



PALILA: PsychoAcoustic Listening Laboratory

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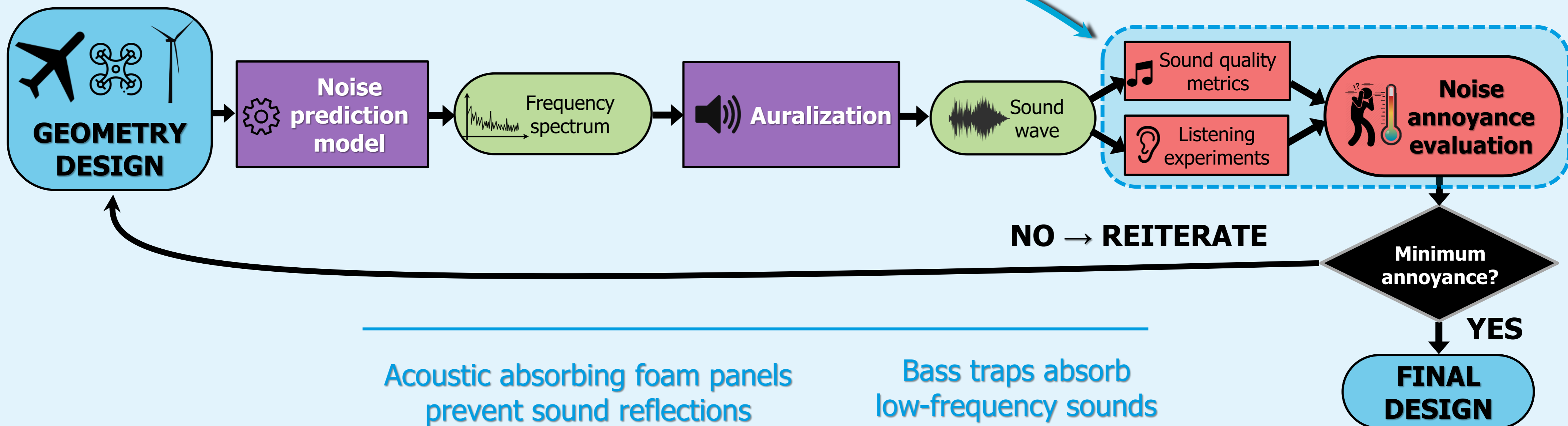
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A quiet, soundproof facility to conduct psychoacoustic listening experiments about **human perception of sound**. We focus on **aerospace noise sources** (aircraft, drones, wind turbines, etc.).

This laboratory enables **perception-driven design** for obtaining socially **sustainable aviation** by minimizing annoyance:

