farearth

Level-1C Product quality report

TRUBIT-1_EO-100_20240928T094332_20240928T094336_L1C_R3C1

Acquired: 28 Sep 2024 09:43:32 Z

Processed: 6 Mar 2025 12:16:20 Z

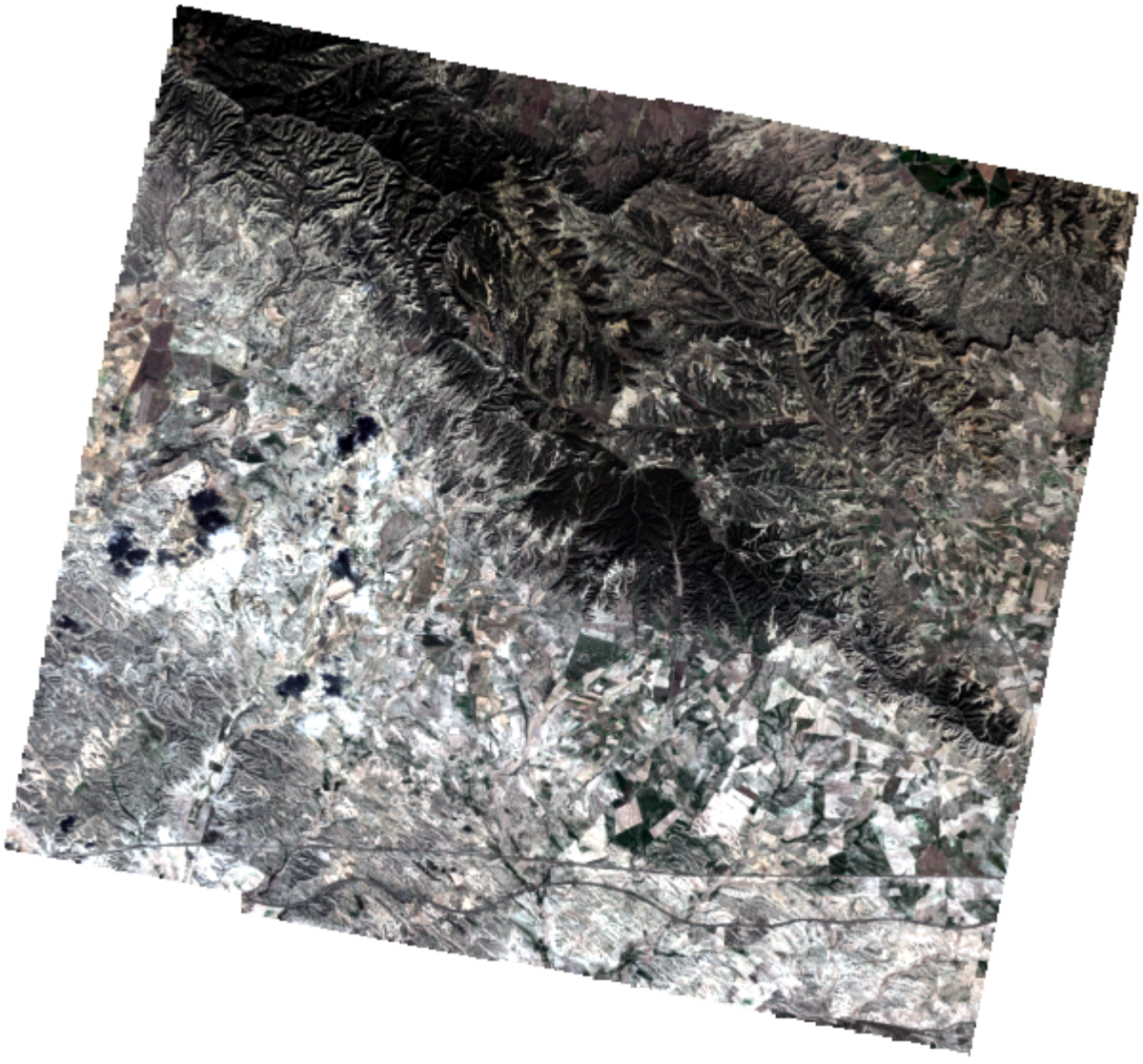

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Table of Contents

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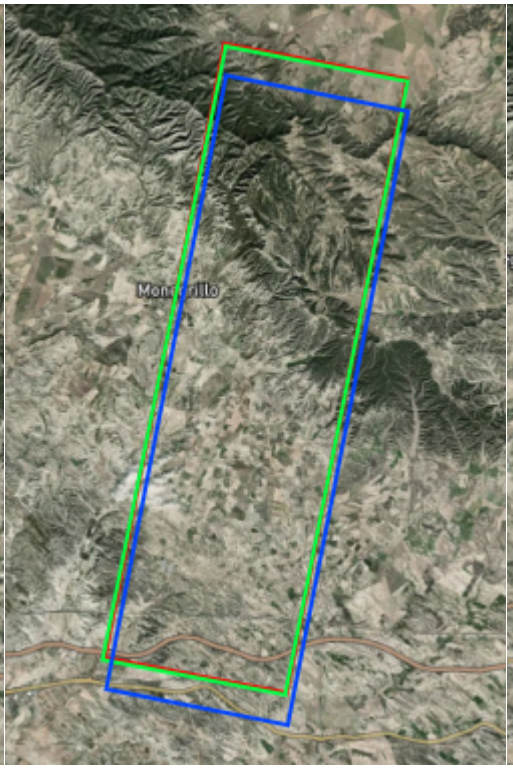
Raw, systematic and precision alignment

The outlines below show the accuracy of the products with and without a precision refinement step. The unrefined outline (highlighted in red) shows the location of the image with only a systematic calibration model applied. This is a good representation of the satellite's calibrated pointing accuracy. The refined outline (highlighted in green) results from the product as a Level 1C image, with the