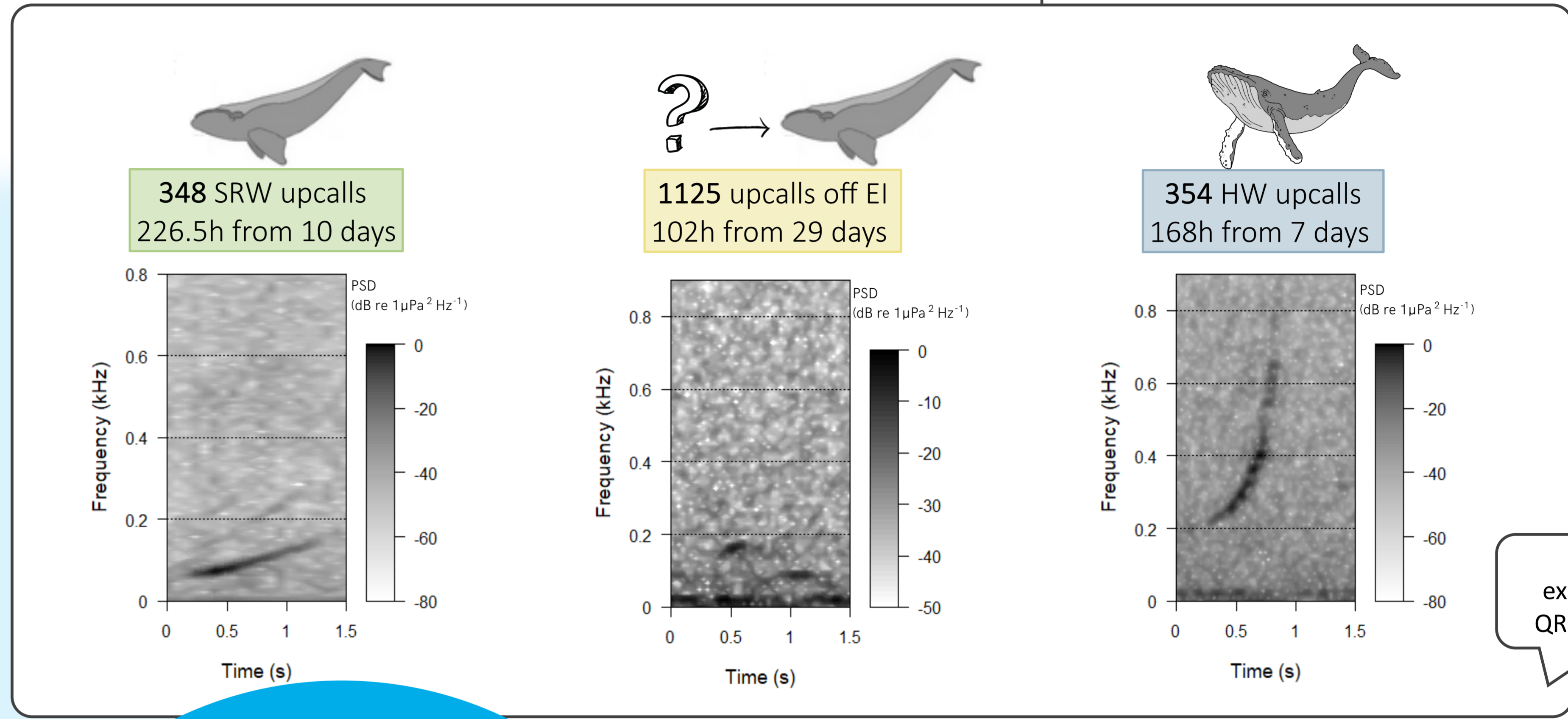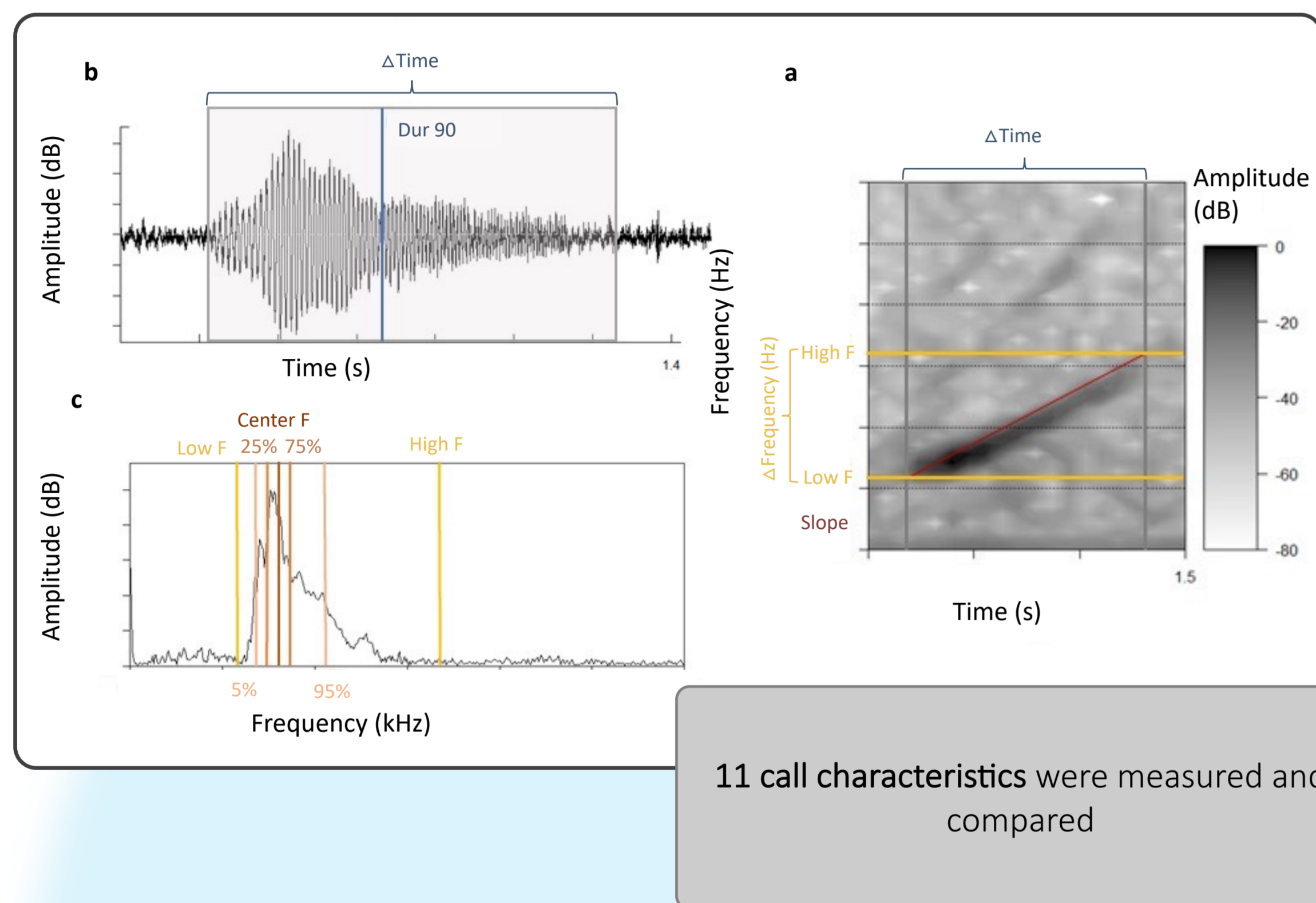