

Supplementary material

Figures

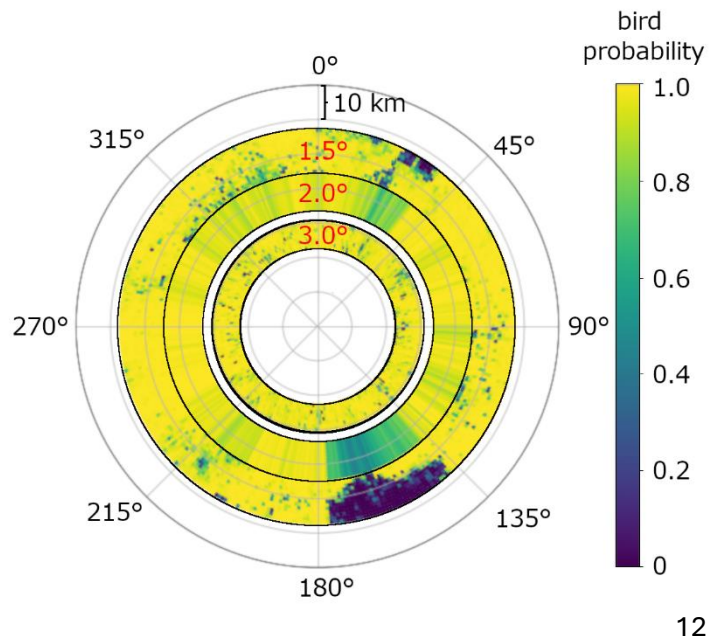


Figure S1. Horizontal cross section of the interleaved single-PRF bird probabilities of the 1.5° and 3° beam (degrees in red) and the dual-PRF layer of the beam at 2° in the height layer of 600–800 m of the Ikaalinen C-band weather radar on 12 Oct 2021 at 9 pm UTC. Blue areas in the ring of 1.5° denote precipitation with low bird probability. Azimuthal bird probabilities in the interleaved dual PRF are averages of the respective probabilities in the two single-PRF sweeps classified according to Mäkinen et. al. (2022).

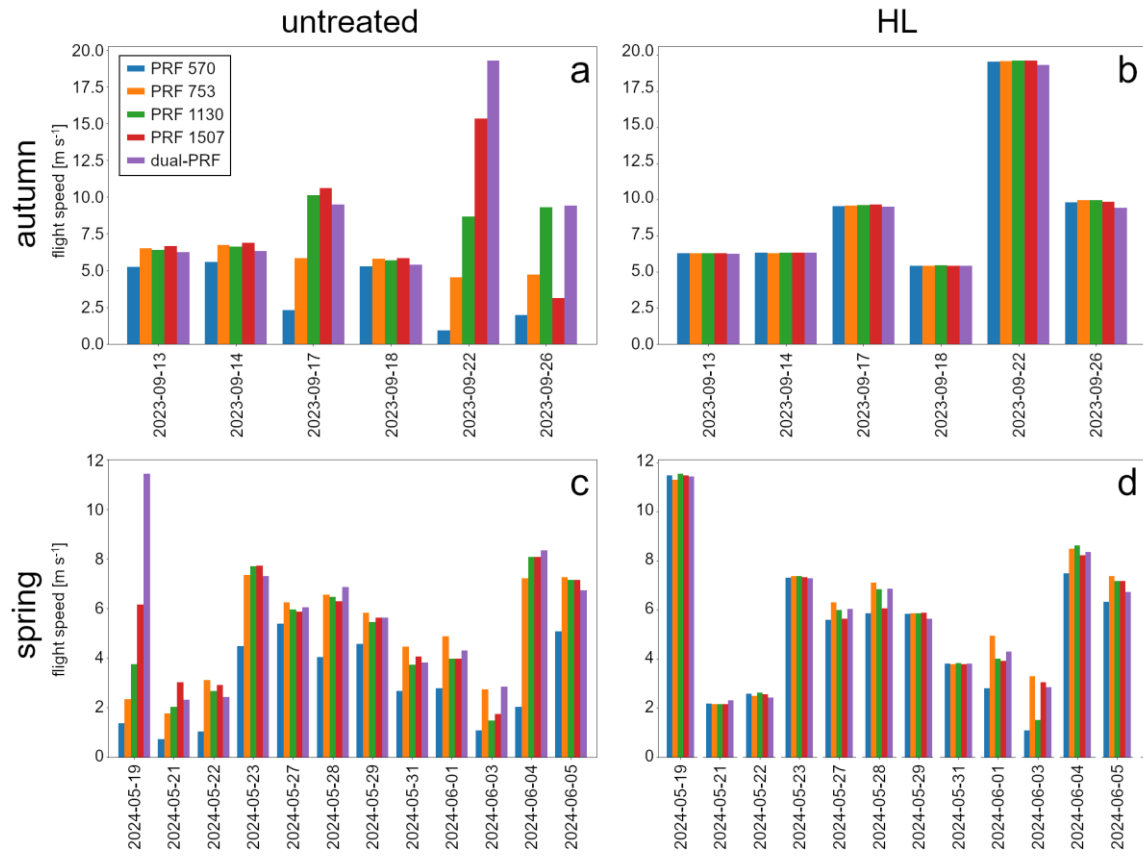


Figure S2. Ground speeds for insects from untreated (a, c) and dealiased (“HL”, b, d) velocities in 2023 (upper row) and 2024 (lower row) from four single-PRF modes (570, 753, 1130, 1507 Hz) and dual PRF without outlier correction.

