

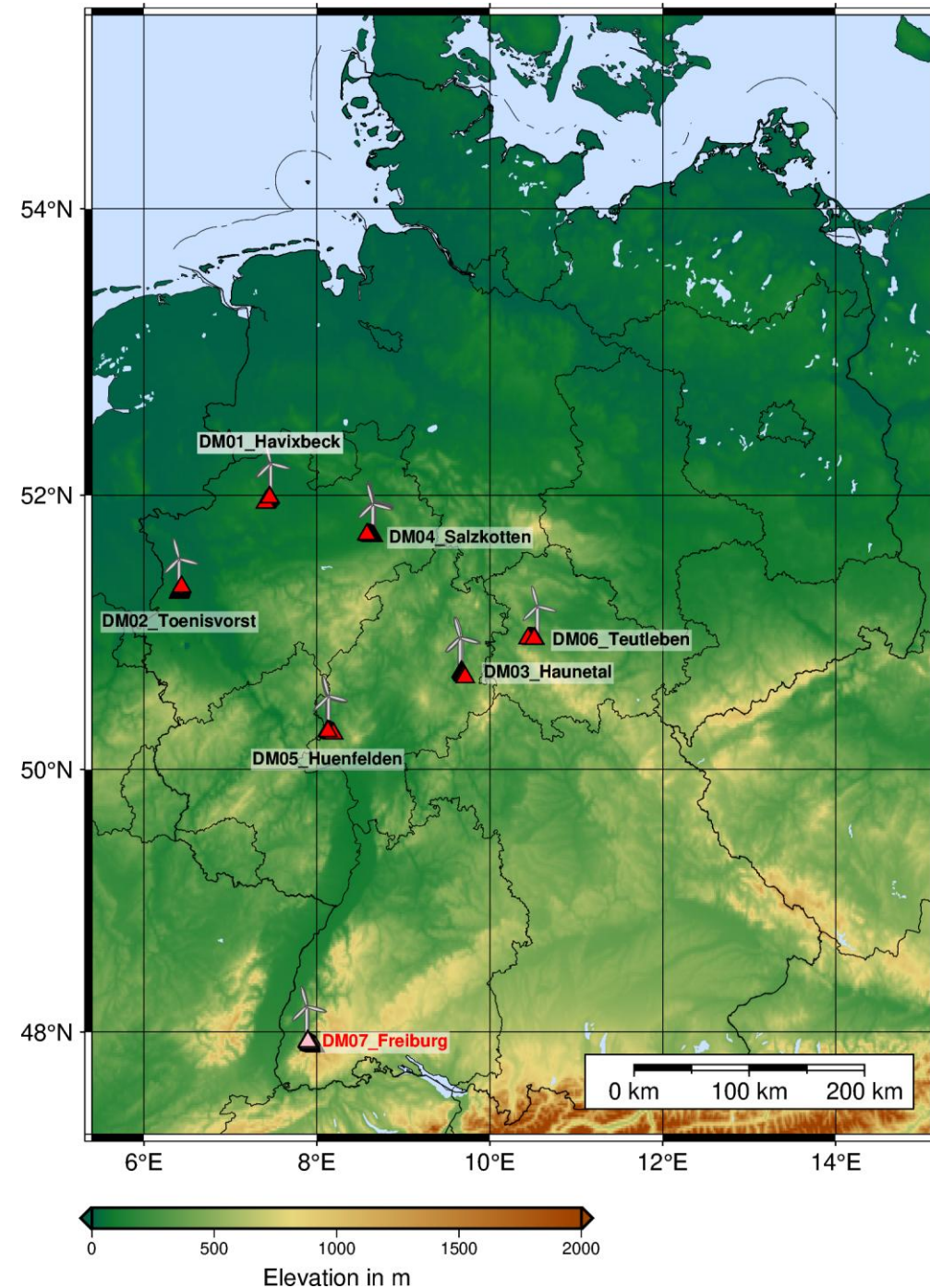
DB MISS - KIT current status

Sarah Mader, 3 July 2025



Line measurements

- In total we did seven measurement campaigns
- Last campaign close to Freiburg was finished in June 2025

