The Extinction Curve at Mauna Kea in the Visible Range

In order to measure its efficiency, the Herzberg Spectrograph was used during one engineering night in March with the grating #6 (300 l/mm), blue optics and the TH1 CCD camera. The efficiency of the other grating/optics combinations was measured the following days using the internal continuum source of the spectrograph.

During the engineering night, which happened to be photometric, several standard stars were observed at different airmasses to derive the extinction curve for the night, as well as a faint QSO in order to have a precise value for the limiting magnitude of the spectrograph+TH1 combination.

The spectral coverage on the CCD was 2200 Å, from 3650 to 5850 Å with a dispersion equal to 3.8 Å per pixel. The laboratory data are still being reduced and the complete results of this engineering run will be published in the next issue of the Info Bulletin. Because of the very good photometric conditions, the derived extinction curve and the UV extinction curve (CFHT Info Bulletin # 17) were in very good agreement in the overlapping region from 3700 to 3850 Å.

We therefore appended the two curves to cover the 3070-5850 Å spectral region.

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Table 3: Extinction Curve at Mauna Kea

Wavelength (Å)	Extinction (magnitude/airmass)	Wavelength (Å)	Extinction (magnitude/airmass)
3100	1.37	4000	0.25
3200	0.82	4250	0.21
3300	0.57	4500	0.17
3400	0.51	4750	0.14
3500	0.42	5000	0.13
3600	0.37	5250	0.12
3700	0.33	5500	0.12
3800	0.30	5750	0.12
3900	0.27		

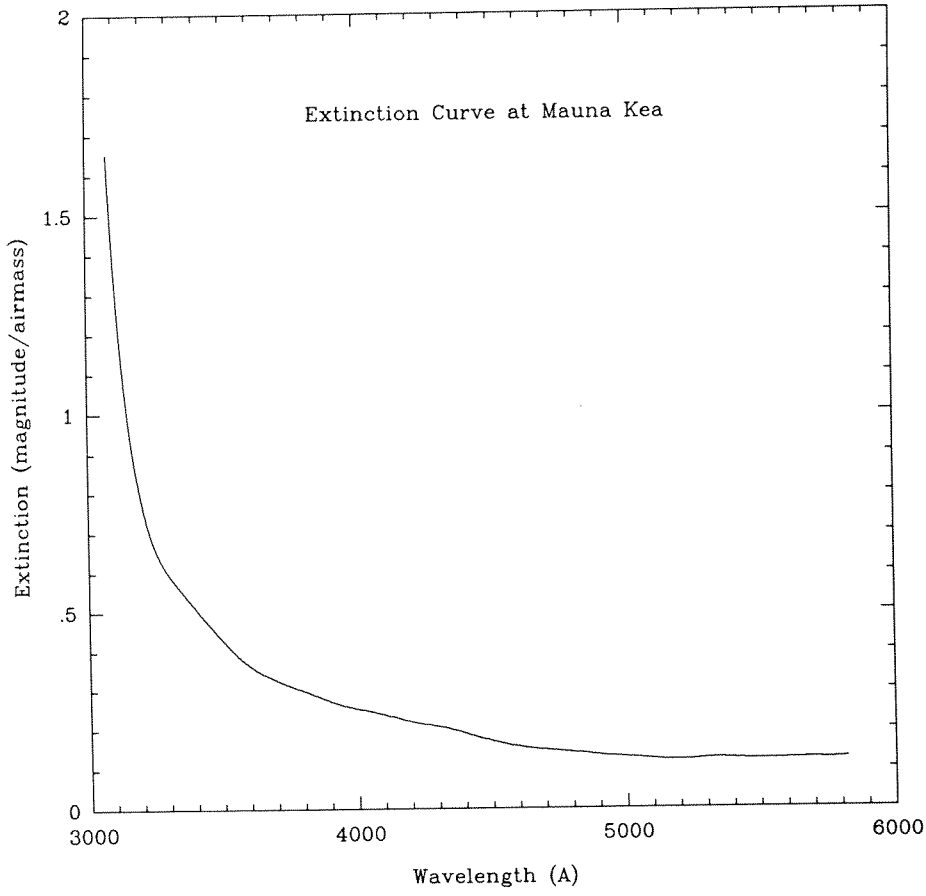

Figure 11.