



# SBG-TIR Final Band Positions

MRD - 2023-04-26-UPDATE

Band #	Center Wavelength ( $\mu\text{m}$ )	Spectral Width (FWHM) (nm)	Tolerance Center Wavelength ( $\pm$ nm)	Tolerance Spectral Width ( $\pm$ nm)	Knowledge Center Wavelength ( $\pm$ nm)	Knowledge Spectral Width ( $\pm$ nm)	Accuracy (Kelvin)	NEdT (Kelvin)	Range (Kelvin)
MIR-1	3.98	20 (TBC)	50	10	10	10	$\leq 3@750$	$\leq 0.3@750$	700-1200
MIR-2	4.8	150 (TBC)	100	50	20	20	$\leq 1@450$	$\leq 0.2@450$	400-800
TIR-1	8.32	300 (TBC)	100	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500
TIR-2	8.63	300 (TBC)	100	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500
TIR-3	9.07	300 (TBC)	100	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500
TIR-4	10.30	300 (TBC)	50	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500
TIR-5	11.35	500 (TBC)	100	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500
TIR-6	12.05	500 (TBC)	100	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500

Final band positions and tolerances for SBG-TIR bands

Jet Propulsion Laboratory, California Institute of Technology

© 2024. California Institute of Technology. Government sponsorship acknowledged



# Final version as of 6/9/24

Table 5 TIR Instrument Spectral Bands and their Characteristics

Band #	Center Wavelength ( $\mu\text{m}$ )	Spectral Width (FWHM) (nm)	Tolerance Center Wavelength ( $\pm$ nm)	Tolerance Spectral Width ( $\pm$ nm)	Knowledge Center Wavelength ( $\pm$ nm)	Knowledge Spectral Width ( $\pm$ nm)	Accuracy (Kelvin)	NEdT (Kelvin)	Range (Kelvin)
MIR-1	3.98	25 (TBC)	50	10	10	10	$\leq 3@750$	$\leq 0.3@750$	700-1200
MIR-2	4.80	150 (TBC)	100	50	20	20	$\leq 1@450$	$\leq 0.2@450$	400-800
TIR-1	8.32	300 (TBC)	100	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500
TIR-2	8.63	300 (TBC)	100	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500
TIR-3	9.07	300 (TBC)	100	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500
TIR-4	10.30	300 (TBC)	50	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500
TIR-5	11.35	500 (TBC)	100	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500
TIR-6	12.05	500 (TBC)	100	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500

Jet Propulsion Laboratory, California Institute of Technology

© 2024. California Institute of Technology. Government sponsorship acknowledged



# Changes

Band #	Center Wavelength ( $\mu\text{m}$ )	Spectral Width (FWHM) (nm)	Tolerance Center Wavelength ( $\pm$ nm)	Tolerance Spectral Width ( $\pm$ nm)	Knowledge Center Wavelength ( $\pm$ nm)	Knowledge Spectral Width ( $\pm$ nm)	Accuracy (Kelvin)	NEdT (Kelvin)	Range (Kelvin)
MIR-1	3.98	25	50	10	10	10	$\leq 3@750$	$\leq 0.3@750$	700-1200
MIR-2	4.8	150 (TBC)	100	50	20	20	$\leq 1@450$	$\leq 0.2@450$	400-800
TIR-1	8.32	300 (TBC)	100	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500
TIR-2	8.63	300 (TBC)	100	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500
TIR-3	9.07	300 (TBC)	100	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500
TIR-4	10.30	300 (TBC)	50	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500
TIR-5	11.35	500 (TBC)	100	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500
TIR-6	12.05	500 (TBC)	100	50	20	20	$\leq 0.5@275$	$\leq 0.2@275$	200-500

Final band positions and tolerances for SBG-TIR bands