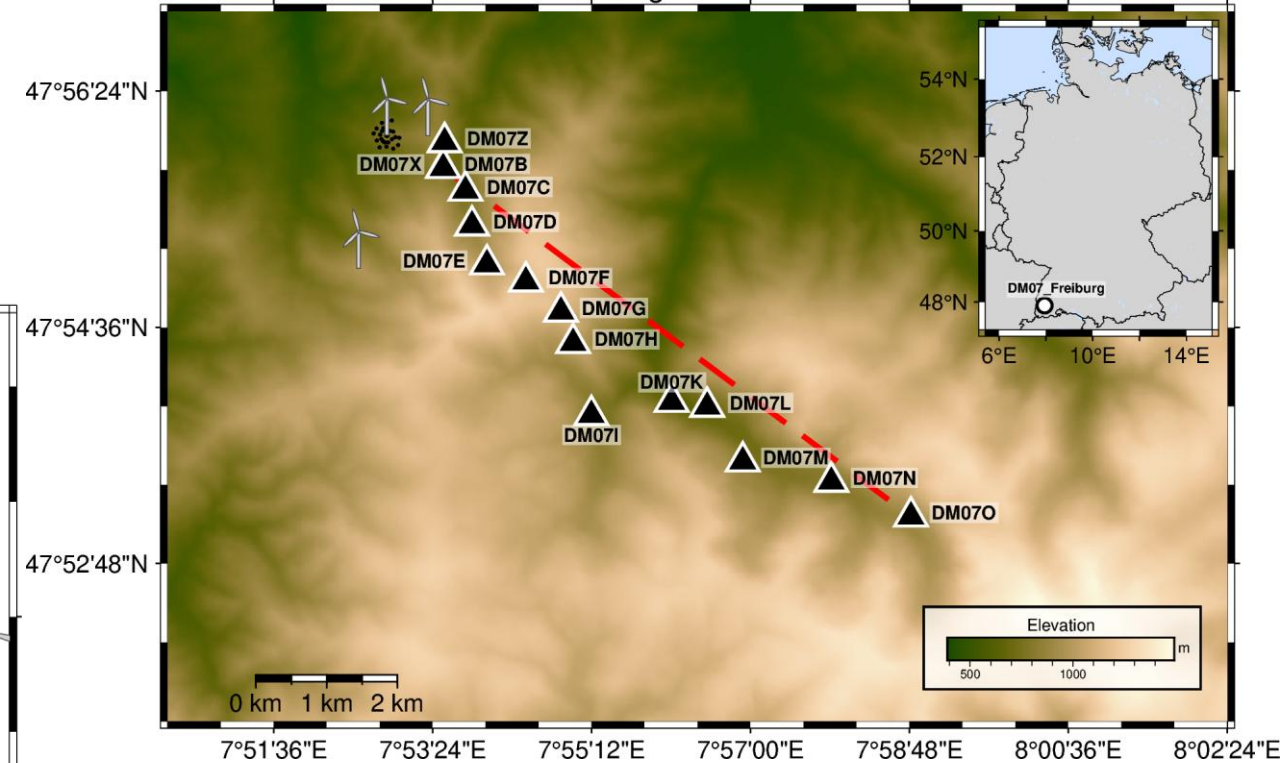
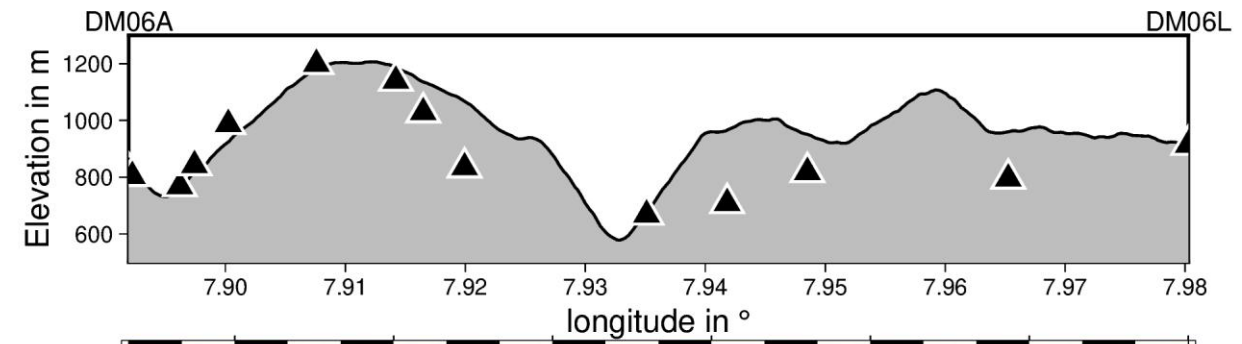