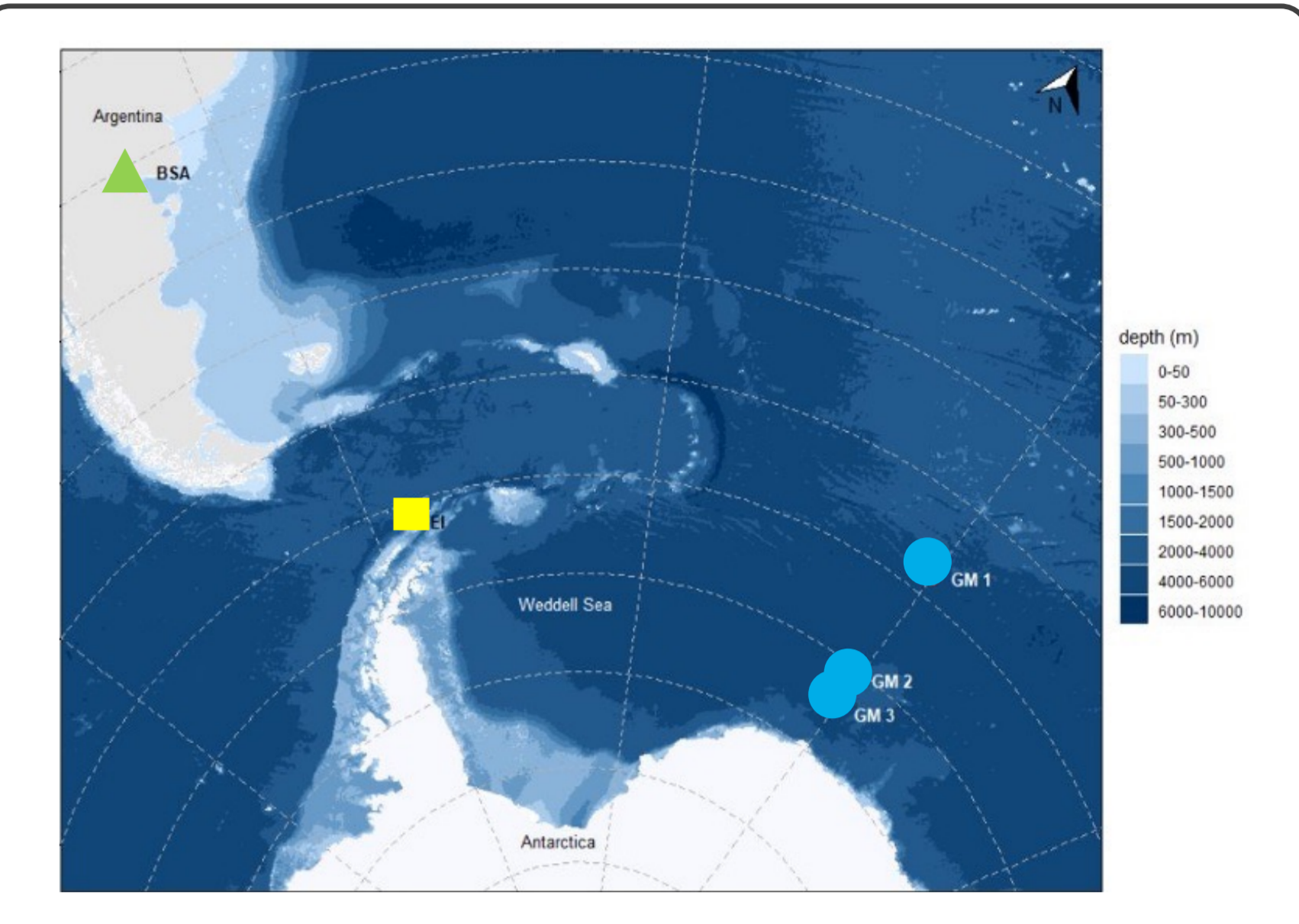Svenja Wöhle[1], Elke Burkhardt[1], Ilse van Opzeeland[1,2] & Elena Schall[1]
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Background

