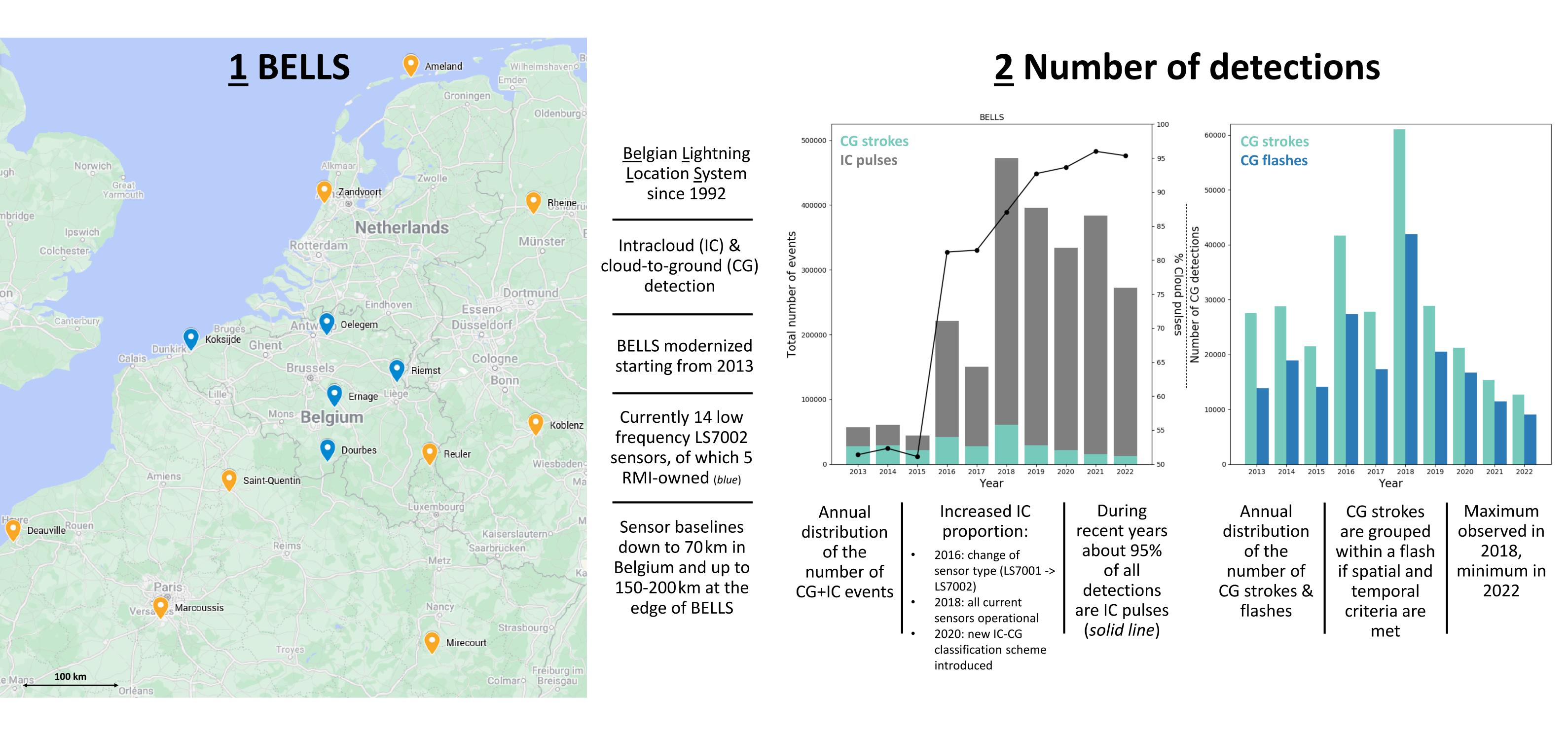


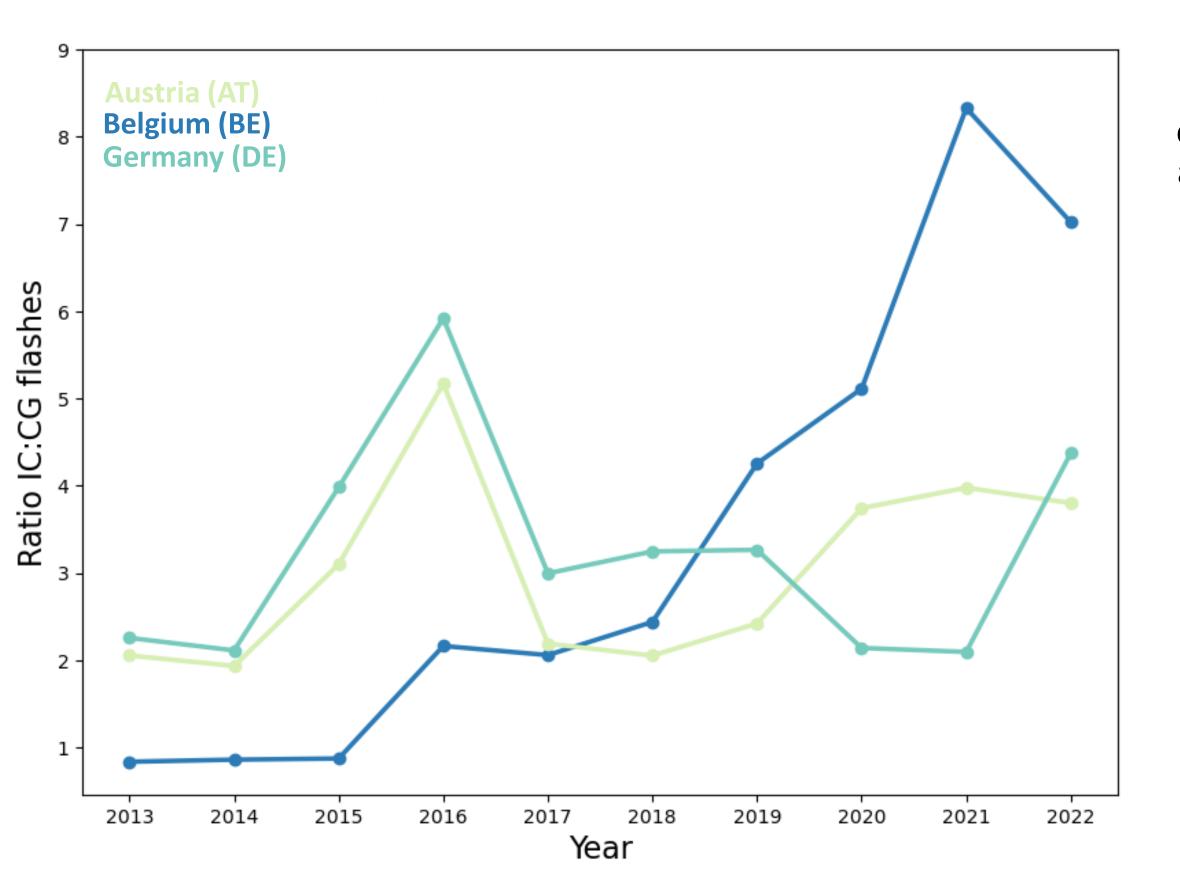
Total lightning in Belgium: 10-year observations from the ground-based lightning location system BELLS