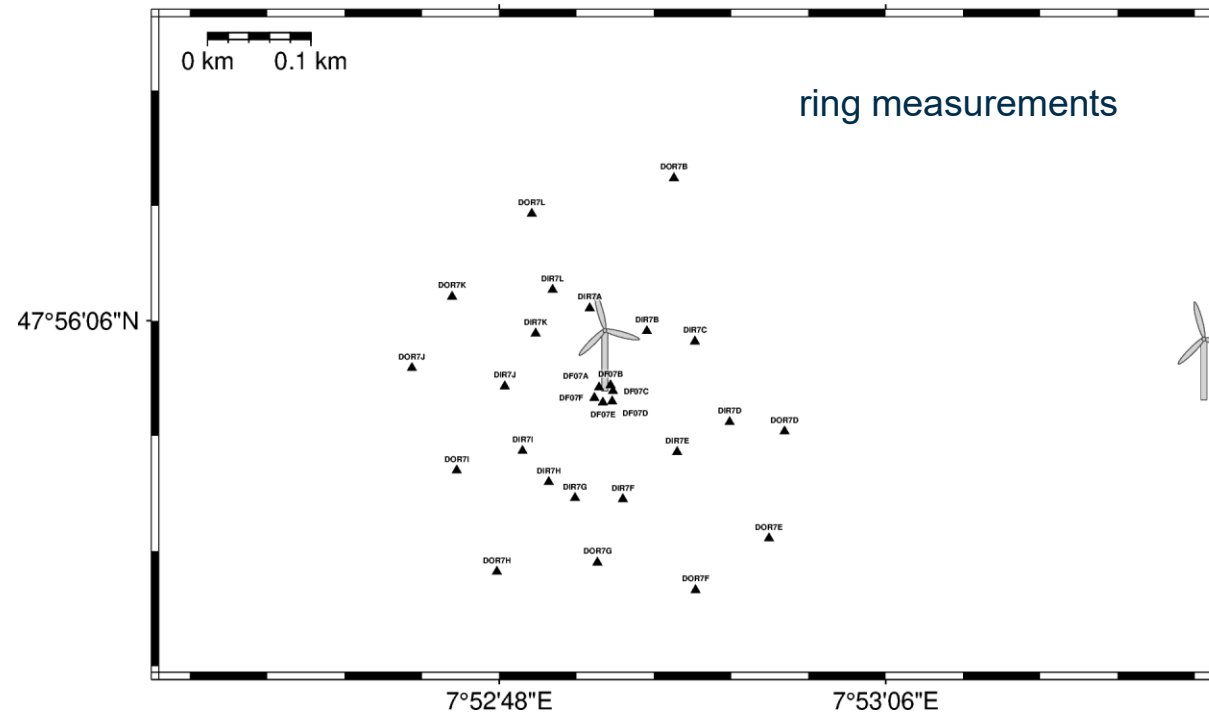