location refined using reference data. The blue outline shows the uncalibrated raw outline, as calculated purely from the navigation and attitude data provided by the spacecraft.

SM5

Raw to systematic : 1500m
Raw to precision : 1430m
Systematic to precision : 72.7m



SM6

Raw to systematic : 1140m
Raw to precision : 1060m
Systematic to precision : 79.3m

SM7

Raw to systematic : 1200m
Raw to precision : 1130m
Systematic to precision : 83.4m

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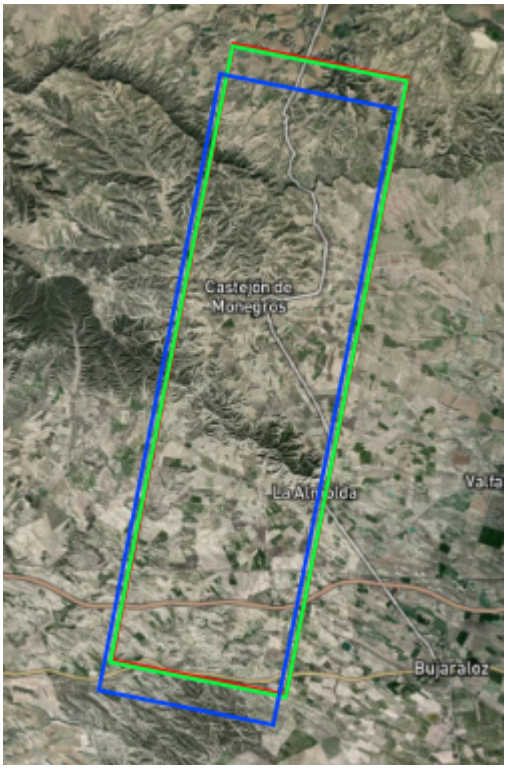
Geodetic accuracy (continued)



SM8

Raw to systematic : 1170m

Raw to precision : 1100m

Systematic to precision : 80.5m

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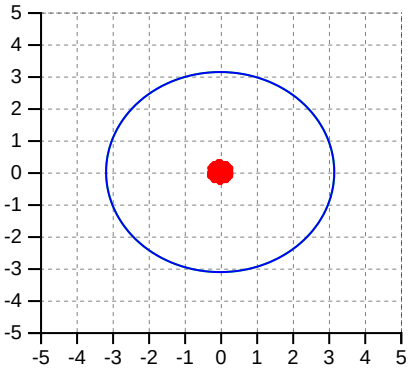
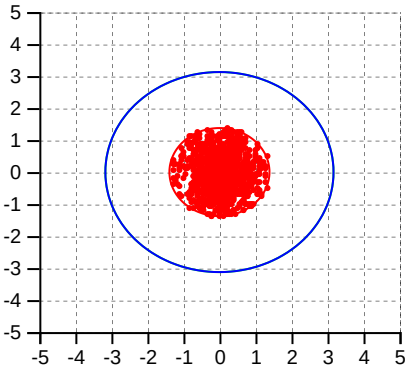
Band-to-band disparity

