

ACOUSTICS2008/1215

Auditory capture in a spatial cueing task

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This study examined how an auditory non-informative spatial cue influences detection and localization of auditory targets. In a go-no go task subjects attended a centrally placed loudspeaker surrounded by 6 other loudspeakers and were asked to respond only to centre targets. The cue came from one of the loudspeakers and preceded the target tone with an SOA of 100 or 400 ms. A baseline condition with a spatially diffuse cue was included, using out-of-phase presentation through two loudspeakers. Results show that, compared to the baseline, cues shortened reaction times at small cue-target angles (up to 7°) and increased them at larger angles. At the shortest SOA, the reaction time difference was up to 80 ms. Furthermore, cueing seems to have no effect on sound localization: false alarms were normally distributed around the hits. These findings demonstrate that strong auditory capture effects occur that depend on cue-target distance.