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Project consortium SmartAQnet – Aerosol Akademie

16. Newsletter SmartAQnet

April 2019





Newsletter April 19

Smart Air Quality Network

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WP0: Project management

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Klaus Schäfer participated in the Jour Fixe of the consortium on 19th March 2019, 11:30 – 12:45, performed as phone conference.

HMGU - EPI

Ongoing work with preparation of 2018 report, in cooperation with HMGU CMA group.

M. Kowalski participated in the Jour Fixe of the consortium on 19th March 2019, 11:30 – 12:45, performed as phone conference.

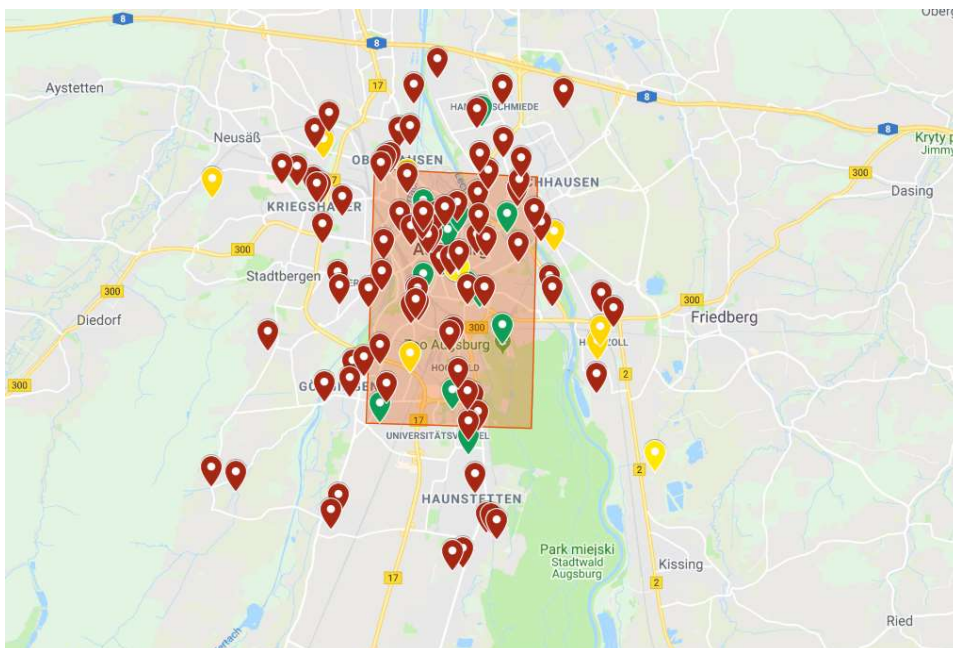
KIT/IMK-IFU

Klaus Schäfer participated in the Weekly Jour Fixe of the steering committee performed by phone (Tuesday, 15:00).

WP1: Data mining and campaigns

HMGU - EPI

- Ongoing maintenance process of all scientific scouts EDM80NEPH already installed in Augsburg, together with M. Hank (Grimm).
- HMGU EPI team (T. Kusch and M. Kowalski) continued acquisition of additional sites, in close cooperation with the environmental office of Augsburg (T. Gratza). Decisions were taken about the distribution to different specific site categories within the Measurement Phase 2.
- Few new agreements for device installations within new sampling sites were obtained.
- A new version of the site-searching map, including potential locations for the new sampling sites, was prepared.



The map is available online,

https://drive.google.com/open?id=1hqW7FK5FEM1Tg_dm4cIXfAIQU9UJWAGJ&usp=sharing

KIT/IMK-IFU

The measurements of ceilometers to study the North-South profile of mixing layer height in Augsburg are continued at the aerosol measurement station at HSA and at the Klostergarten and data were collected in the data bank at IGUA.

Klaus Schäfer participated in the citizen workshop for fine dust measurements in Augsburg on 13th March 2019 and installed a particle sensors SDS011 at home in Garmisch-Partenkirchen, so that one more observation in that area is available (see WP5).

Uni Augsburg

Five bicycle bags with Alpha sense OPC-N3, SDS011 and SHT75/SHT85 sensors are ready for use. Thirty SDS011 sensors according to the OK-Lab were completed. All devices are put into operation at the university for two weeks for calibrations. In week 16 these sensors will be distributed to voluntary citizens.

WP2: Data collection / Devices

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The market observation was continued by collection of all relevant papers in the git tutorial about low- and middle-cost sensors and smart air quality networks as well as information about companies relevant for air quality monitoring by middle- and low-cost sensors.

HMGU - EPI

- During the last period, two calibration / hot spotting tours took place, the first one on 14th -15th March, during REKLIM tour. Additionally searched for new opportunities to install devices in known locations (availability of power supply and installation principles).

- Most recent hot spotting tour took place on 28th March.

- The broken reference device, OPC 002, was transported to GRIMM in Pouch during delivery of other devices for calibration.

WP3: Data aggregation and analyses

HMGU - EPI

- Reference data from HMGU containers instruments are still collected and validated. A transfer of project data is in preparation.

KIT/IMK-IFU

The sub-contract of KIT/IMK-IFU with Technische Universität Graz (TUG) to develop a small-scale emission inventory for Augsburg is ongoing. First results were presented at the scientific symposium of meteorology DACH (see WP5).

WP4: Data application

WP5: Data oriented dissemination and application

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The Home Page (especially the overview of papers and presentations) and the Newsletter of the project were developed continuously.

Klaus Schäfer participated in the citizen workshop for fine dust measurements in Augsburg on 13th March 2019 and contributed to the information about the project for the local newspaper as well as participants.

First discussion for the development of business models started.

The contacts for cooperation with MAN Energy Solutions as well as for new project proposals with the Institut für Physikalische Messtechnik (IPM) of the FhG, Freiburg were continued.

HMGU - EPI

M. Kowalski and T. Kusch took part in the external workshop for citizens, organized on 13th March in Open Lab in Augsburg. During workshop, the SAQN devices were presented obtained contact with potentially interested citizens and so far, two locations are initially confirmed.

M. Kowalski prepared an abstract "Use of low-cost sensors to build a high-resolution network in Augsburg city - SmartAQnet-Project" for the European Aerosol Conference 2019 in Gothenburg (25th -30th Aug 2019).

KIT/IMK-IFU

Ulrich Uhrner presented at the DACH 2019 in Garmisch-Partenkirchen the poster "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 on 18th and 19th March 2019.

The schoolchildren at the Werdenfels-Gymnasium in Garmisch-Partenkirchen were successful within the initiative "Jugend forscht" and winners in the regional contest with their work about air quality in Garmisch-Partenkirchen. They prepare now the presentation of their results together with additional error analyses of data for the country contest in April. The particle monitor GRIMM EDM164 and some low-cost particle sensors SDS011 from KIT/TECO are continuously operated. The data analyses and measurement concept is supported by Klaus Schäfer.

Uni Augsburg

Visit of the DACH Meteorologists Conference in Garmisch-Partenkirchen. Two posters were presented here:

- Spatial analysis of the autumnal SmartAQnet measurement campaigns in September and November 2018, Erik Petersen et al.

- Determination of the boundary layer height with unmanned aerial vehicles and Ceilometer, Johanna Redelstein et al.

and an oral presentation:

- Exploration of the planetary boundary layer with unmanned aerial vehicles, Andreas Philipp et al.

Further information

There is no additional information at this time.