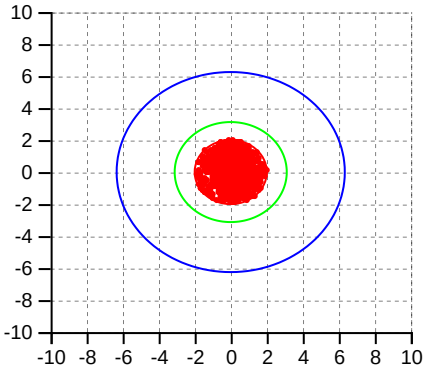
The alignment between bands is measured after all corrections have been applied. The scatter plots below show the difference in meters of the tie-points collected in each band-pair on a 2-dimensional grid. The red circle represents the CE95 boundary, while the green circle shows the resolution of the first band, and the blue circle the resolution of the second.



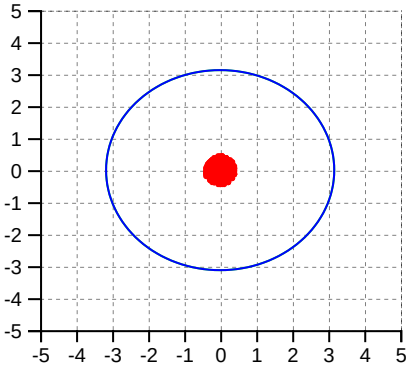
BLUE to GREEN
Mean: 0.159m, CE95: 0.302m



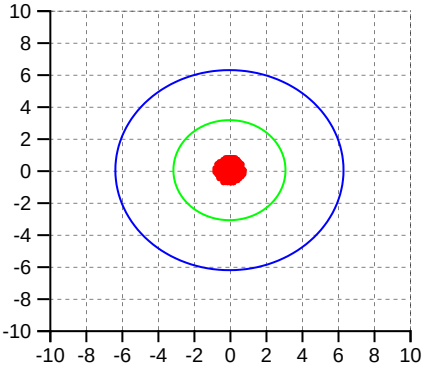
BLUE to NIR1
Mean: 0.716m, CE95: 1.38m



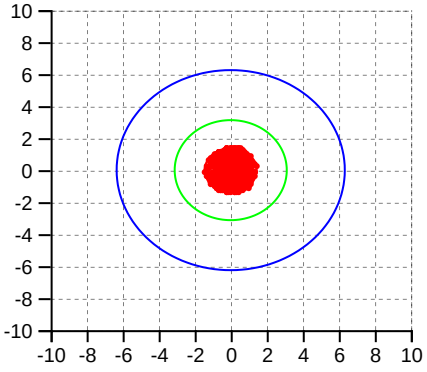
BLUE to NIR2
Mean: 1.06m, CE95: 2.02m



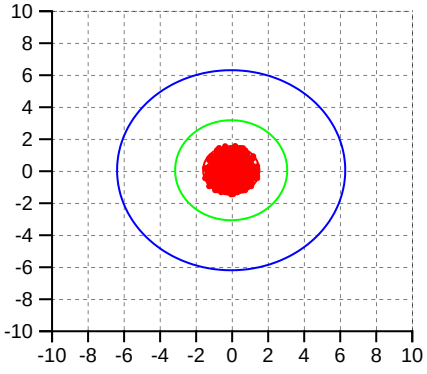
BLUE to RED
Mean: 0.227m, CE95: 0.431m



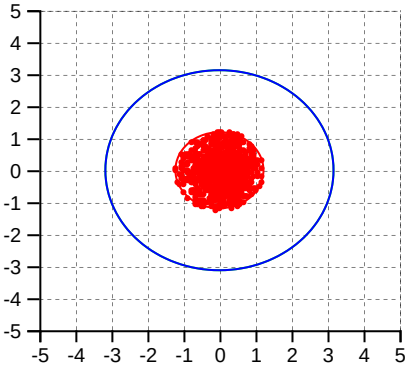
BLUE to REDEDGE1
Mean: 0.423m, CE95: 0.803m