Southern right whales (SRWs) are steadily recovering, but an understanding of their spatio-temporal distribution is vital for further conservation measurements. Passive acoustic monitoring (PAM) methods can be used, but the efficiency of PAM methods depends on the ability to detect and correctly interpret acoustic signals. The most commonly detected vocalization of the SRW is the **upcall,** but **difficulties to distinguish** from humpback whale (HW) upcalls were reported.
Unknown upcalls off Elephant Island (EI) were detected and **compared to confirmed SRW and HW upcalls**.

11 call characteristics were measured and compared

348 SRW upcalls 226.5h from 10 days

1125 upcalls off EI 102h from 29 days

354 HW upcalls 168h from 7 days

For sound examples scan QR code below!

Results

1. We **identified** the acoustic **parameters driving** the main **differences** between SRW and HW upcalls
2. Based on call features **unknown upcalls** off EI could be **attributed to SRWs** confirming acoustic presence of SRWs off EI.
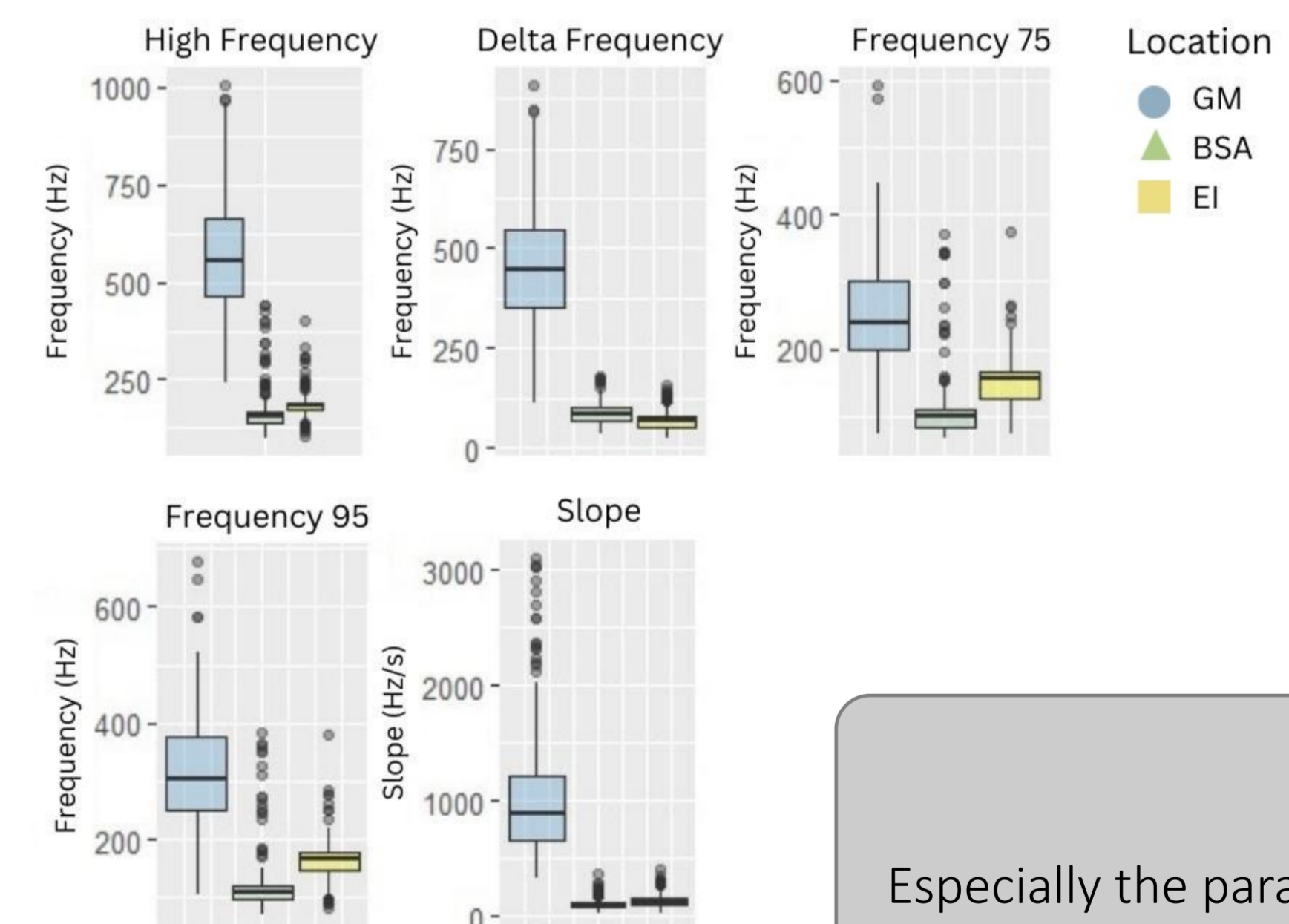
Especially the parameters **bandwidth and slope** can **improve automated detection** of right whale upcalls in PAM approaches.

Conclusion

Confirming the acoustic **presence of SRWs in waters off EI provides first insights into spatio-temporal distribution of SRWs in Antarctic waters and** supports that these waters **are an important foraging ground** for SRWs. Additional long-term data are analysed which will provide further insight in temporal occurrence and migratory behaviour of SRWs in this region, since this **knowledge is vital** for **effective management** implementations.

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