Analysis Report

Data

Test name:
2019-11_INT_8_FRAUNHOFER_8_STATION_ISCAPE

Number of devices tested:
8

Test dates:
2019-11-17 01:00:00+01:00 - 2019-11-21 01:00:00+01:00

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Test Explanation

The methods used in this analysis are subject to the low amount of devices tested, and in general, a *common sense* approach is applied. This means that the plots indicate only trends and highlight some (but not all) potential faulty devices.

Below, the confidence intervals used are those of the normal distribution (meaningful for sample numbers >30) and of the t-student distribution.

Conclusions are derived by analysing the data further and testing the devices for longer periods if needed. Please, also note that statistical significance cannot be inferred from these amounts of devices, so some assumptions for normality have to be accepted. Comments and further discussion are always welcome.

Finally, the individual sensors components integrated in the Smart Citizen hardware have their own accuracies and dispersions, for which Smart Citizen cannot assume any liability other than trying to work with the most appropiate selection. The tests we perform are aimed to determine and assume any failures in the sensors and their integration within the Smart Citizen hardware. For more information, please check the official documentation and the datasheets of each of the sensors.

Warnings

All devices show similar amounts of data. No data loss concern

Conclusions

- Devices show normal behaviour. Two warnings are displayed for the tVOC and eCO2 sensors, but are due to the sensor stabilisation period.
- One PM sensor was replaced prior to 17/Nov due to sensor malfunction and shows proper behaviour. The warning displayed for the PM_25 metric is not considered abnormal sensor behaviour.
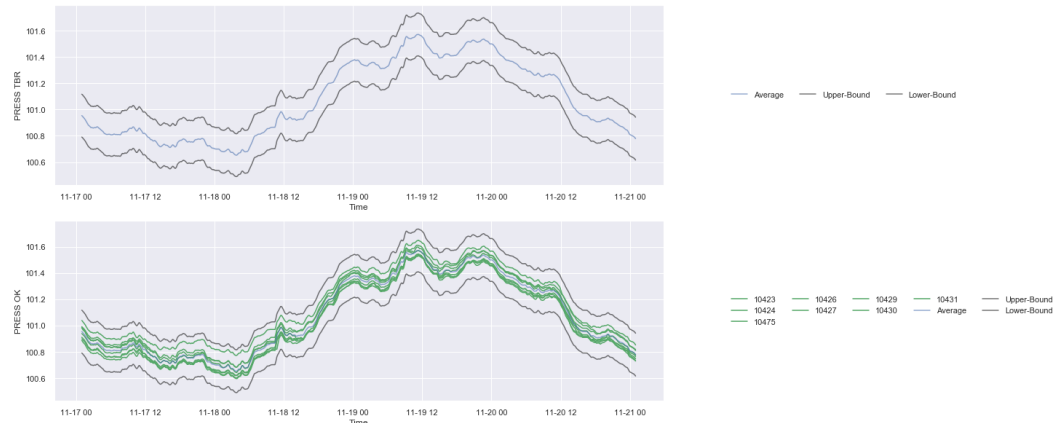
Time Series Plots

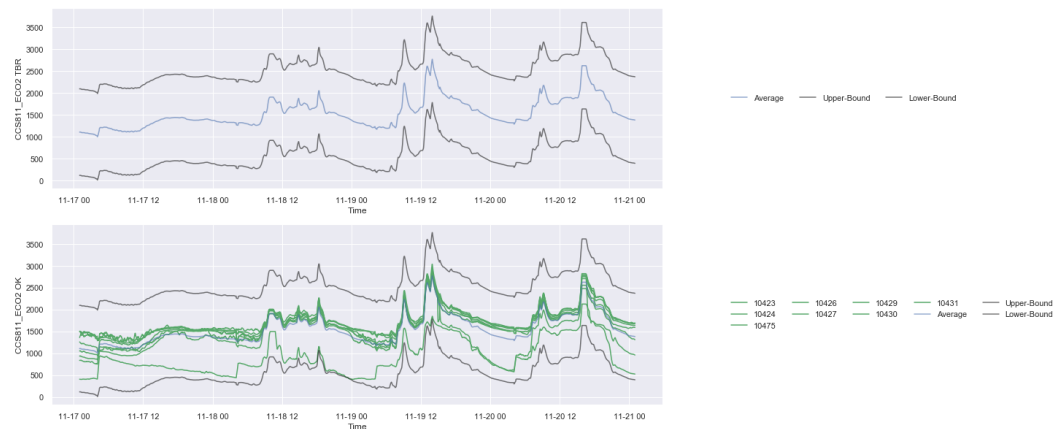Min Date available: 2019-11-17 01:00:00+01:00

