

Figure comments “Monitoring and quantifying wind turbine clutter in DWD weather radar measurements”

Author(s): Michael Frech et al.

MS No.: egosphere-2025-4957

2025-12-03

I am still working on writing up comments on the text, but I have some comments on figures. Since changes to figures are more time consuming, I am going post those comments now. See attached PDF. I hope to get the full review up early next week (week of Dec 8).

Figure 3: The colour bar does not correspond to the figure. The colour bar shows pure gray colours, but the figure is using colours with a magenta/purple shade. The figure is deceptive because starting at 0m implies the radar antenna is higher than all surrounding terrain. Google Earth says the ground height is about 800m at turbines TUR2 and TUR3, and the height at the radar is about 735m. That means the antenna would need to be lower than the ground at that location, unless the antenna is more than 65m above ground. (Maybe the radar is that tall? The radar site specifications are not given.) My version of the figure using a crude topography database is below.

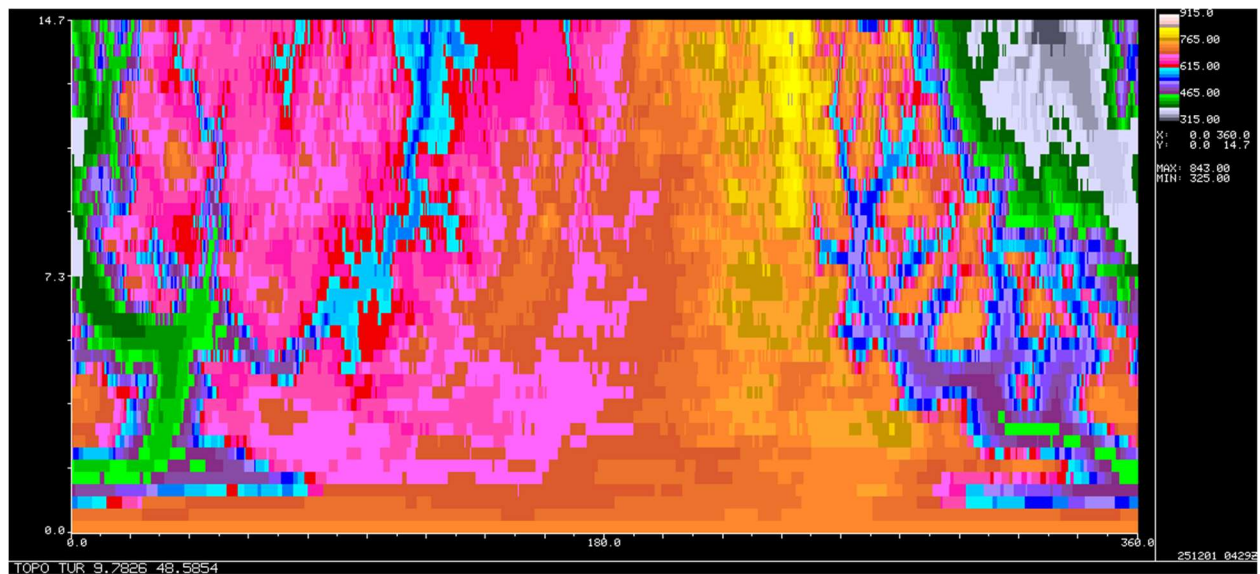
Figure 4 Change “wea” in title? (“WTC”?) Is it easy to replace the WIGOS id with a name? FYI I could not find this ID in the OSCAR database, but I have little experience with WIGOS, so it might be somewhere else.

Figure 8: As with Figure 3, colour bar does not correspond to the figure itself.

Figure 10 In my opinion the upper limit on reflectivity colours should be higher. I was surprised that the turbines seemed to be spread uniformly across 3 degrees, until I realized that the observed values must be far above the colour limits; colours were saturated so no detail below 3 deg in azimuth. I suspect the reported reflectivities are much in excess of 60 dBZ.

Figure 11 What is the meaning of white? I can guess that clutter has exceeded the ability to correct reflectivity, but please state meaning. The same comment for Figure 12.

Figure 14: What is “Wea” and “NoWea” on the figures? Maybe “WF” (Wind Farm) was intended, since discussion in the text indicates that the distributions labelled “Wea” are from the wind farm sector. (Elsewhere WEA is WTC, but I would prefer WF here.)



Coarse view of topography around TUR radar; SRTM30 data (~90m) as B-scan. Yellows are heights above 765m, which is the 735m ASL ground level at TUR radar plus assumed 30m antenna height above ground. (Relates to Figure 3.)