

ACOUSTICS2008/1047
**Trading of intensity and interaural correlation cues in the
perception of loudness**

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When a signal is added to noise in the NoS π binaural configuration, a reduction in interaural cross-correlation (IACC) occurs at the signal frequency. Increases in tone intensity produce decreases in IACC. Consistent with this relationship, direct manipulations of IACC can result in the perception of an added signal and progressive reduction in IACC produces progressive increases in the loudness of this signal [Culling et al. 2001 *J. Acoust. Soc. Am.* 110, 1020-1029]. In the present study, a narrow sub-band of noise (460-540 Hz) embedded within a broadband (0-3 kHz) diotic noise was manipulated in both intensity and IACC in a 3-interval, odd-one-out task. In the reference intervals, IACC was zero and the spectrum was flat. In the target interval, both the IACC and the intensity of the target band were incremented. These increases have opposing effects on loudness. Correct identification of the target interval followed a U-shape as a function of the size of intensity increment. The minimum of the function was at chance performance, indicating that the opposing cues were fully traded.