Dear Referee,

We would like to thank you for taking the time to review our paper and your suggestions, which definitely helped to improve the quality of the manuscript. We reply to your comments below. Our response to the comments appears in bold and revised text as *italic*.

Minor suggestions/remarks:

- Line 45 or 57: One sentence on CML network density and changes over time and location might highlight their relevance
  We agree that adding a sentence on CML networks highlights their relevance. We added the following sentence at L57 (line numbers refer to the original manuscript):
  Moreover, the number of CMLs operating worldwide in the 6-56 GHz range, which are most useful for rainfall estimation, is expected to grow from 4.6 million in 2021 to 6 million in 2027 (ABI research, 2021).

- Line 140: Why the decision for 30 seconds? What are the effects of another threshold on your study?

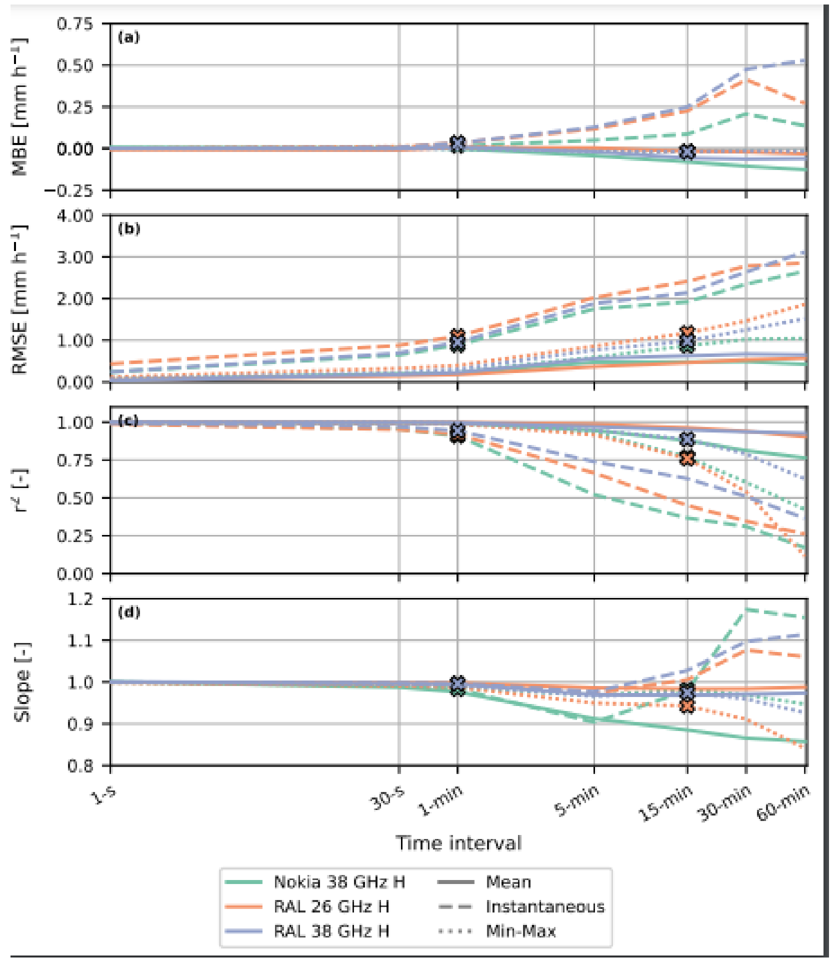
  The disdrometer data is provided with a 30-second resolution. To refrain ourselves from making any assumptions about when a rainfall event is continuous or not, we decided to use a single timestep as threshold. We added as follows:

  In this figure two contiguous rainy periods, which are separated by a single 30-second dry time interval, are counted as separate events and not combined into a single event. To refrain ourselves from making any assumptions about when a rainfall event is continuous or not, we decided to use a single timestep in the available disdrometer data as threshold.

- Line 200: As RMSE and MBE are explained it might be good to also explain r2
  We have added the r^2 equation in step 7, where it is mentioned for the first time.

$$r^2 = 1 - \frac{\sum(R_{obs} - R_{20Hz})^2}{\sum(R_{obs} - \overline{R_{obs}})^2},$$

  This comment made us realise that we made a small mistake in the calculation of r^2. Instead of using the 20 Hz observation to compute the r2, we used the predicted value by the linear regression model. This causes the r^2 values in figure 9 to be somewhat lower, but does not affect the overall conclusions. See:



The markers at 1-min instantaneous and 15-min min-max sampling strategies are added after comments of reviewer number 2.

