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Abstract
The “singer’s formant” is a prominent spectrum envelope peak near 3 kHz, typically found in voice sounds produced by classical operatic singers. According to previous research, it is mainly a resonatory phenomenon produced by a clustering of formants 3, 4 and 5. Its level relative to the first formant peak varies depending on vowel, vocal loudness and other factors. Its dependence on vowel formant frequencies is examined. Applying the acoustic theory of voice production, the level difference between the first and third formant is calculated for some standard vowels. The difference between observed and thus calculated levels is determined for various voices. It is found to vary considerably less between vowels sung by professional singers than by untrained voices. The center frequency of the singer’s formant, determined by long-term-spectrum analysis of grammophon recordings, is found to increase slightly with the pitch range of the voice classification.