

CO-ALIGNMENT REQUIREMENTS FOR THE FUV SPECTROSCOPIC CHANNELS

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1. INTRODUCTION

This report explicitly defines the requirements for co-alignment of the three FUV channel spectra, i.e. G130M, G160M, and G140L, and the rationale behind the requirements.

The co-alignment requirement is defined by two considerations. One, the spectra must fit within a well defined region to support repositioning of the spectra on the detector to support microchannel plate lifetime adjustments. Two, the spectra must all fit within a region smaller than the flat field lamp illumination pattern.

The lifetime adjustments will move the spectrum by 0.5 mm from its previous position. Thus, the spectra must all fit within a 0.5 mm region to support lifetime adjustments. The flat field lamp will illuminate a 1 mm high region. Therefore, the lifetime adjustment requirement is more stringent and thus the defining criteria

2. REQUIREMENT

The spectra for the G130M, G160M, and G140L shall be aligned such that over 90% of the length of the spectrum a 0.5 mm wide strip includes the full height of the spectrum (see the figure below).