- Line 240: If possible more information on this filter would be beneficial. If not, it would be good to state this.
  We don't know exactly what kind of filter this is, or perhaps the internal hardware is designed differently (see comments reviewer 2). Therefore, we rephrased all references to this filter as follows:

  L106-110: The employed frequencies for the Nokia and RAL 38 GHz links are close, hence exhibit similar electromagnetic characteristics, but do not interfere with each other. However, these devices were found to give a different response, likely due to the internal hardware in the Nokia link being designed differently, reducing the high-frequency fluctuations in the signal, while the RAL link has a different antenna cover than the Nokia link, which affects the distribution of water remnants on the cover (see van Leth et al., 2018a).

  L242-243: These high-frequency fluctuations in the signal are roughly reduced by 0.5 dB, which is likely caused by the different internal electronics in the Nokia link.

L375-376: Overall, this indicates that a reduced duration of wet-antenna attenuation and hardware reducing the signal fluctuations can significantly reduce the influence of the selected temporal sampling strategy.

L447-451: An additional difference between these devices is the reduced signal fluctuation in the Nokia link, likely caused by the different hardware employed in the Nokia link. However, these differences do not have an influence of the same order of magnitude on the raw signal. Where the hardware causes the fluctuations to reduce roughly by 0.5 dB, the additional wet-antenna attenuation for the RAL link is roughly 2 dB higher. Therefore, we attribute the largest differences between the Nokia and RAL 38 GHz links to the difference in wet-antenna attenuation.

L555-556: This device mostly differs from the other two devices, the RAL 38 and 26 GHz links, in terms of reduced magnitude and duration of wet-antenna attenuation and is designed with hardware that reduces signal fluctuations.

- Line 242: Why more fluctuations?
  When comparing Fig. 4p and x, we observe that the estimated rainfall intensities fluctuate more for RAL 26 GHz than the RAL 38 GHz for the min-max sampling strategy. This could be caused by the different exponents in the R-k relation. We rephrased as follows:
  Compared to the RAL 38 GHz link, the RAL 26 GHz link shows slightly more fluctuations in the estimated rainfall intensities for the min-max sampling strategies, which could possibly be caused by the different exponent in the R-k relation.

Minor technical remarks:

- Line 112: 'as remnant' seems a bit redundant
  We agree on that. We removed this from the text.
  On the RAL cover water droplets form once it gets wet, which induces a more significant attenuation of signal intensity than the water film that forms on the Nokia cover ~~as remnant~~ after getting wet.

- Figs. 4 and 5. The color between 1,s, 5min and 60min has low contrast, making it difficult to see, especially for the small figures.
  We agree that this was indeed hard to see. We adapted the figure by giving the 60-minute line a slightly darker color. See figure 5 as example:

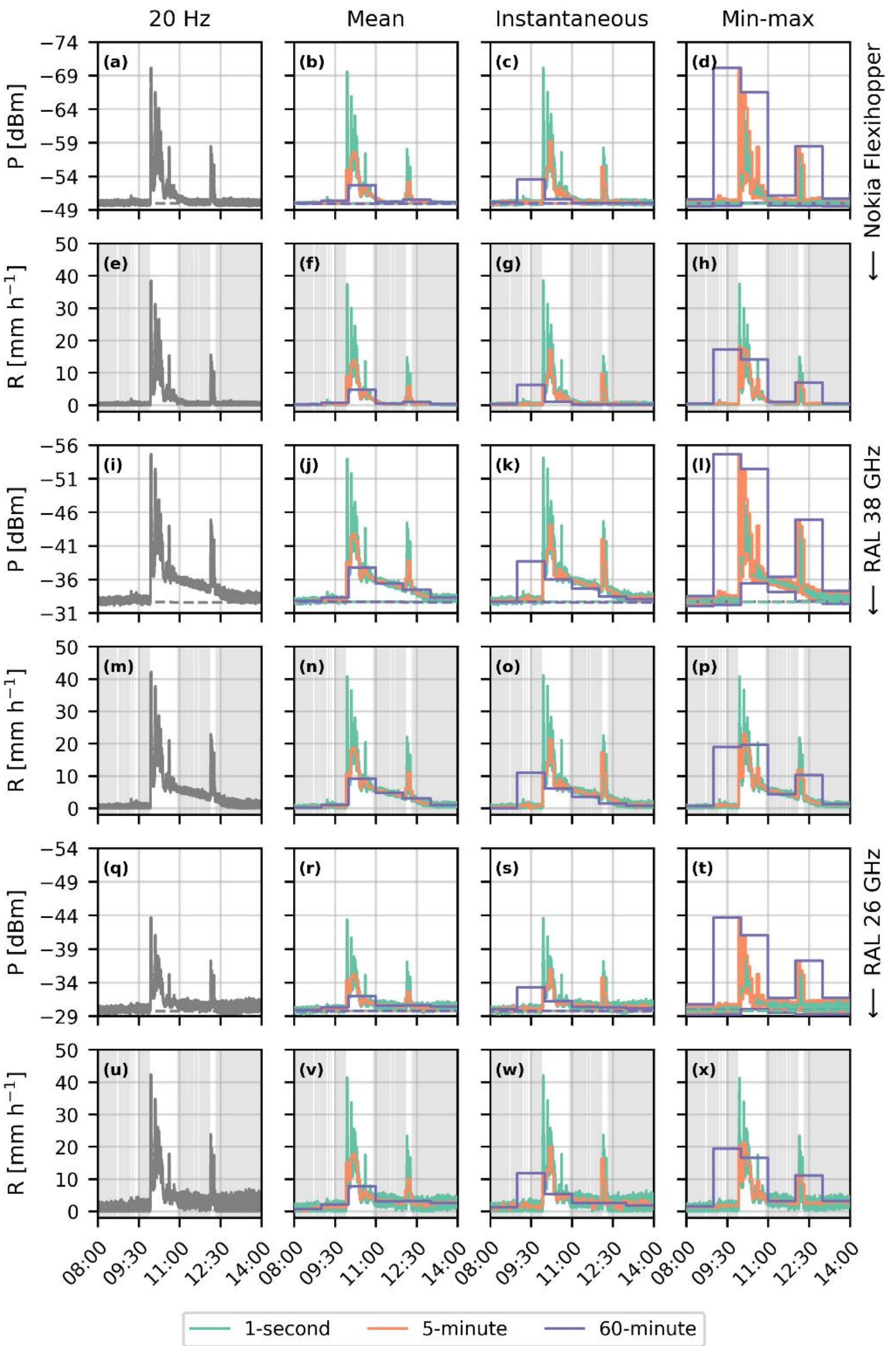
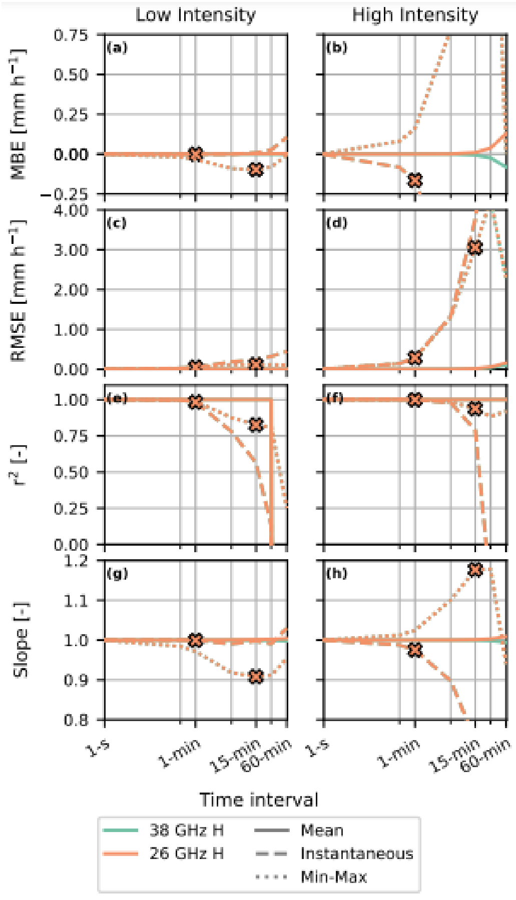


***Figure 5**. Comparison of received (solid) and baseline (dashed) power levels (a-d, i-l, q-t) and retrieved rain rates (e-h, m-p, u-x) during a high-intensity precipitation event on 21 June 2015 obtained with the Nokia (a-h), RAL 38 GHz (i-p) and RAL 26 GHz (q-x) microwave links for all sampled variables and the 1-second, 5-minute and 60-minute time intervals. Grey areas indicate dry periods based on disdrometer data.*

- Fig. 7: In the legend move 'mean' to the right column

  We have moved the mean to the right column.



The markers at 1-min instantaneous and 15-min min-max sampling strategies are added after comments of reviewer number 2.

- Line 375: Also, a general

We agree. We added the comma:
Also, a general comparison between the theoretical events and all rain events in the dataset reveals the influence of wet-antenna attenuation on the performance of the rainfall retrieval algorithm.