

Geo-locational Accuracy of Orthorectified DMC+ MR constellation data products: Considering the use of Sentinel-2 vs Landsat-8 as Reference

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Abstract

UK-DMC2 celebrated its 10th birthday this July. Known for providing high quality, wide swath MR data, it has exceeded its originally planned mission lifetime - yet it continues, its popularity driven by trust.

It was joined in orbit this year by two younger, more agile, siblings:

ALSAT-1B

4 multispectral bands at 24m resolution: Blue, Green, Red, NIR
Panchromatic band at 12m resolution
4km swath.

KazSTSat

6 multispectral bands at 18m resolution: Coastal Blue, Blue, Green, Red, Red Edge, NIR
275km swath

Since the launch of UK-DMC2, products have been manually orthorectified using Landsat-8 GLS2000 15m panchromatic imagery as reference. Of course, things have changed in the intervening years: Procedures have evolved and become automated, and more recent reference layers are available.

As such, orthorectified ALSAT-1B and KazSTSat data are being created using automated scripts and routines but also perhaps using more up to date reference data. With this in mind, we have been investigating the use of an orthorectified layer of Sentinel-2 data at 10m resolution as reference data for the production of future orthorectified HR image products.

This proposed poster presentation will:

1. Provide a comparison between Landsat-8 and Sentinel-2 as reference data layers for orthorectification
2. Describe an exercise undertaken to determine the suitability of Sentinel-2 data vs the Landsat-8 data currently in use at DMCii for orthorectification

3. Provide the results of that exercise

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