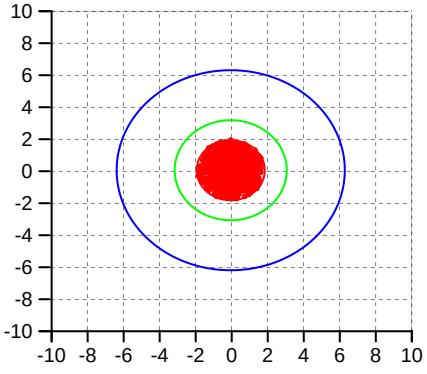
BLUE to REDEDGE2
Mean: 0.734m, CE95: 1.41m



BLUE to REDEDGE3
Mean: 0.787m, CE95: 1.51m



GREEN to NIR1
Mean: 0.626m, CE95: 1.21m



GREEN to NIR2
Mean: 0.963m, CE95: 1.84m

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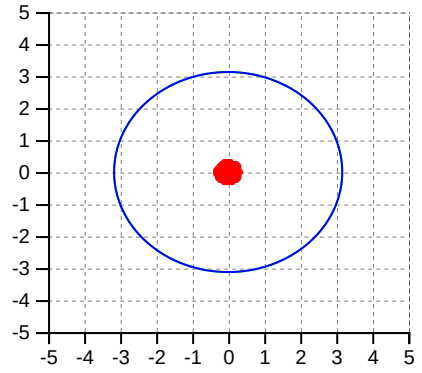
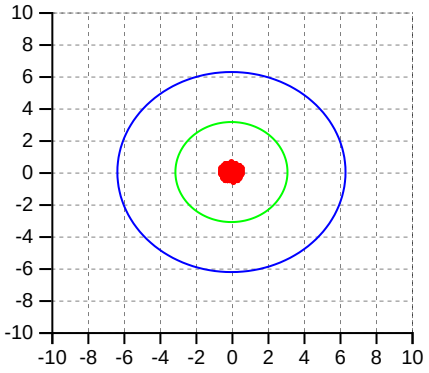
Band-to-band disparity (continued)



