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The Role of Higher Harmonics In Musical Interval Perception RICHARD KRANTZ, Metropolitan State College of Denver, JACK DOUTHETT, University of New Mexico (retired) — Using an alternative parameterization of the roughness curve we make direct use of critical band results to investigate the role of higher harmonics on the perception of tonal consonance. We scale the spectral amplitudes in the complex home tone and complex interval tone to simulate acoustic signals of constant energy. Our analysis reveals that even with a relatively small addition of higher harmonics the perfect fifth emerges as a consonant interval with more, musically important, just intervals emerging as consonant as more and more energy is shifted into higher frequencies.

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