(1/10) - PRESS

Using t-student Distribution
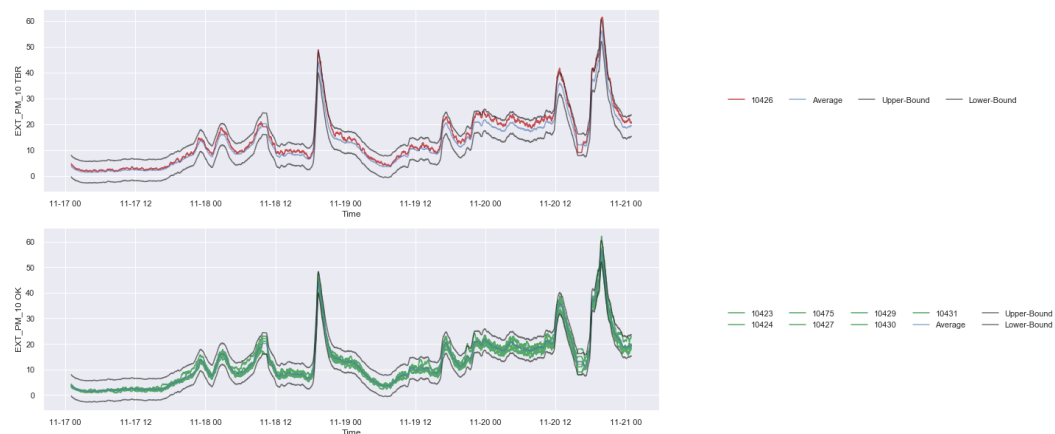

(2/10) - CCS811_ECO2

Using t-student Distribution
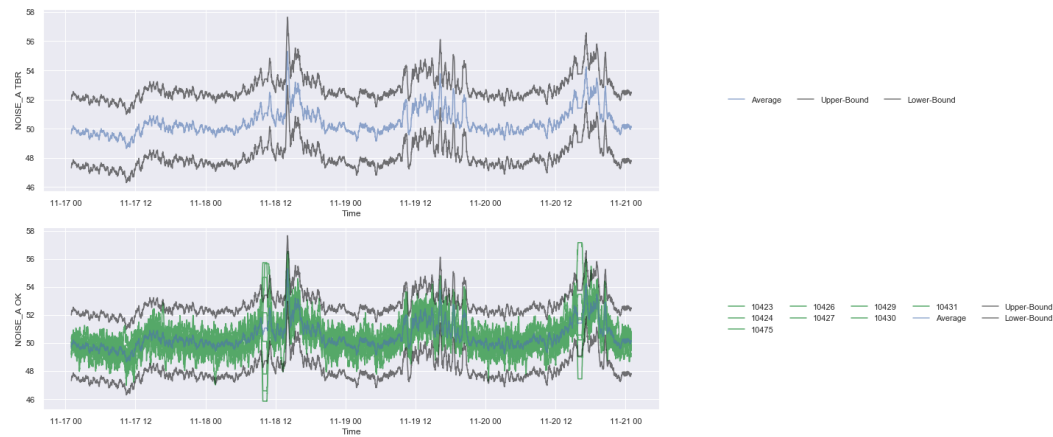

(3/10) - EXT_PM_10

Using t-student Distribution
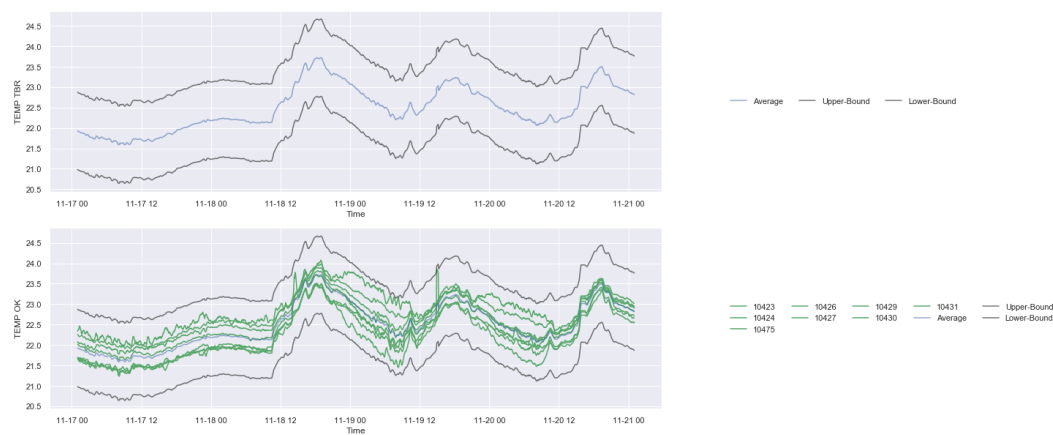
WARNING: Device 10426 out of 3% limit — 4.5% out