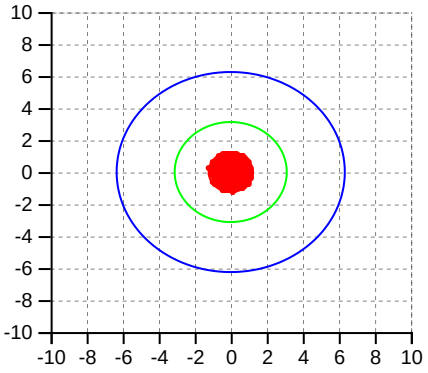
GREEN to RED

Mean: 0.18m, CE95: 0.341m



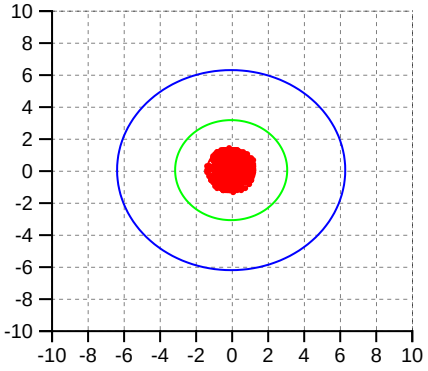
GREEN to REDEDGE1

Mean: 0.33m, CE95: 0.619m



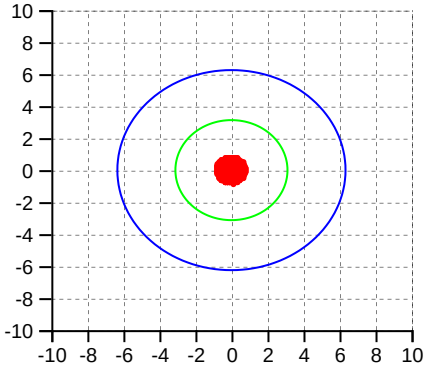
GREEN to REDEDGE2

Mean: 0.634m, CE95: 1.21m



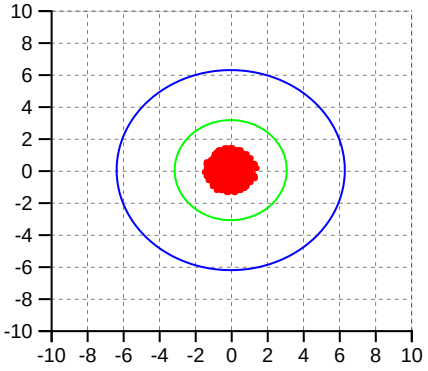
GREEN to REDEDGE3

Mean: 0.706m, CE95: 1.35m



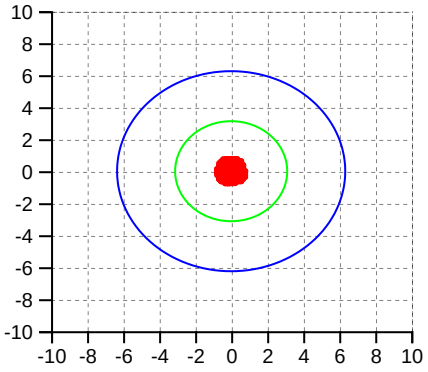
NIR1 to NIR2

Mean: 0.459m, CE95: 0.873m



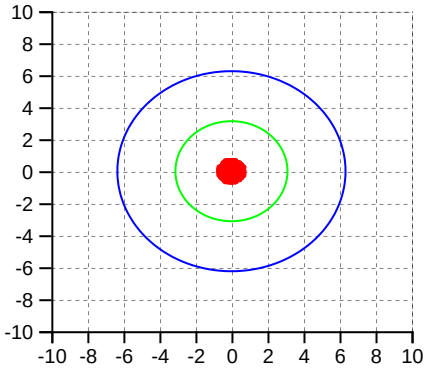
NIR1 to REDEDGE1

Mean: 0.701m, CE95: 1.36m



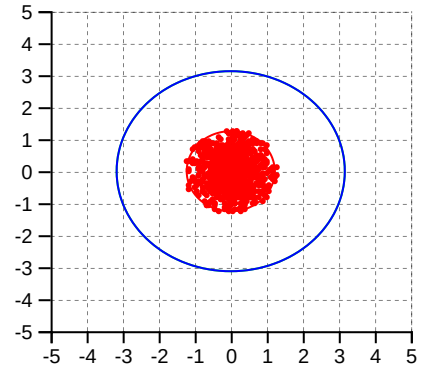
NIR1 to REDEDGE2

Mean: 0.43m, CE95: 0.822m



NIR1 to REDEDGE3

Mean: 0.382m, CE95: 0.72m



RED to NIR1

Mean: 0.643m, CE95: 1.24m

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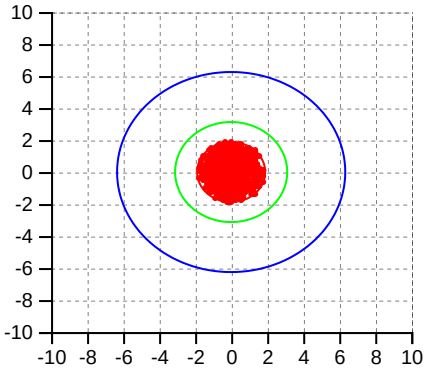
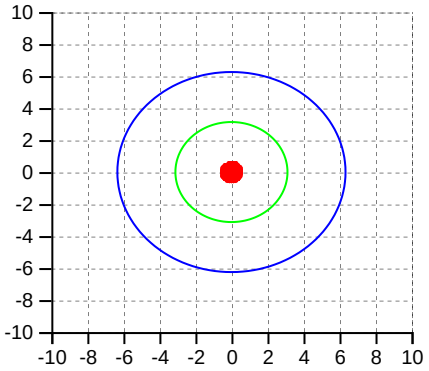
Band-to-band disparity (continued)



