

Earth Syst. Sci. Data Discuss., referee comment RC3  
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## Comment on **essd-2022-221**

Anonymous Referee #3

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Referee comment on "OpenMRG: Open data from Microwave links, Radar, and Gauges for rainfall quantification in Gothenburg, Sweden" by Jafet C. M. Andersson et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2022-221-RC3>, 2022

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### General comments

The quality of this paper is good and it is well written. Despite it is mainly purposed to illustrate the OpenMRG dataset, I think it is useful to the people involved in rainfall data processing, as it provides some general info about rainfall sensor data. I appreciated the rain gauge data analysis.

### Specific comments

I looked at the data repository as well, downloaded the data and looked through by MATLAB. As far as I know it's the first open dataset featuring three different rainfall sensors. There's a readme file, which explains the structure of each dataset. The CML npc file is a bit large (4 GB) and the full rx and tx variables take around 460 Mbytes each.

I noticed some +/-1 dB fluctuations in tx with no apparent correlation with rx (just looked at CML 1). I guess it is quantization. Do you have an idea of the reason why quantization is effective only at times?

Sensor altitude data are missing. Can we consider the altitude factor irrelevant everywhere in the area? For instance, link paths are horizontal?

About the paper I suggest to add a few information:

- About CML data: 10-s resolution is not the CML standard (15-min is more common). It would be really interesting to know whether Ericsson data acquisition system was modified on purpose to carry out rainfall measurements or if this is their standard for network monitoring. Was the firmware of each sensor upgraded to get 10-s data? In general, it's important to know if high temporal resolution set-ups are expensive or not in terms of software/firmware upgrades.
- You provided most of this information. However, it would be good to have a comparative table of CML, RG, and radar with info about georeferencing (i.e. coordinate system), time axis (origin and format and synchronization if any), temporal resolution and maybe density (sensors/km<sup>2</sup>).

#### Technical corrections

- 3, line 32: section should be in Caps
- 6, line 1 (several times since): there should be a space between 100 and m and between 15 and km
- 10, line 4: included instead of include
- 10, line 11: "for each" instead of "for each the"
- 10, line 13-14: is this range the min-max difference of Ptx over the observation period?