(4/10) - NOISE_A

Using t-student Distribution
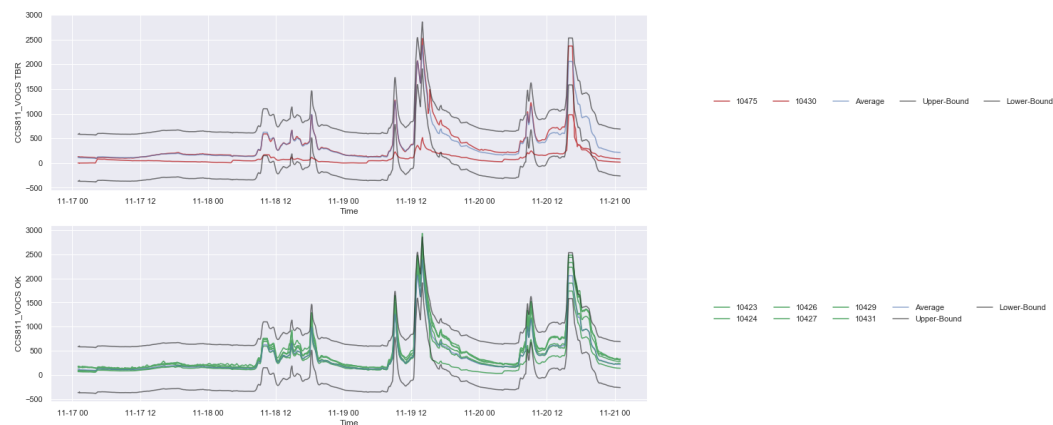

(5/10) - TEMP

Using t-student Distribution

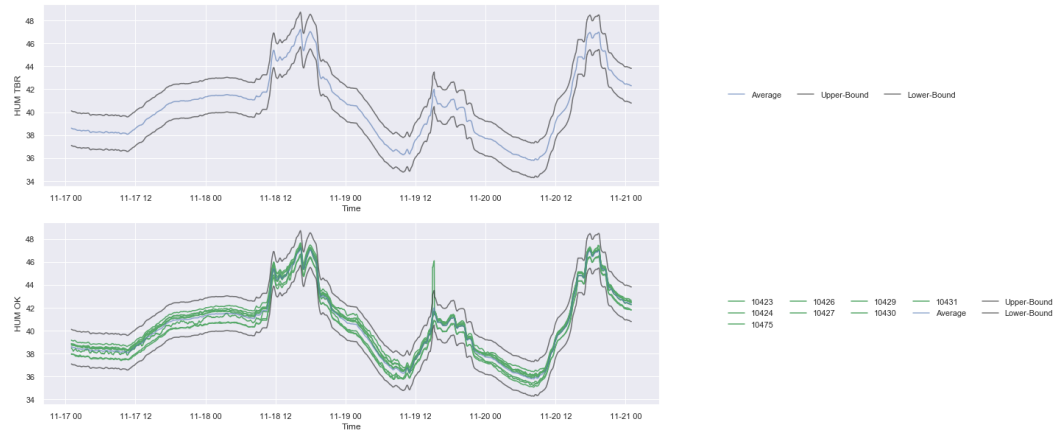## (6/10) - CCS811_VOCS

Using t-student Distribution

```
WARNING: Device 10475 out of 3% limit - 12.2% out
WARNING: Device 10430 out of 3% limit - 3.4% out
```
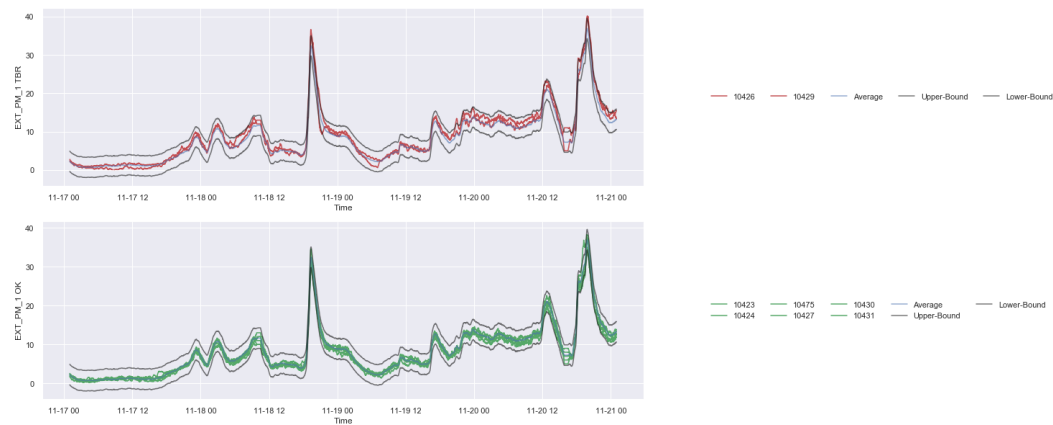
(7/10) - HUM