belspo

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3 IC:CG flash ratio

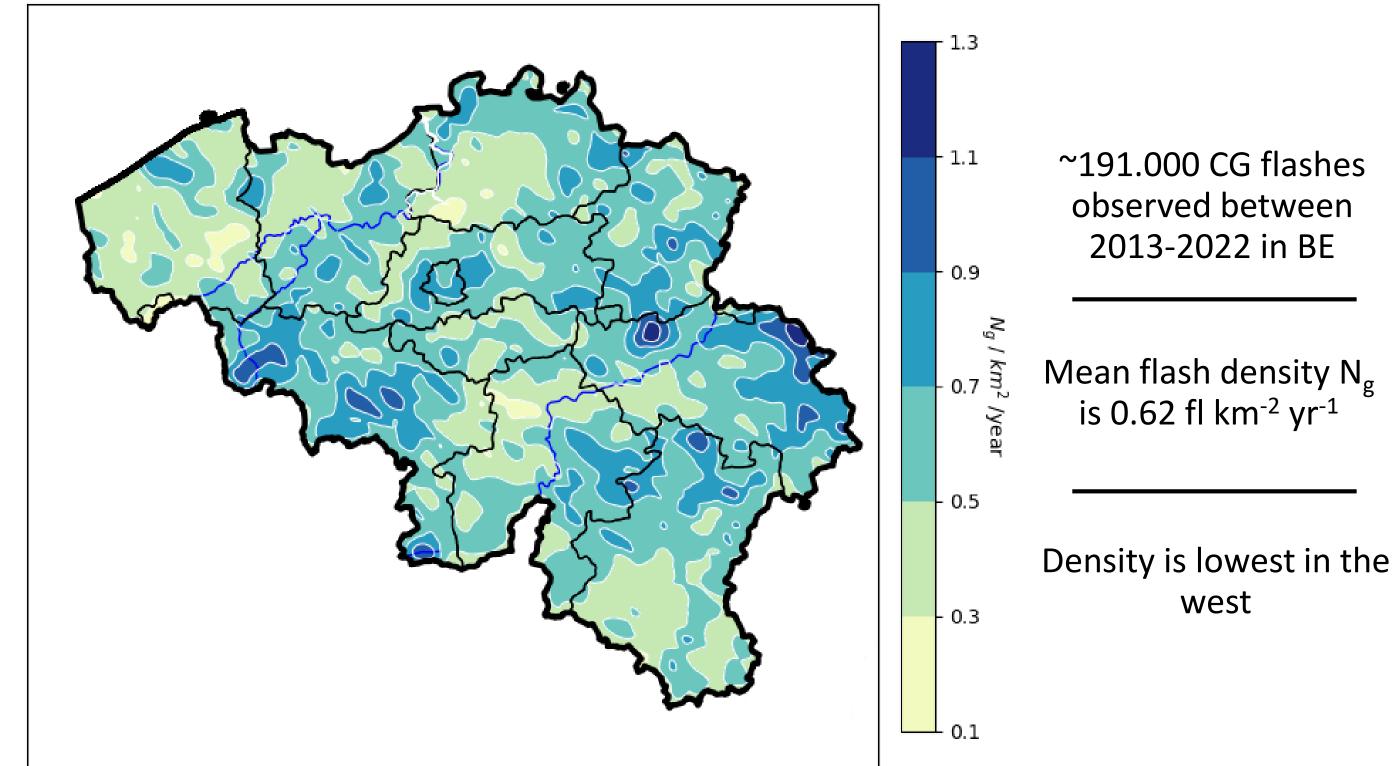


*European Cooperation for Lightning Detection. RMI is member of EUCLID since 2015.

IC:CG flash ratio in Belgium (BE) by BELLS compared to Austria (AT) and Germany (DE) based on EUCLID* detections

AT/DE peak in 2016 caused by EUCLID's grouping algorithm at that time

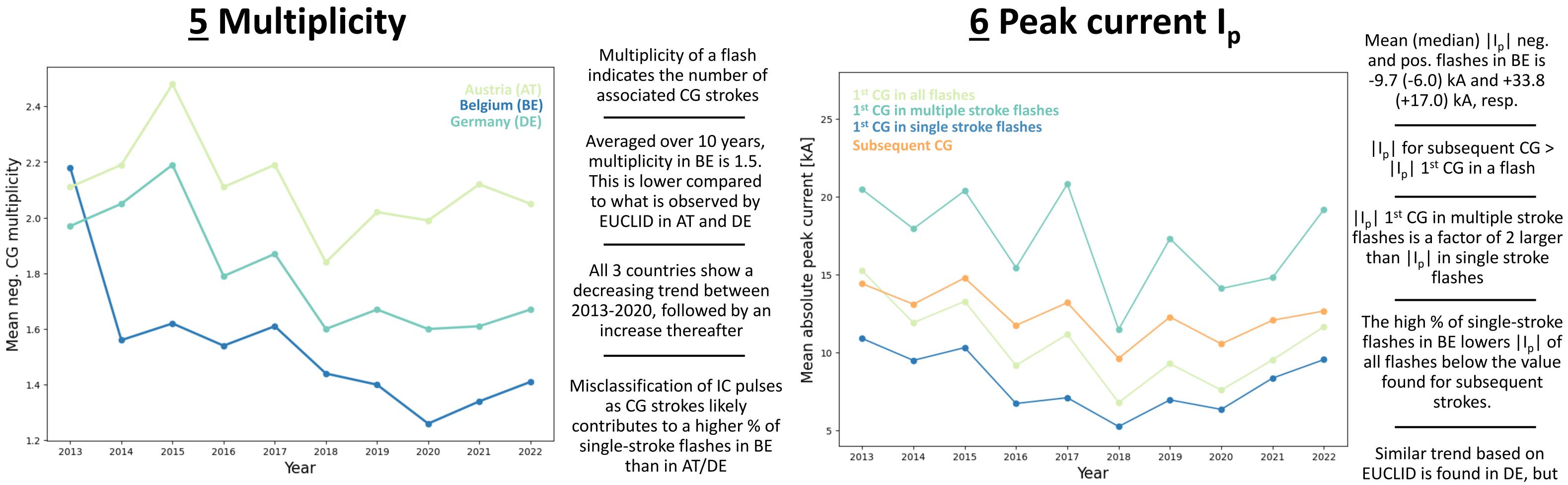
<u>4</u> Flash density N_g



~191.000 CG flashes observed between

Recent IC:CG ratio in BE is a factor of two higher compared to AT/DE

Small baselines in BELLS facilitate IC detection



|I_p| 1st CG in multiple stroke flashes is a factor of 2 larger

not in AT



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Short sensor baselines in BELLS facilitate the detection of cloud discharges [see <u>2</u> & <u>3</u>]

The low multiplicity in Belgium [see **5**] is caused by BELLS' high IC sensitivity and some misclassification of IC pulses as isolated single-stroke CG flashes

A reduced peak current (factor 2-3) in single-stroke flashes compared to first strokes in multiple-stroke flashes [see **<u>6</u>**] indicates a degree of misclassification of IC pulses as isolated single-stroke CG flashes