Measurement Campaigns

	time	Number of WTs	Power in MW	WT types	Geology
DM01_Havixbeck	November 2022 November 2024 – January 2025	3	4.5	1	Quaternary glacial deposits, silt, sand and gravel
DM02_Toenisvorst	December 2022 – January 2023	2	4.0	1	Quaternary sand and gravel
DM03_Haunetal	October 2023 – November 2023	4	4.2	1	Sandstone with boulders, clay siltstone
DM04_Salzkotten	December 2023 – January 2024	11	2 – 4.2	4	Quaternary glacial deposits, silt, sand and gravel, meltwater deposits
DM05_Huenfelden	February 2024 – March 2024	3	4.5	1	Clay slate, siltstone, sandstone, quartzite
DM06_Teutleben	October 2024 – November 2024	13	3.0 – 5.5	6	limestone, lime marl stone,
DM07_Freiburg	April 2025 – June 2025	3	4.26 – 5.6	3	Gneiss, granite

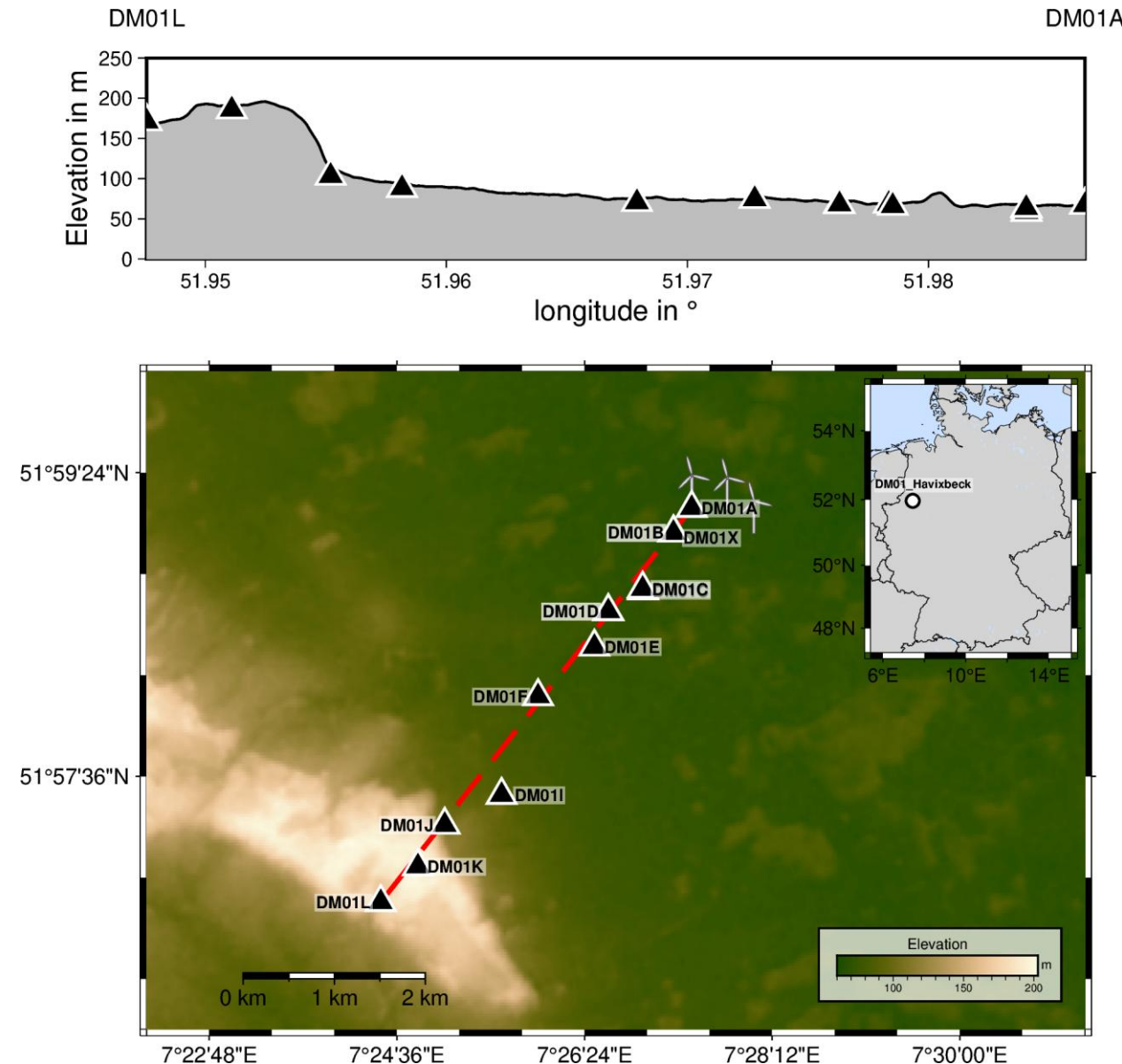
DM07 Freiburg

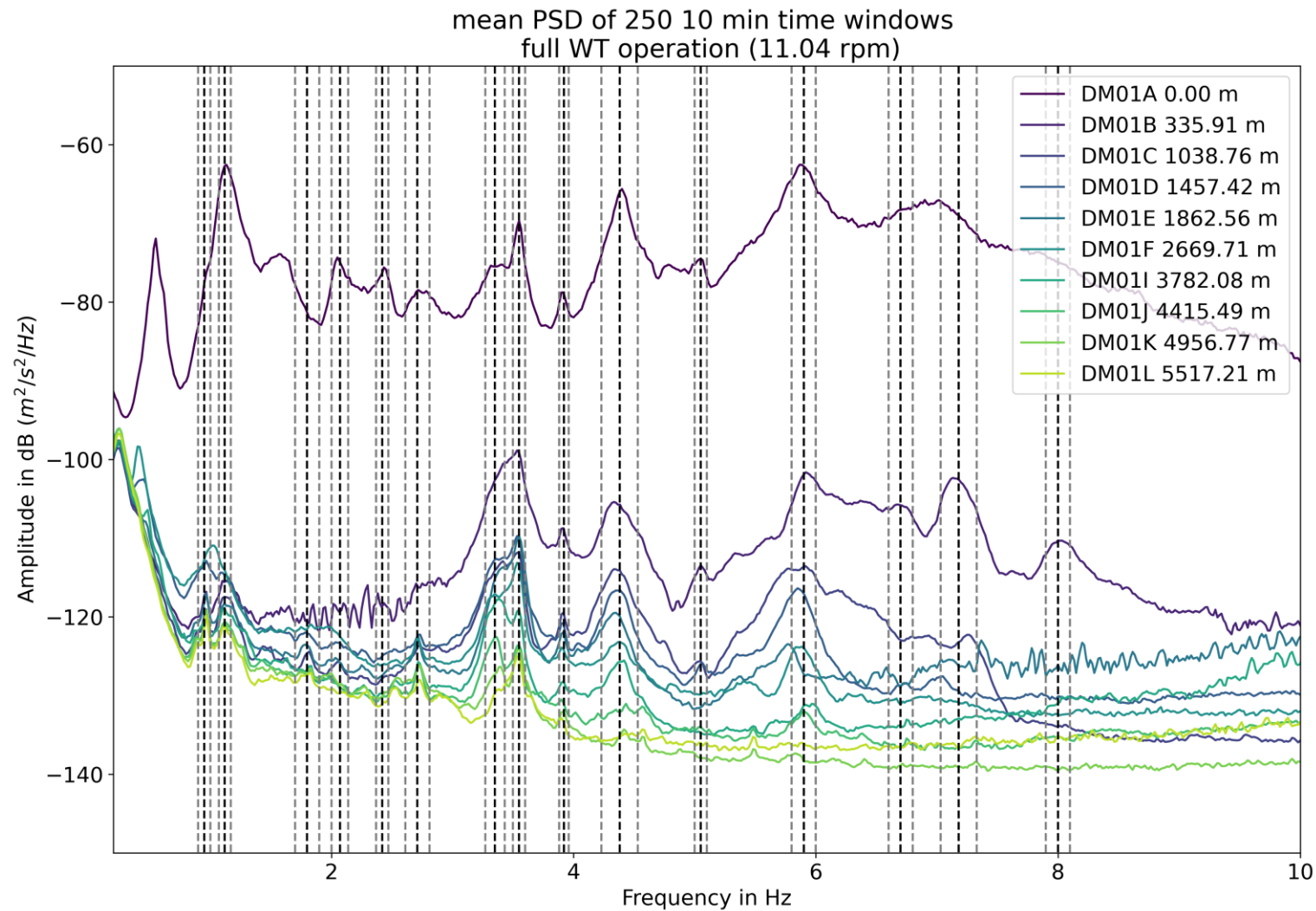
- Line measurement and ring measurement close to Freiburg on hard rock in the Black Forest
- Very strong topography
- Longest line with 8.5 km length



DM01 Havixbeck

- Windfarm with three 4.5 MW wind turbines
- To compare emissions before and after windfarm construction, we did a measurement in November 2022 (DM01B – DM01D) and later in November 2024

