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Pitch perception and the encoding of click trains in the mammalian ventral cochlear nucleus.

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Pseudo-periodic click trains with the same autocorrelation may produce different subjective pitches (Pressnitzer et al., 2001). The pitch shift was explained on the basis of statistical properties of third-order inter-click intervals, i.e. properties of intervals between non-successive clicks. This raises the question of the encoding of non-successive inter-click intervals in the auditory system. Single unit recordings in the ventral cochlear nucleus of the anaesthetised guinea pig were collected with the stimuli. The presence or absence of the perceptual pitch shift was reflected in temporal properties of the physiological responses.