1. General comments

The paper “Measurement report: TURBAN observation campaign combining street-level low-cost air quality sensors and meteorological profile measurements in Prague” outlines very well the strategy used to verify and quality control the data of low-cost sensors networks in different conditions against consecrated and more robust techniques.

The manuscript is overall well written and addresses relevant issues.

2. Specific comments

This paper is a response to an actual necessity of data availability at a higher spatial resolution in cities.

A further improvement is necessary, to became more scientific appropriate (e.g “similar course of concentrations over time”, “In this context, a very appropriate question is offered, namely what is sufficiently long field comparative measurement? The answer to this question is not clearly defined anywhere. Overall the recommendation based on the experience of different studies is, the longer the better.”)

Please avoid abbreviations on Schemes or graphs (e.g Figure 5) and improve the contrast and quality of images.

The paper is rather long and difficult to follow, due to multiple details. I think the authors should reconsider the paper organization and the beneficial of pollution events and remote sensing data in this manuscript.

A stronger conclusion, more focused on the low sensors networks necessary characteristic, testing parameters, regular checks and drifts supervision should be added.

3. Technical corrections

- Please avoid abbreviations on Abstract and graphical abstract
- It is worthy to consider also periodical checks for LCS stability overtime after the laboratory or field calibration (line 65)
- Please include information related to the calibration and field calibration concentrations interval and subsequent consequences
- Line 164: mention the heights interval, as included on the Table 1
- Add details related to the linear response of the sensors on diverse concentration intervals
- Add more comments related to the relationship of concentrations measured by LCS and by reference monitor, e. g slope difference between raw and corrected data
- Add more insights related to:
    - Figure 6 A: high difference between RM and S11 concentrations for example, more than 50%
    - Figure 6 C&D: 19-22.01.2022 high difference between EM and LCS concentrations, different variability
- Figure 7 caption, add explanation for grey dots
- Figure 7 and 8: include the negative values as well where is the case to explain the median values.

- Line 359: explain the large variability of LCS pairs heights, as described in Table 1 and related uncertainties
- Section 2.3.2 the comparison of MWR to radiosonde temperature profiles were performed for multiple locations, please mention here at least this and discuss the findings in relation with other studies at line 690
- If possible please discuss the weekly variation of pollutants in relation with other studies in Prague region
- A short comment on diurnal variation will be also valuable, some sensors concentrations are not showing the typical diurnal variation, maybe a correlation with the location
- Line 500 and Figure S37, it can be seen the low SNR on ceilometer attenuated backscatter due to low clouds, comment related to this finding, moreover please add y axes label
- Line 550 the pollution events seems to be over a very short time frame (2-4 hour), please explain the long-range aspect in this case
- Line 730 please include an explanation for differences in NO_2 and PM diurnal variations and peaks hour
- Please mark with different colour or marker the sites locations (e.g background, traffic) in all graphs to be easier to follow
- Line 750 the concentrations at different heights should be considered using also the measurements uncertainties.