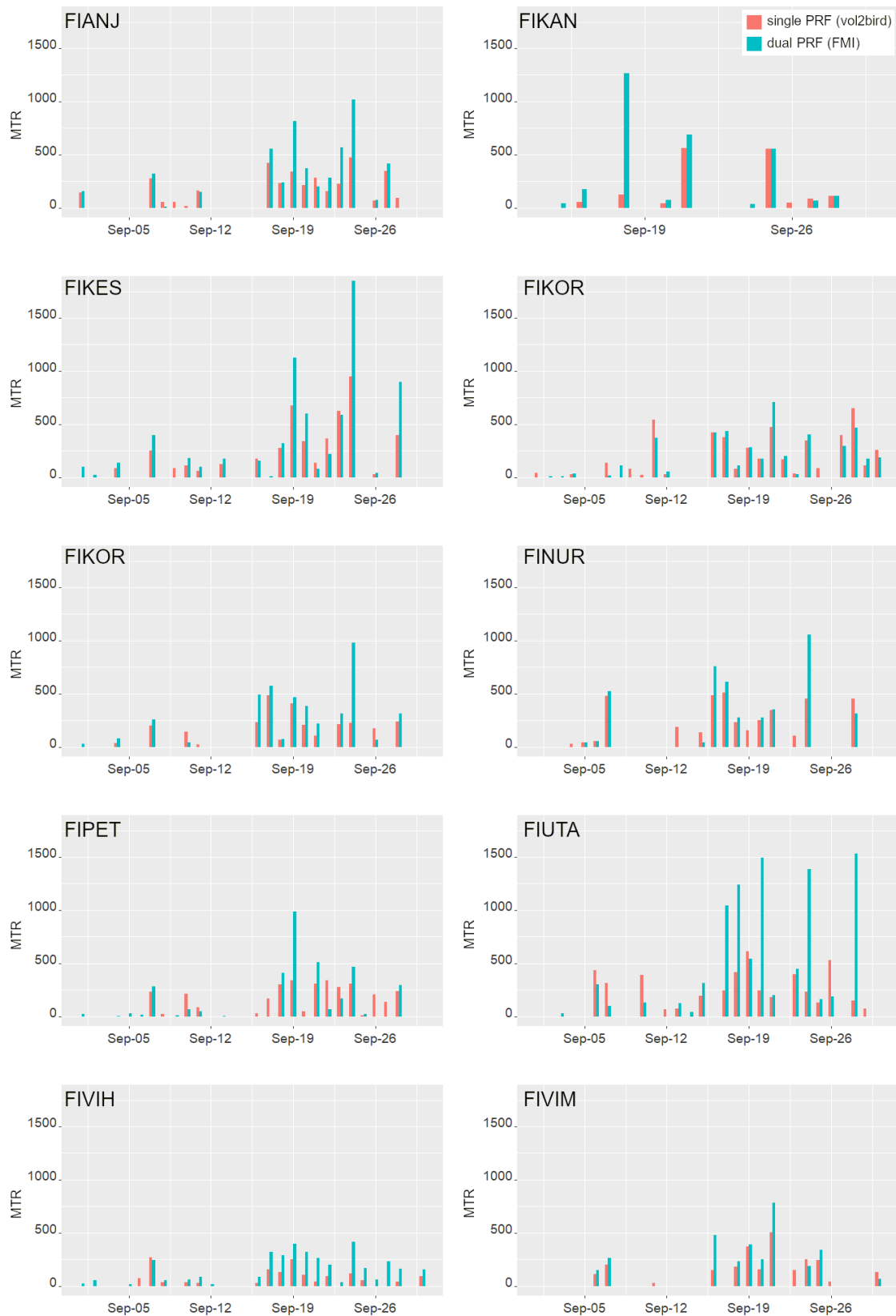


Figure S3. Comparison of migration traffic rates in a height range of 0–1 km between the single-PRF (vol2bird, red) and dual-PRF (FMI, green) methodology in Sept 2022 for the 10 Finnish polarimetric weather radars.