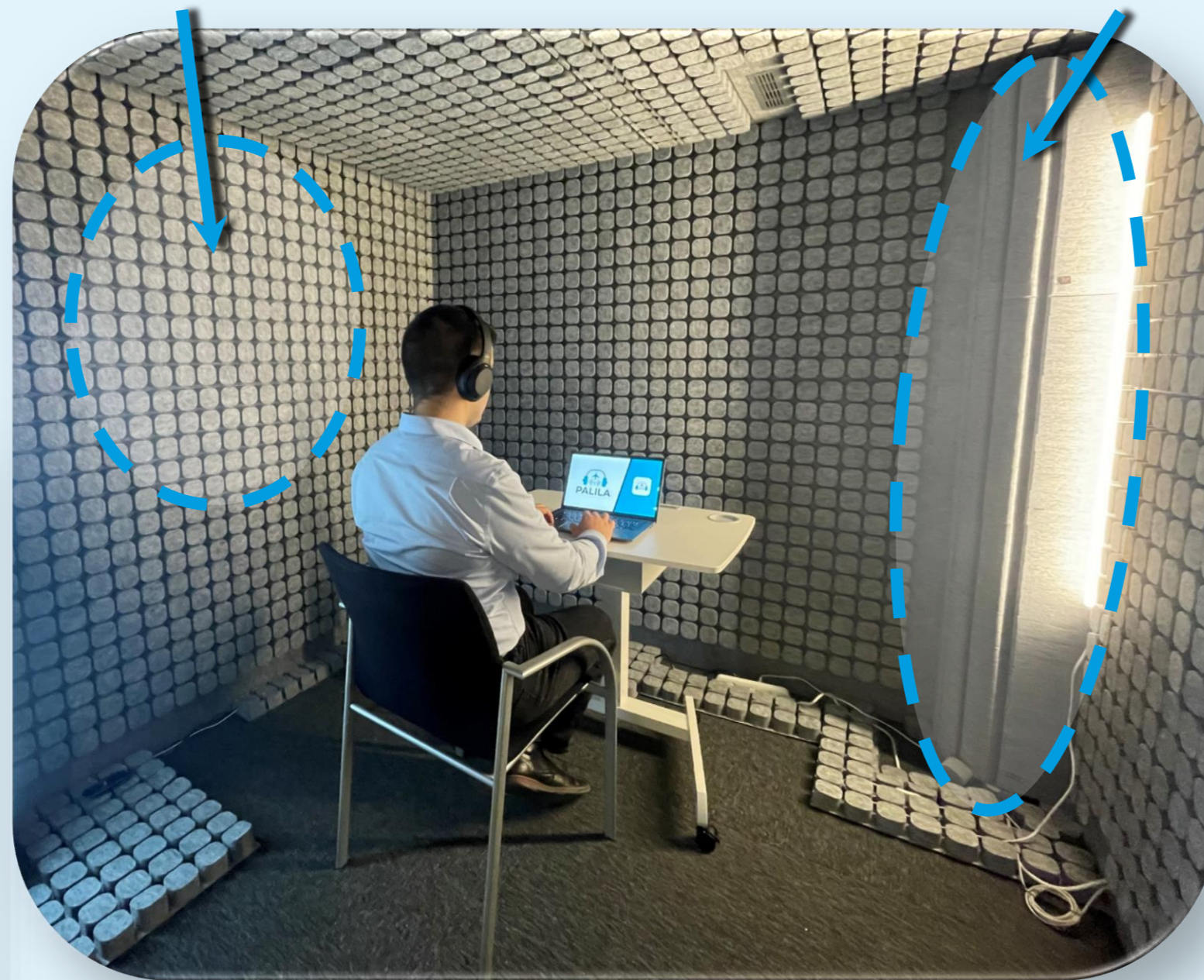
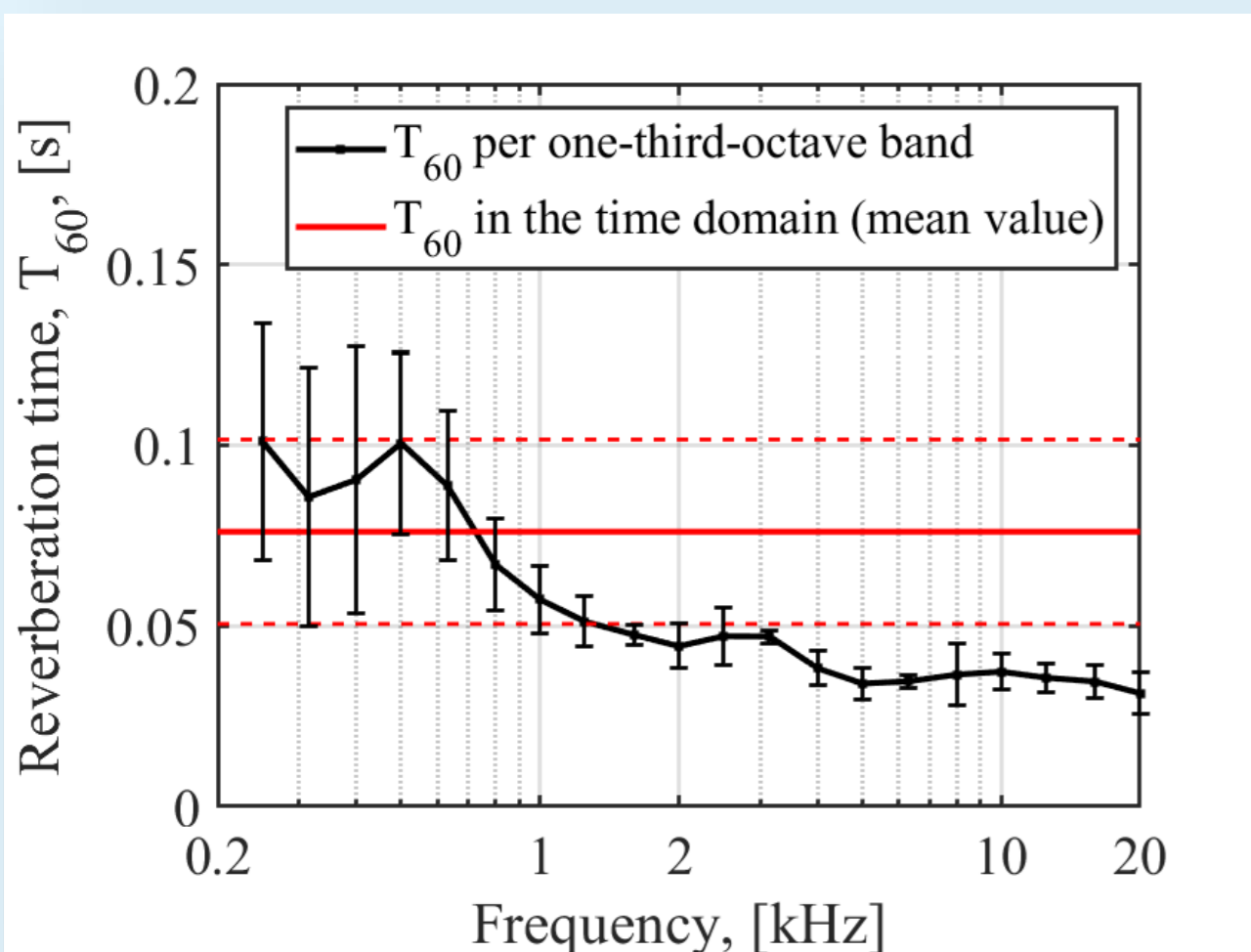
Fun fact! PALILA is also a species of Hawaiian honeycreeper (critically endangered, sadly)



