

“Optimal Resolutions for Optical and IR Spectroscopy”

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We study the effects of atmospheric emission lines in the 0.4-2.4 micron range at resolutions ranging from 100-100,000 on a pixel-by-pixel basis. After building an atmospheric emission model, we define and calculate the fraction of pixels free of emission lines in 7 different band passes. We then discuss the the effect of the background emission on the SNR of targets of various magnitudes to determine a ‘best’ resolution at which to observe.