Appendix A: Calibration Tables

The following table describes the contents of the NetCDF file containing the tables used by the GUVI calibration algorithm. Any update in the calibration tables will be reflected in a change in the filename. All GUVI products will be tagged with the calibration version used to produce them.

Filename example: GUVI-TIMED-V001.ncdf ([Instrument]-[Spacecraft]-V[Version ID].ncdf)

Table 7. Tables Contained In NetCDF Calibration File

Name	Units	Subscripts	Purpose
Limb Color Covariance Mask	unitless	Color 1, along-track, color 2, slit, detector	Covariance of LBH 1 and LBH 2 for error analysis
Disk Color Covariance Mask	unitless	Color 1, along-track, color 2, slit, detector	Covariance of LBH 1 and LBH 2 for error analysis
Limb Color Overlap Fraction	unitless	Color 1, along-track, color 2, slit, detector	Overlap of 1304 and 1356 for accurate 1304 subtraction
Disk Color Overlap Fraction	unitless	Color 1, along-track, color 2, slit, detector	Overlap of 1304 and 1356 for accurate 1304 subtraction
Limb Dark Background Mask	unitless	detector	Calculate dark counts in background pixel
Disk Dark Background Mask	unitless	detector	Calculate dark counts in background pixel
Limb Dark Count Mask	unitless	Along-track, color, detector	Calculate dark counts in colors
Disk Dark Count Mask	unitless	Along-track, color, detector	Calculate dark counts in colors

Limb 1216 Background Mask	unitless	Along-track, color, slit, detector	Subtract 1216 background from other colors
Disk 1216 Background Mask	unitless	Along-track, color, slit, detector	Subtract 1216 background from other colors
Limb 1304 Background Mask	unitless	Along-track, color, slit, detector	Subtract 1304 background from other colors
Disk 1304 Background Mask	unitless	Along-track, color, slit, detector	Subtract 1304 background from other colors
Limb Long Background Mask	unitless	Along-track, color, slit, detector	Subtract long-wavelength background from colors
Disk Long Background Mask	unitless	Along-track, color, slit, detector	Subtract long-wavelength background from colors
Limb Responsivities	Counts/s/R/pix	Across-track, along-track, color, slit, detector	Convert counts to Rayleighs for each color and pixel
Disk Responsivities	Counts/s/R/pix	Across-track, along-track, color, slit, detector	Convert counts to Rayleighs for each color and pixel
Limb Calibration Error Ratio	unitless	Across-track, along-track, color, slit, detector	Calculate part of variance due to calibration error
Disk Calibration Error Ratio	unitless	Across-track, along-track, color, slit, detector	Calculate part of variance due to calibration error
Limb Background Pixel Mask (1216)	unitless	Across-track, along-track, slit, detector	Subtract 1216 background from background pixel
Disk Background Pixel Mask (1216)	unitless	Across-track, along-track, slit, detector	Subtract 1216 background from background pixel
Limb Background Pixel Mask	unitless	Across-track, along-track, slit,	Subtract 1216 background from

(1304)		detector	background pixel
Disk Background Pixel Mask (1304)	unitless	Across-track, along-track, slit, detector	Subtract 1216 background from background pixel
Detector Processor Ratio Coefficient	Unitless	None	quadratic term in input rate response
Along Background Expand Index	Unitless	3 along-track	Defines spatial pixels which use 3 along-track background pixels
Across Background Expand Index	Unitless	7 across-track	Defines spatial pixels which use 7 across-track background pixels
Disk Integration Time	Seconds	None	Single pixel Integration time
Limb Integration Time	Seconds	None	Single pixel Integration time