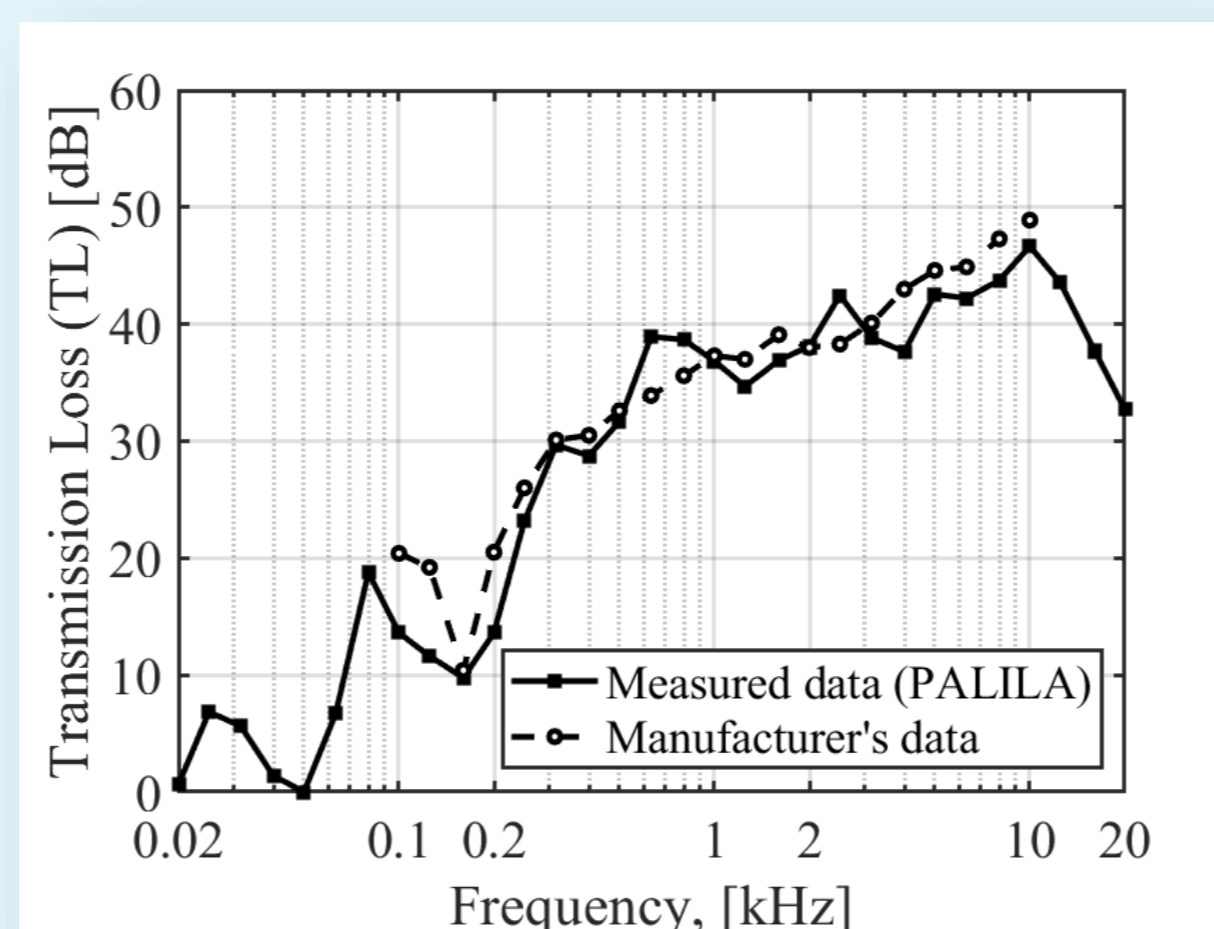
Acoustic absorbing foam panels prevent sound reflections

