheric Chemistry and Physics, Atmospheric Measurement Techniques, Tellus, etc.), about 20 manuscripts per year.

Guest editor for several Journals

Reviewer for many scientific programs (EU, NERC programs, NSF, ERC, DFG-Schadstoffe in der Luftfahrt, BMBF-OFP).

Associated editor for the Journal of Atmospheric Techniques (AMT)

Publications: Number of co-authored publications: 470, of these peer-reviewed: 342, including Nature- or Science publications: 9.