Ultraviolet spectra of asteroids: comparison with visual classification

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Ultraviolet spectra of 44 asteroids were obtained by various observers with the International Ultraviolet Explorer (IUE) satellite between 1978 and 1991. Preliminary reductions of 28 sets of asteroidal spectra were published by Butterworth and Meadows in 1985. In the present work we revise these composite spectra slightly, using improved solar spectra and additional observations, and we augment them with the largely unpublished spectra of 16 asteroids not available to Butterworth and Meadows. Solar continuum uncertainties can result in apparent features at about 20% of the continuum level; several continuum models are used to test small apparent features.

The 44 asteroids represent classes C, E, F, G, M, S, 1, m, and r (Tedesco et al. 1989 classification scheme). The composite ultraviolet spectra will be compared to asteroidal classification schemes based on visual and infrared data.

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