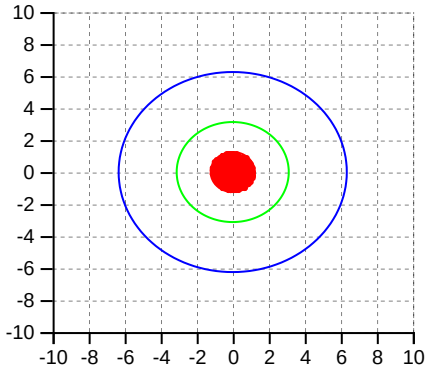
RED to NIR2

Mean: 0.984m, CE95: 1.87m



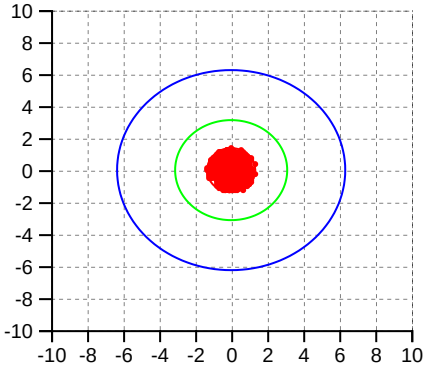
RED to REDEDGE1

Mean: 0.279m, CE95: 0.53m



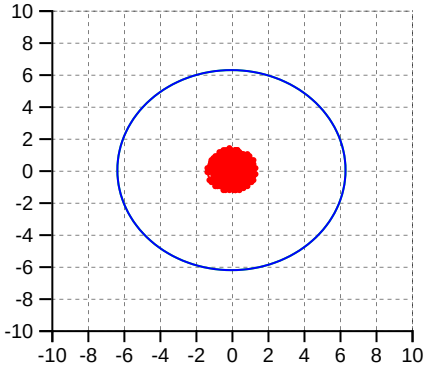
RED to REDEDGE2

Mean: 0.622m, CE95: 1.19m



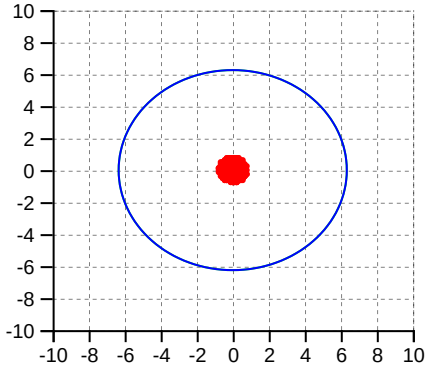
RED to REDEDGE3

Mean: 0.716m, CE95: 1.36m



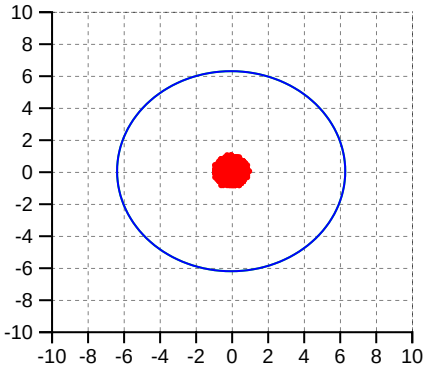
REDEDGE1 to NIR2

Mean: 0.671m, CE95: 1.29m



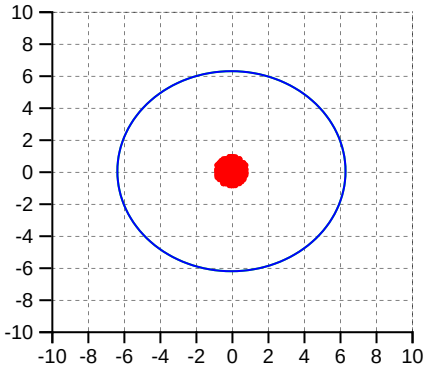
REDEDGE1 to REDEDGE2

Mean: 0.424m, CE95: 0.81m



