

Satellite Photogrammetry HWG

assigned Monday 7 April, 2017 due 1 week, 11th

Use the RPC coefficients for image laf01 to project 7 GCPs into the image & compare with the measured line & sample.

Plot the misclosure vectors (proj. points - meas. points), as well as show everything numerically.

1. Remember to use the correct h values as shown in the web note. (most of our error before was due to height datum error!)
2. for the plot, negate the y axis to match line number direction using: `set(gca, 'Ydir', 'reverse');`
3. plot a point symbol at the measured locations.
4. choose an appropriate Exaggeration Factor so the error vectors are visible on the plot.
5. plot an appropriate "scale" to give correct interpretation of the graphics.
6. see the posted file read_rpb.pdf, containing matlab script to read the .rpb file. (Offsets, Scales, P1, P2, P3, P4)
7. In case your notes are not complete, see the posted file "NITF standards for RPC coefficients" for order of the coeff's.
8. remember: ϕ, λ, h $\xrightarrow{\text{normalized}}$ P, L, H , evaluate m, c_m , then un-normalize to obtain l, s before comparing with measurements, l, s , etc.

