



The Paul Scherrer Institute is with 1300 employees the largest research centre for the natural and engineering sciences in Switzerland and a worldwide leading user laboratory. Its research activities are concentrated on the three main topics of solid-state physics, energy and environmental research as well as human health.

The Laboratory of Atmospheric Chemistry studies the effects of emissions from energy use on the atmospheric environment. The aerosol research in our laboratory involves emission characterization, field campaigns, smog chamber studies and long-term measurements at high alpine site Jungfrauoch.

One of the largest uncertainties in our current understanding of the earth's climate system is the role played by small particles, commonly known as aerosols. For example, aerosol particles are known to be important in the formation and persistence of clouds, but very little is known about precisely how particle composition is coupled to the uptake of water and thus the initiation of cloud formation.

For characterization of aerosol particles we are looking for a

PhD Student in Environmental Research

Your tasks

You will investigate the volatility and hygroscopicity of aerosol particles as a function of aerosol chemical composition. In a first step you will improve an existing Hygroscopicity and Volatility Tandem Differential Mobility Analyzer (HVTDMA) such that can be used for the investigation of particles smaller than 20 nm. Laboratory particles with known volatility and hygroscopicity are then used to determine the performance of the new instrument. In a next step, you will deploy the instrumentation at our smog chamber and in the field in order to describe the formation and chemical composition of ambient particles.

Your profile

This position requires an enthusiastic and creative scientist interested in atmospherically relevant questions and a Master or equivalent degree in chemistry, physics, or environmental sciences. General experience in experimental work is needed and specific knowledge in the area of aerosol measurement technologies is advantageous. Basic programming skills and proficiency in spoken and written English are prerequisites. The candidate must have affinity for practical work and cooperation in a multidisciplinary team. You will be registered as a PhD student at ETH Zürich, while the practical work will be carried out at PSI.

For further information please contact: Dr Ernest Weingartner, phone +41 (0)56 310 24 05, ernest.weingartner@psi.ch

Please submit your application to: Paul Scherrer Institut, Human Resources, Ref. code 5502, Miriam Zehnder, 5232 Villigen PSI, Switzerland or to: miriam.zehnder@psi.ch

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