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Quantitative evaluation of annoyance from military shooting noise

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ABSTRACT

Noise has always been an important environmental problem for man. Thus, a number of studies have been done on noise annoyance such as traffic (road, railway, aircraft) or industrial noise. In comparison to these noise sources, however, shooting noise is relatively less studied. In addition, there are various types of firearms that determination of the rating sound level for shooting noise is complicated. From the early studies, annoyance on shooting noise should be separated by caliber of firearms and A-weighted sound exposure level correlates well with annoyance. In this study, laboratory test was carried out with shooting noise recorded at military firearm ranges. A dose-response relationship is established, and it is compared to that of traffic and wind turbine noises. This study also investigates effects of consecutive single shots on annoyance.