



FIG. 5.—Comparison of spectra of the inner bulge and outer nucleus of M31 (PA = 55°: nucleus major axis). At the top is the mean spectrum of the bulge outside the nucleus but at radii where $\sigma = 145 \text{ km s}^{-1}$. Below it is the observed spectrum of the outer nucleus and bulge. The third spectrum is the result of subtracting the first from the second, i.e., the spectrum of the outer nucleus by itself. At the bottom is a spectrum of the standard star η Cyg (K0 III). The wavelength region shown is 5298–5135 Å; 1 pixel ≈ 1.2 Å. The lines at pixels 421, 431, and 435 are Mg I *b*, $\lambda\lambda$ 5183.6, 5172.7, and 5167.3 Å, respectively.

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