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Project consortium SmartAQnet – Aerosol Akademie

14. Newsletter SmartAQnet

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Newsletter February 19 Smart Air Quality Network

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WP0: Project management

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Contribution to the project status report at the mid-term Jour Fixe on 08 January and the written version after this.

HMGU-EPI

On 29th January meeting with T. Gratzka to decide how to proceed with searching for additional 35 sampling sites within the city of Augsburg, possibility of cooperation with schools, kindergartens and city facilities.

On 1st February meeting of the HMGU EPI group (J. Cyrus, M. Kowalski and T. Kusch), with HMGU CMA group (G. Abbaszade, M. Khedr, J. Bendl and X. Liu) and Klaus Schäfer at CMA. We discussed the further steps of the project work and how to coordinate the activities of the two HMGU groups.

KIT/IMK-IFU

Weekly Jour Fixe of the steering committee performed by phone (Thursday, 16:00; now Tuesday, 15:00).

WP1: Data mining and campaigns

HMGU-EPI

- Ongoing installation/substitution/maintenance process of EDM80NEPH and EDM164 in Augsburg together with M. Hank and M. Uebach from Grimm.

- HMGU EPI team prepares for searching for additional sites, thus recent meeting in city office (T. Gratzka). T. Kusch and M. Kowalski made first on-site searching for suitable locations, starting from the west side of Augsburg city, designating first promising locations.

KIT/IMK-IFU

The measurements of ceilometers to study the North-South profile of mixing layer height in Augsburg (IGUA, Aerosol measurement station at HSA and at the Klostergarten) are continued.

Uni_A

On 31 January, an IOP of the University of Augsburg focused mainly on bicycle measurements was carried out. Measurements were taken continuously from 6:00 CET to 20:00 CET on a route between Karlstraße, Kongress am Park, Schertlinstraße, Messcontainer Friedberger Straße and Maxstraße. In addition, three measurement flights were carried out on the university campus (7:00, 13:00 and 19:00 CET) and the SODAR-RASS was operated with 60% volume.

A third copter and other fixed-wing UAV parts were procured to increase the number of measurement sites for future IOPs.

Three further OK-Lab kits with SDS011 were ordered, which are to be mounted at the university and in the city.

WP2: Data collection / Devices

HMGU-EPI

- During the last period two calibration/hot spotting tours took place, the first one on 15th January, together with M. Uebach (Grimm). During this tour, the new software was downloaded to devices, as well as we replaced the Scientific Scout at Karlstraße, due to connectivity issues. The set

EDM80NEPH/EDM164 was demounted from IGUA site, in order to cancel the EDUROAM network, causing problems with automatic data transfer to FTP server.

WP3: Data aggregation and analyses

HMGU-EPI

Currently ongoing comparison reports of two Aethalometers (old and new, MAGEE Scientific AE33), measuring black carbon concentration

KIT/IMK-IFU

The sub-contract of KIT/IMK-IFU with Technische Universität Graz (TUG) to develop an emission inventory for Augsburg is ongoing. Ulrich Uhrner (TUG) discussed with Andreas Philipp (IGUA) the collection and application of traffic counting data for the determination of road traffic data.

Uni_A

Current traffic counts can now be retrieved from the traffic computer of the city of Augsburg. For this purpose, a program package was written that extracts the XML data of the OCIT-C interface relatively efficiently. A query for the four 15-minute sums of one hour on all approx. 5600 loops now takes (only approx. 5 minutes). The data for 2018 are currently being retrieved. The position of several detectors has not yet been documented; work on this is still in progress.

WP4: Data application

WP5: Data oriented dissemination and application

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The Home Page and the Newsletter of the project were developed continuously.

KIT/IMK-IFU

The abstract for the conference DACH 2019 in Garmisch-Partenkirchen has been accepted and scheduled as Poster in session Thema 13 - Umweltmeteorologie:

Unterstützende und ergänzende Modellierung im Rahmen des Smart Air Quality Networks by Ulrich Uhrner, Johannes Werhahn, Raphael Reifeltshammer, Andreas Philipp, Robert Kunde, Klaus Schäfer and Stefan Emeis.

The display time will be Monday, 18 Mar 2019, 10:30-Tuesday, 19 Mar 2019, 19:00. The author in attendance time is Tuesday, 19 Mar 2019, 10:30-12:30.

The measurements by the particle monitor GRIMM EDM164 and 10 low-cost particle sensors SDS011 from KIT/TECO by school children are going on at the Werdenfels-Gymnasium in Garmisch-Partenkirchen within the initiative "Jugend forscht". The data analyses and measurement concept is supported by Klaus Schäfer.

Uni_A

A newspaper article by Sylvia Ehrenreich in the research supplement of the Augsburgener Allgemeine was published on 31. 01. 2019: "Wie steht es um unsere Luft?" This was decidedly called for citizen participation, which also led to a lot of feedback on the day of publication (31.1.).

Further information

There is no additional information at this time.