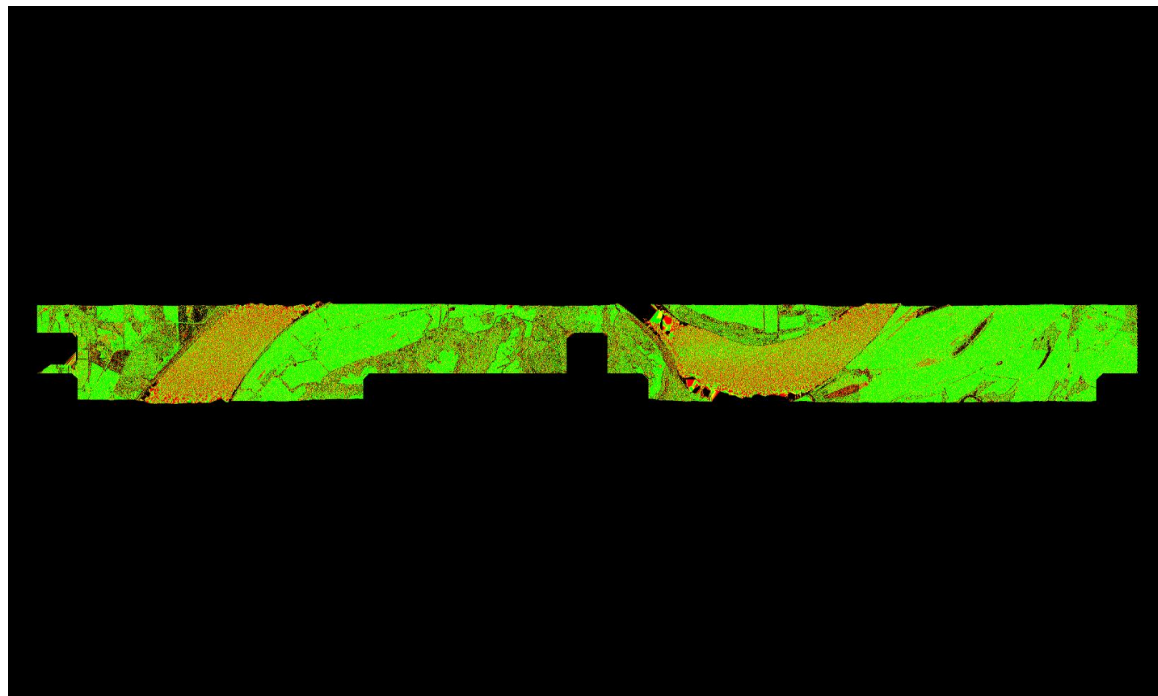


1.9.2 Report on Separation of Scan Direction (Relative Accuracy) per Flight Line

The USGS LiDAR Base Specification Version 1.0 states that: "Relative accuracy within individual swaths: ≤ 7 cm RMSDz."

The purpose of this section is to show a graphic of the relative vertical accuracy within a representative sample flight line. This automatically selected flight line will have the lowest multiple return to single return ratio. This vertical accuracy analysis is done by comparing the inbound and outbound scan lines to each other as two separate surfaces and then generating a vertical separation raster from their TIN deltas. This is displayed by thematically coloring the separation magnitude on a color ramp based on absolute distance. Good LiDAR data should have a consistent green coloration across the flight line (perpendicular to flight), ignoring warmer colorations due to above ground surface features. Small color variations are to be expected. The purpose of this test is to find problematic data indicated by warming color variation trends away from the center of the scan line. Flight lines that have inconsistent colorations from the center towards the edges of the flight line would highlight the possibility of a sensor or internal calibration problem, usually an incorrect encoder latency value. The relative accuracy RMSDz is reported in the bottom left of this page.

[Data Source - E:\Pope_Hardin\Swath_LAS\00068_Split2.las](#)
[E:\Pope_Hardin\QAQC2\1_9_2\Individual_00068_Split2.jp2](#)



A maximum vertical separation cutoff has been applied to this graphic for the purpose of masking out disruptive features that do not show calibration issues between flight lines (e.g., trees, moving cars, etc.). This can be modified in the Color Options settings window.