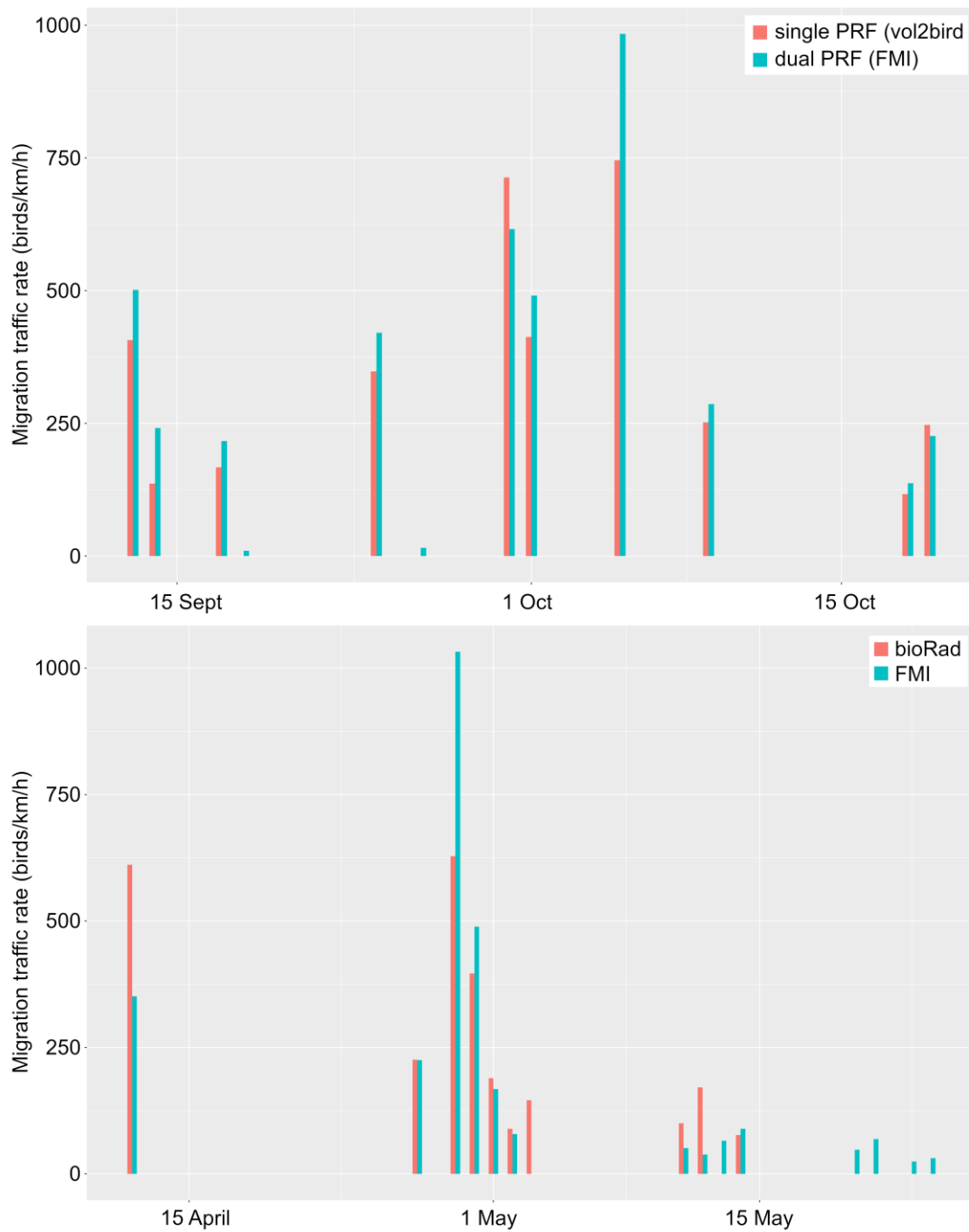


Figure S4. Comparison of migration traffic rates in a height range of 0–1 km between the single-PRF (vol2bird, red) and dual-PRF (FMI, green) methodology in autumn 2023 (top) and spring 2024 (bottom) for the Kankaanpää radar.

Supplementary Material

Tables

Table S1. Mean ground speeds from 200-m height layers in 0–1 km (i.e. $n = 5$) in single PRF (vol2bird) and dual PRF on 17, 18, 20, 24 and 28 Sept 2023 in the Utajärvi radar. Standard deviation and number of empty height layers are given in brackets.

Mean ground speeds [m/s]	17 Sept	18 Sept	20 Sept	24 Sept	28 Sept
Single PRF (vol2bird)	9.27 (± 3.85 ; 1)	13.75 (± 4.68 ; 0)	8.18 (± 2.06 ; 1)	9.80 (± 0.00 ; 3)	8.27 (± 2.17 ; 2)
Dual PRF	14.10 (± 4.02 ; 1)	16.38 (± 3.34 ; 1)	14.87 (± 1.92 ; 0)	17.14 (± 1.09 ; 0)	21.9 (± 3.31 ; 2)