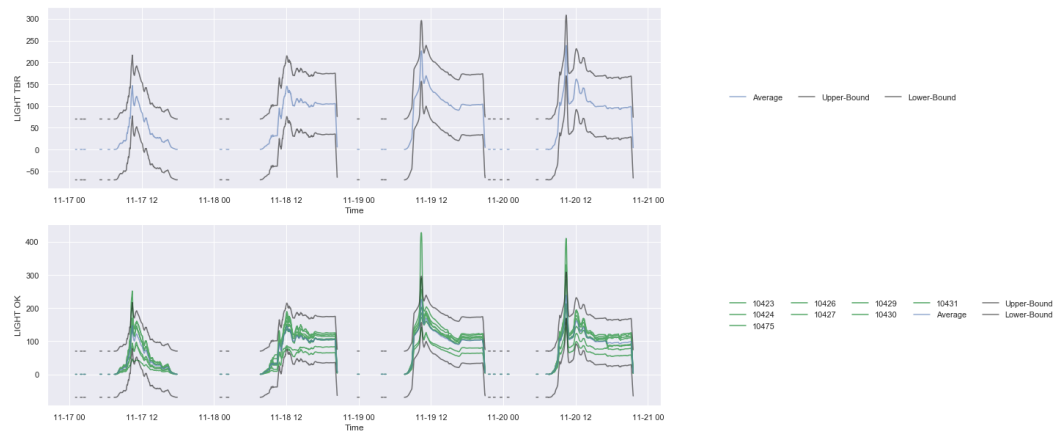Using t-student Distribution

(8/10) - EXT_PM_1

Using t-student Distribution

```
WARNING: Device 10426 out of 3% limit – 4.4% out
WARNING: Device 10429 out of 3% limit – 4.1% out
```


(9/10) - LIGHT

Using t-student Distribution

(10/10) - EXT_PM_25

Using t-student Distribution

```
WARNING: Device 10426 out of 3% limit - 3.2% out
WARNING: Device 10429 out of 3% limit - 4.3% out
```