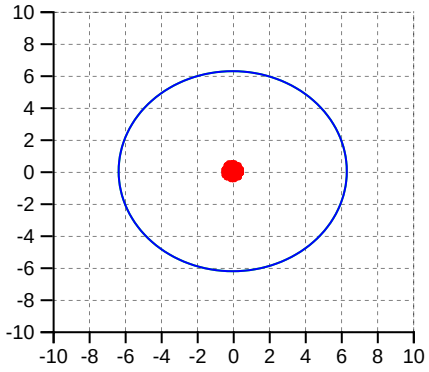
REDEDGE1 to REDEDGE3

Mean: 0.504m, CE95: 0.968m



REDEDGE2 to NIR2

Mean: 0.453m, CE95: 0.867m



REDEDGE2 to REDEDGE3

Mean: 0.259m, CE95: 0.491m

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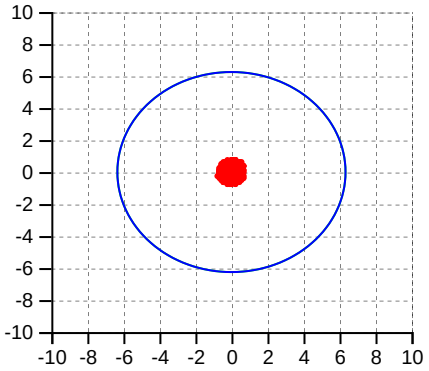
Band-to-band disparity (continued)



REDEDGE3 to NIR2

Mean: 0.392m, CE95: 0.754m

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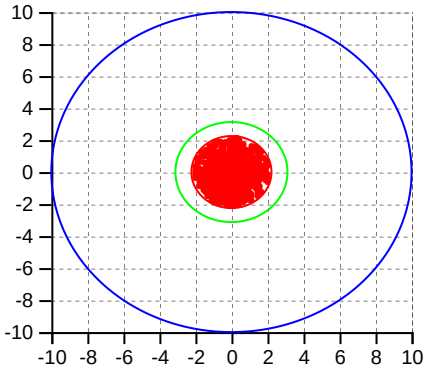
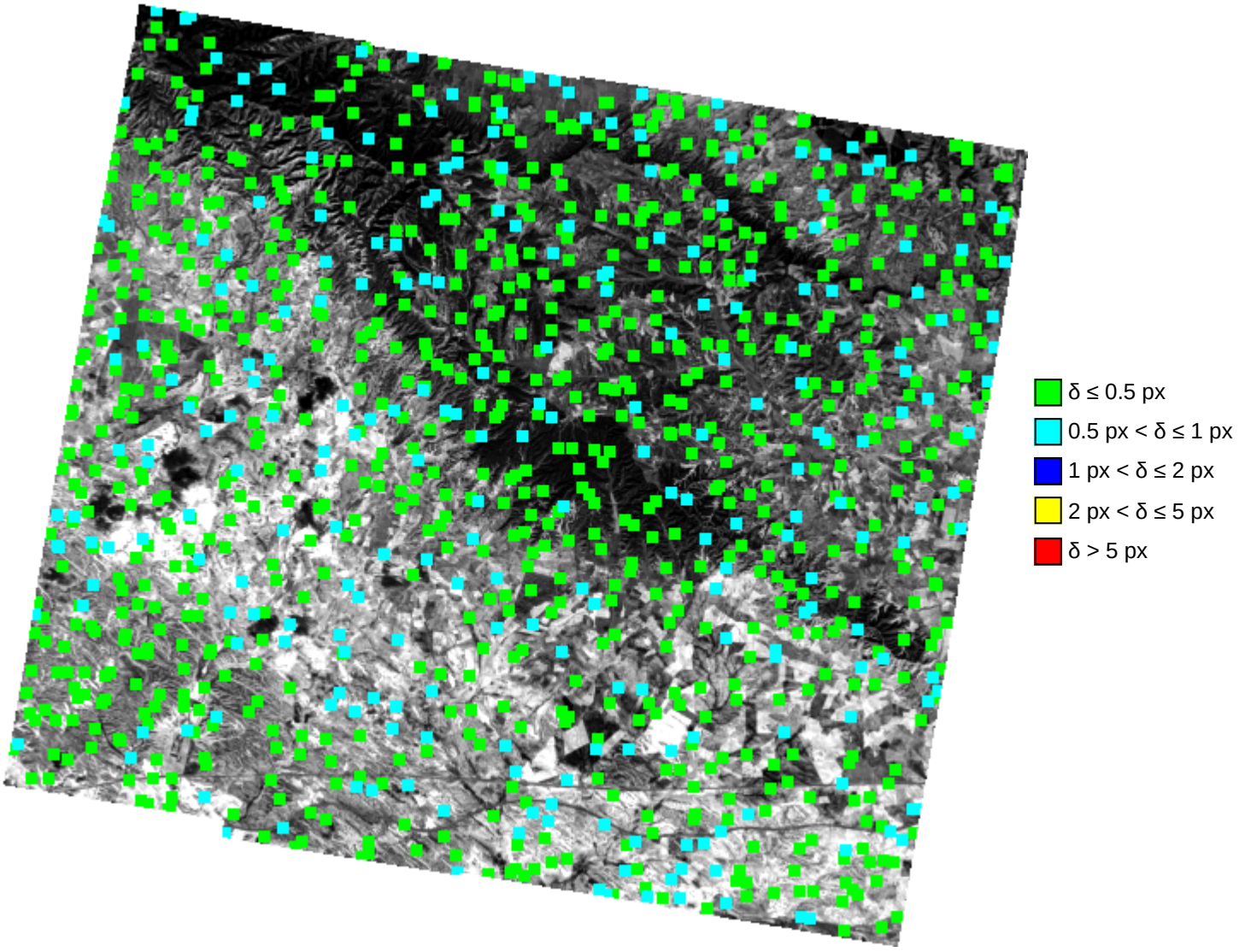
Band-to-reference disparity

