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**Frequency selectivity in diotic and dichotic masking conditions for
normal-hearing and hearing-impaired listeners**

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Previous studies argued that, for broadband maskers, the operational binaural critical bandwidth is similar to the monaural critical bandwidth. The aim of the present study was to test this hypothesis using the notched noise paradigm. Thresholds were measured for a diotic masker and a signal that was either in phase or had an interaural phase difference of 180 degrees. For comparison, thresholds were also measured for a broadband masker (without a notch) at various masker levels to account for possible level effects of the binaural masking level difference (BMLD). Normal-hearing and hard-of-hearing listeners with various degrees of sensorineural hearing impairment participated in the experiment. For all subjects, the thresholds decreased faster for the diotic than the dichotic signal as the notch width increased. The comparison with the data for the broadband masker indicated that this decrease of the BMLD is not due to the decrease of masker level within the auditory filter centered at the signal frequency. The thresholds can be predicted by an equalization-cancellation model assuming a slightly broader auditory filter in the dichotic masking condition. A possible realization of this different binaural auditory filter shape is adding to the on-frequency filter fractions of the adjacent filters.