

New Research published on Current Biology!

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Congratulation to [Tam](#) , [David](#) and [Concetta nbsp;](#); who just published on Current Biology!

Ho, T. H., Leung, J., Burr, D., Alais, D. & Morrone, M. C. (2017). Auditory Sensitivity and Decision Criteria Oscillate at Different Frequencies Separately for the Two Ears, Current Biology, [PDF](#)

Many behavioral measures of visual perception fluctuate continually in a rhythmic manner, reflecting the influence of endogenous brain oscillations, particularly theta (~4–7 Hz) and alpha (~8–12 Hz) rhythms. However, it is unclear whether these oscillations are unique to vision or whether auditory performance also oscillates. Several studies report no oscillatory modulation in audition, while those with positive findings suffer from confounds relating to neural entrainment. Here, we used a bilateral pitch-identification task to investigate rhythmic fluctuations in auditory performance separately for the two ears and applied signal detection theory (SDT) to test for oscillations of both sensitivity and criterion (changes in decision boundary). Using uncorrelated dichotic white noise to induce a phase reset of oscillations, we demonstrate that, as with vision, both auditory sensitivity and criterion showed strong oscillations over time, at different frequencies: ~6 Hz (theta range) for sensitivity and ~8 Hz (low alpha range) for criterion, implying distinct underlying sampling mechanisms. The modulation in sensitivity in left and right ears was in antiphase, suggestive of attention-like mechanisms sampling alternatively from the two ears.

