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Auditory Sensory Memory for Random Waveforms

C. Kaernbach
Karl-Franzens-Universität Graz, Schubertstr. 51a, 8010 Graz, Austria
chris@kaernbach.de

The memory of auditory random waveforms (i.e. noise) is a special case of the auditory memory for sensory information. The experiments reported here evaluate the dynamics of this storage system as well as the interactions with new input. Periodic waveforms can be discriminated from uncorrelated noise by naive listeners up to a cycle length of 20 seconds, with the major decline in performance between 5 and 10 seconds. Even single repetitions of a piece of the waveform can be detected up to a stimulus onset asynchrony of 6 seconds. The capacity of this storage system is limited to a few items of in total a few hundred milliseconds length. Within this capacity, however, items do not interfere strongly. These results are compatible with the view that auditory sensory memory is a modality-specific module of short-term memory.

The complete document was not available at the publication time. It has been replaced by the submitted abstract.