Bass traps absorb low-frequency sounds

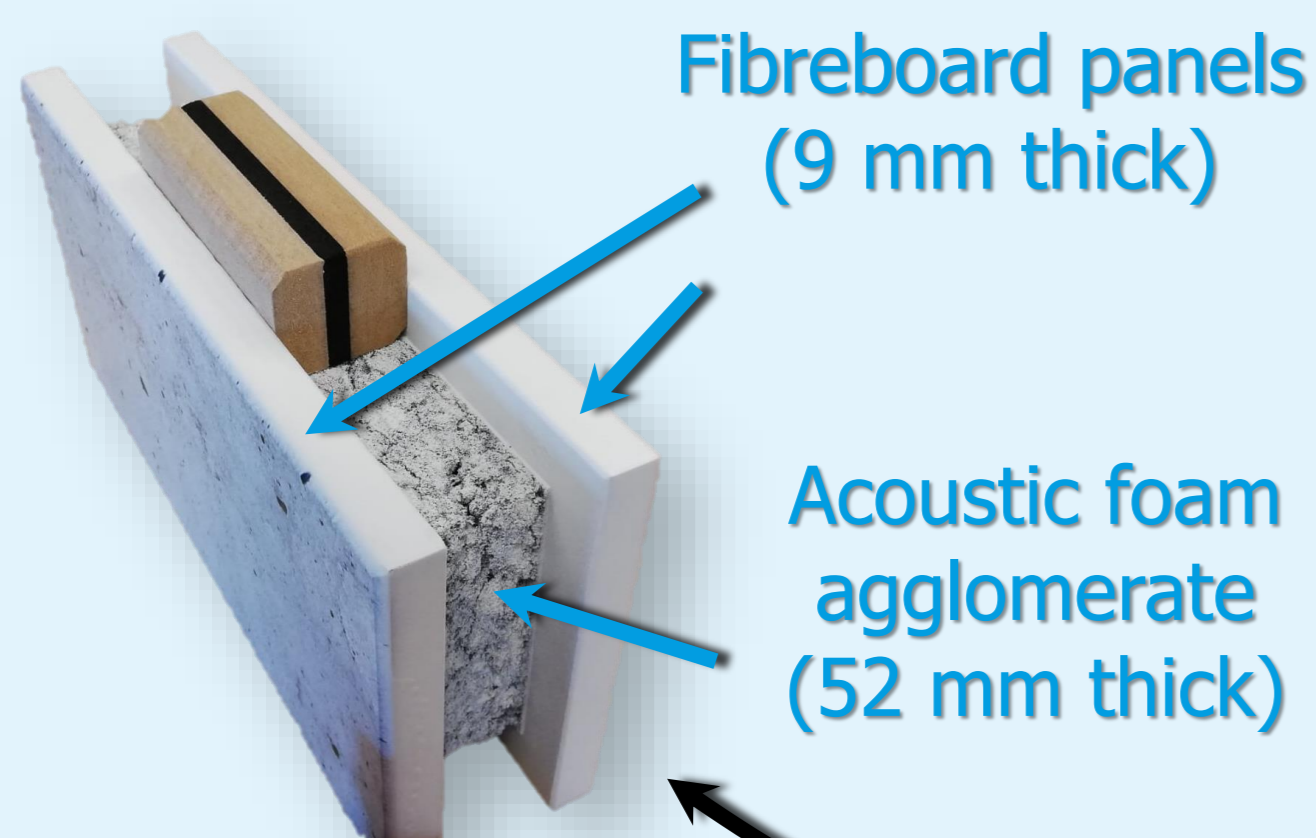
There are almost **"no echoes"** inside PALILA. With a reverberation time of only **0.07 s**, the room is considered **acoustically dead!**



