Digitizing Resolution of the Leica GR10 Receiver

692 Henry Berglund August 12, 2016 GNSS Receiver Test Reports 3312

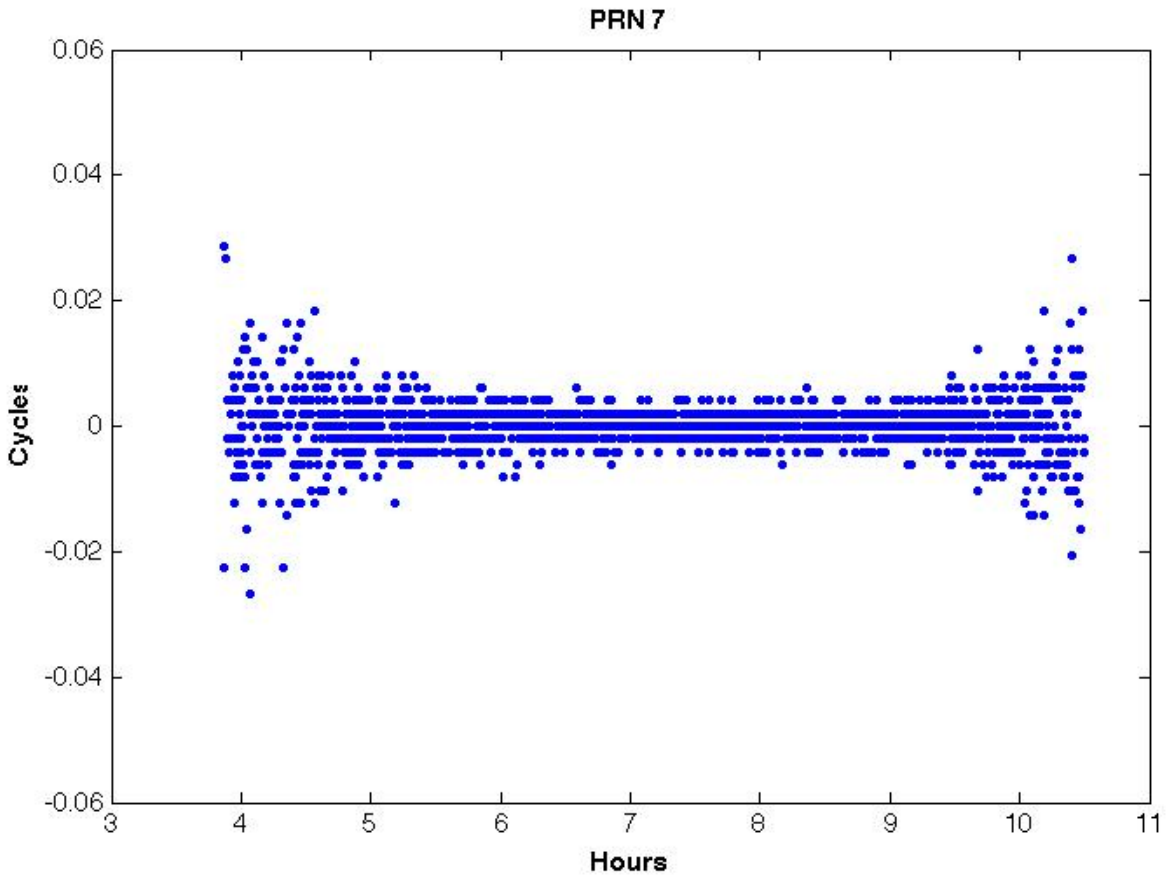
While differencing the L2 and L2C carrier phase measurements made with a Lecia GR10 receiver, we have observed a banding pattern; the difference between each band is ~0.002047434 cycles.

Using the L2 wavelength we found that 0.002047434 cycles = 0.5 mm

This banding demonstrates that the digitizing resolution of the GR10 receiver is 0.5 mm for the L2 signal.

This analysis was done using a translation of m00-format data using extended resolution on the phase values beyond the usual 0.001 cycle resolution available in RINEX observation format.

The following figure shows the difference between the L2 and L2C carrier phase measurements for PRN 7 from a GR10 receiver.



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