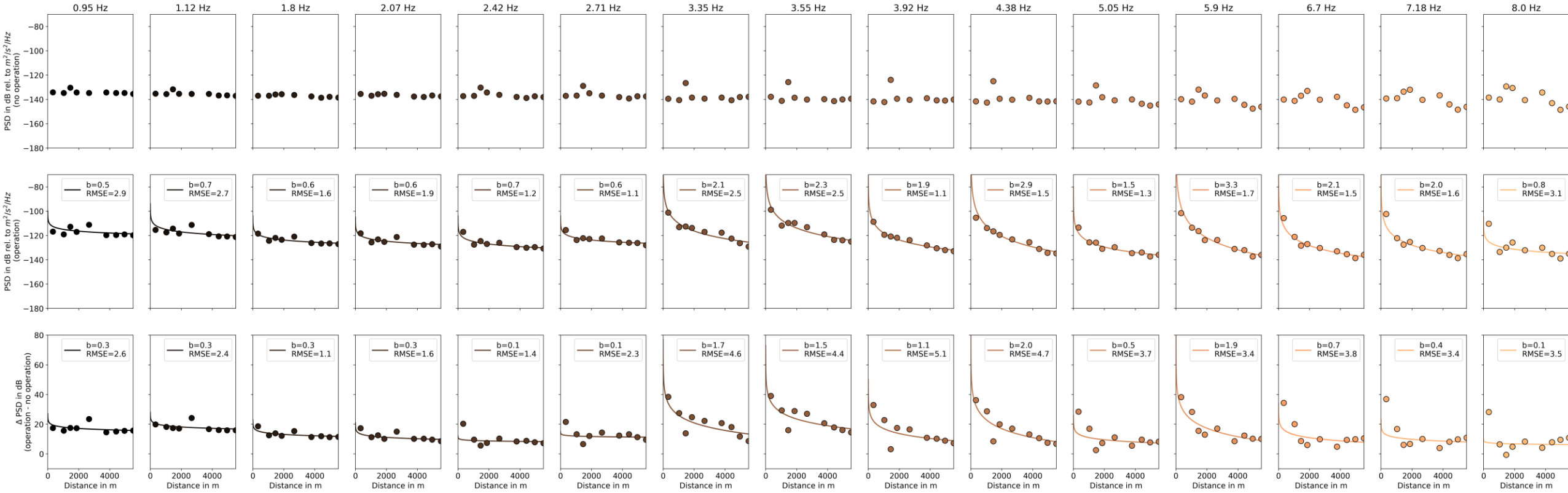




DM01 Havixbeck

- There are a lot of rotation rate dependent frequency peaks
- Here: rotation rate dependent PSD of all stations along the line during full WT operation

DM01_Havixbeck b-value estimation from mean PSD
of 453 10 min time windows with no WT operation
of 250 10 min time windows with full WT operation

