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## **Characteristics of road traffic noise level statistics for shielded areas**

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For noise immission, it is of interest to study other noise level statistics besides the long-term equivalent levels and maximum levels. By further analysis of the time variations of the noise level, an improved description of the negative effects of the noise may be achieved, for instance concerning perceived annoyance. Here, noise level histograms, i.e. probability density functions of sound pressure levels, from controlled recordings have been investigated. This has been made for a situation of special interest, which is a courtyard shielded from a dominating road traffic noise source. It has been reported previously that many shielded urban areas show levels that are considerably higher than the equivalent level, described as an upward tail of the histogram, which is not a usual characteristic of directly exposed areas. From the analysis made here, it is shown that the upward tail, i.e. the higher levels, of the shielded area is caused by locally occurring, unshielded road traffic events. It is concluded that the upward tail as a common characteristic of shielded urban areas may well be due to locally occurring noise events, for instance due to local road traffic.