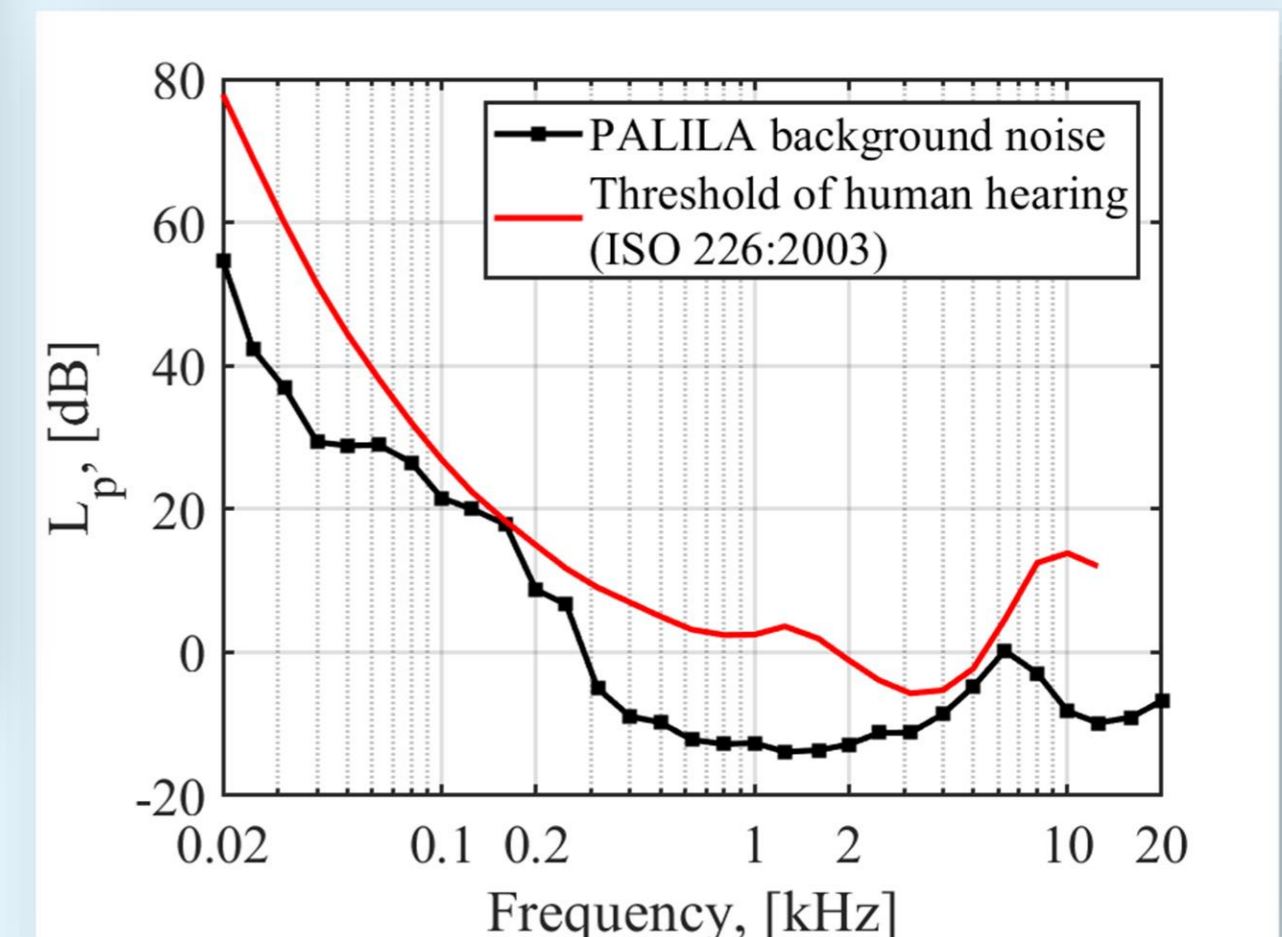
PALILA is **highly insulated from exterior sounds** (weighted average transmission loss: **45 dB**).



This is thanks to its **special wall bricks** made of a *sandwich* structure.



The background noise inside PALILA is incredibly low! **Even quieter than the threshold of human hearing!**



The overall background noise level is only **13.4 dBA**, roughly the same as quiet breathing.

Would you like to participate in our experiments? Scan this QR code to **subscribe to our mailing list!** 😊