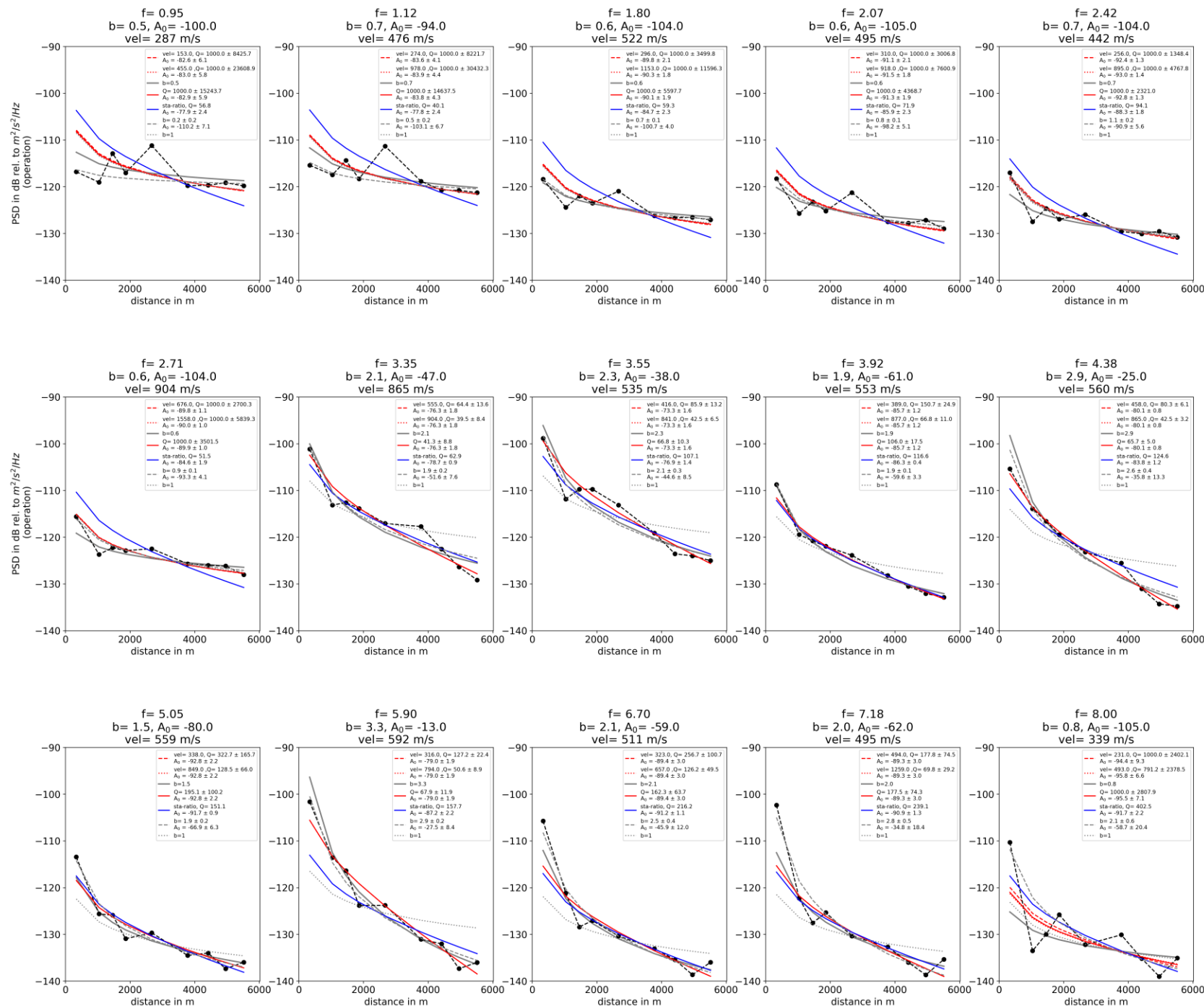


DM01 Havixbeck – b-value

DM01 Havixbeck – Q-value

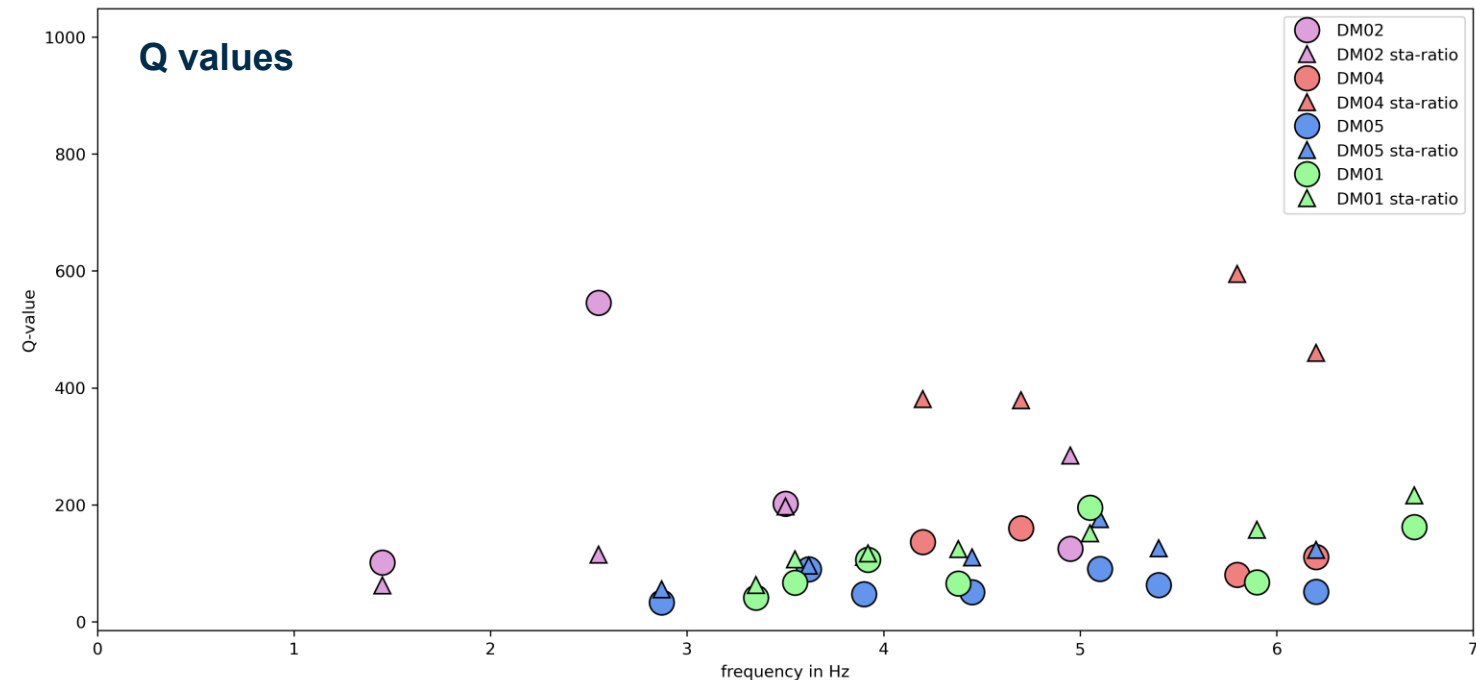
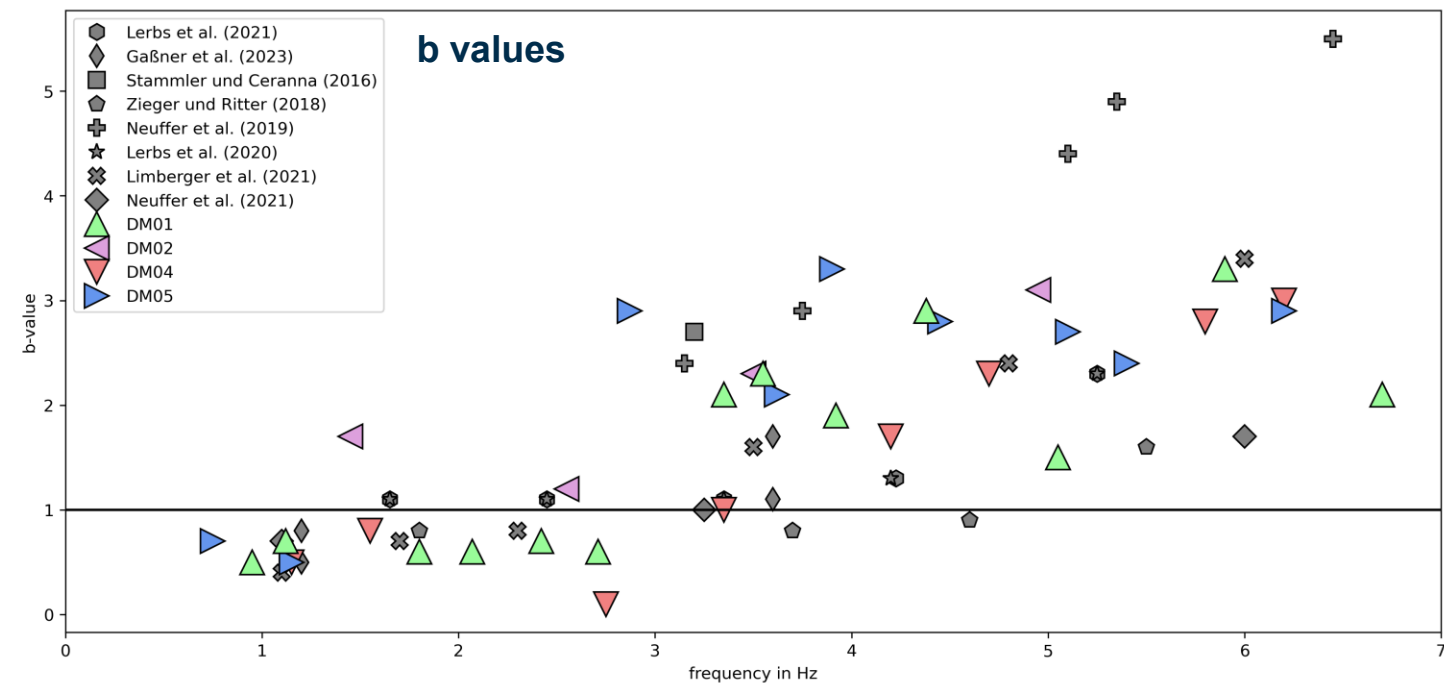
- Fitting of Q does not work for b-values smaller equal 1

- Q-value between 41 - 195



Comparison

- Comparison of b-values shows similar results as in the literature
- Q-values range from about 30 to 600
- Majority of Q-values is between 30 and 200



Conclusion/Outlook/ToDo

- Determination of b-values for measurement campaign DM07 Freiburg
- Determination of Q-values for all measurement campaigns (DM03, DM06, DM07)
- Comparison of recorded data before and after wind turbine construction near Havixbeck
- Comparison of all study sites with each other
- Comparison with studies of other DB MISS groups
- Paper writing, recommendations writing, dissemination etc.