The scatter plots below show the difference in meters of the tie-points collected between the 'RED' band and the 'Band 4 (red)' of the Sentinel-2 reference on a 2-dimensional grid. The red circle represents the CE95 boundary, while the green circle shows the resolution of the RED band, and the blue circle the resolution of the reference.



RED

Mean: 1.15m, CE95: 2.19m



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Sensor layout

Band	Center wavelength (µm)	Bandwidth (µm)	Resolution (m)
BLUE	0.4940	0.0660	3.14
GREEN	0.5600	0.0360	3.14
RED	0.6650	0.0310	3.14
REDEDGE1	0.7040	0.0160	6.28
REDEDGE2	0.7400	0.0150	6.28
REDEDGE3	0.7810	0.0200	6.28
NIR1	0.8340	0.1060	3.14
NIR2	0.8640	0.0220	6.28

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Processing parameters

Product ID	TRUBIT-1_EO-100_20240928T094332_20240928T094336_L1C_R3C1
Spacecraft	TRUBIT-1
Sensors	EO-100
Input files	TRUBIT-1_EO-100_20240928T094332_20240928T094336_L0.h5, TRUBIT-1_EO-100_20240928T094332_20240928T094336_L0_RGB.png, TRUBIT-1_EO-100_20240928T094332_20240928T094336_L0_NAVATT.json, TRUBIT-1_EO-100_20240928T094332_20240928T094336_L0_TRACK.json, TRUBIT-1_EO-100_20240928T094332_20240928T094336_L0_product.json
Input image size	526.31 MB
Imagery start date	2024/09/28 09:43:32 Z
Imagery end date	2024/09/28 09:43:36 Z
Processing date	2025/03/06 12:16:20 Z
Location (lat, long)	41.6100°, -0.3444°
Earth-sun distance (AU)	1.001936
Solar angle (degrees)	138.127° azimuth and 37.335° elevation
Scene altitude (meters)	405.690 MSL or 456.249 HAE
Incidence angle (degrees)	278.932° azimuth and 21.886° zenith
Viewing angle (degrees)	20.204° off-nadir
Processor versions	generic-l1b-to-l1c-processor-1.0.18
Ancillaries for CPF	CPF_TRUBIT-1_EO-100_20231001_20260915_18
Ancillaries for Cop30Dem	Copernicus_DSM_COG_10_N41_00_W001_00_DEM
Ancillaries for EGM2008	EGM2008_tile_3_2, EGM2008_tile_2_2
Ancillaries for Sentinel2L1C	S2B_31TBG_20240914_0_L1C, S2A_31TBF_20241019_0_L1C, S2B_31TBG_20241004_0_L1C, S2A_31TBF_20240909_1_L1C, S2A_31TBG_20240909_1_L1C, S2B_30TYM_20241004_0_L1C, S2A_30TYM_20240909_1_L1C, S2A_30TYL_20241019_0_L1C, S2A_31TBG_20240909_0_L1C, S2A_30TYM_20241019_0_L1C, S2A_31TBG_20241019_0_L1C, S2B_30TYL_20241021_0_L1C, S2B_30TYM_20241021_0_L1C

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