Digitizing Resolution of the Javad Sigma Receiver

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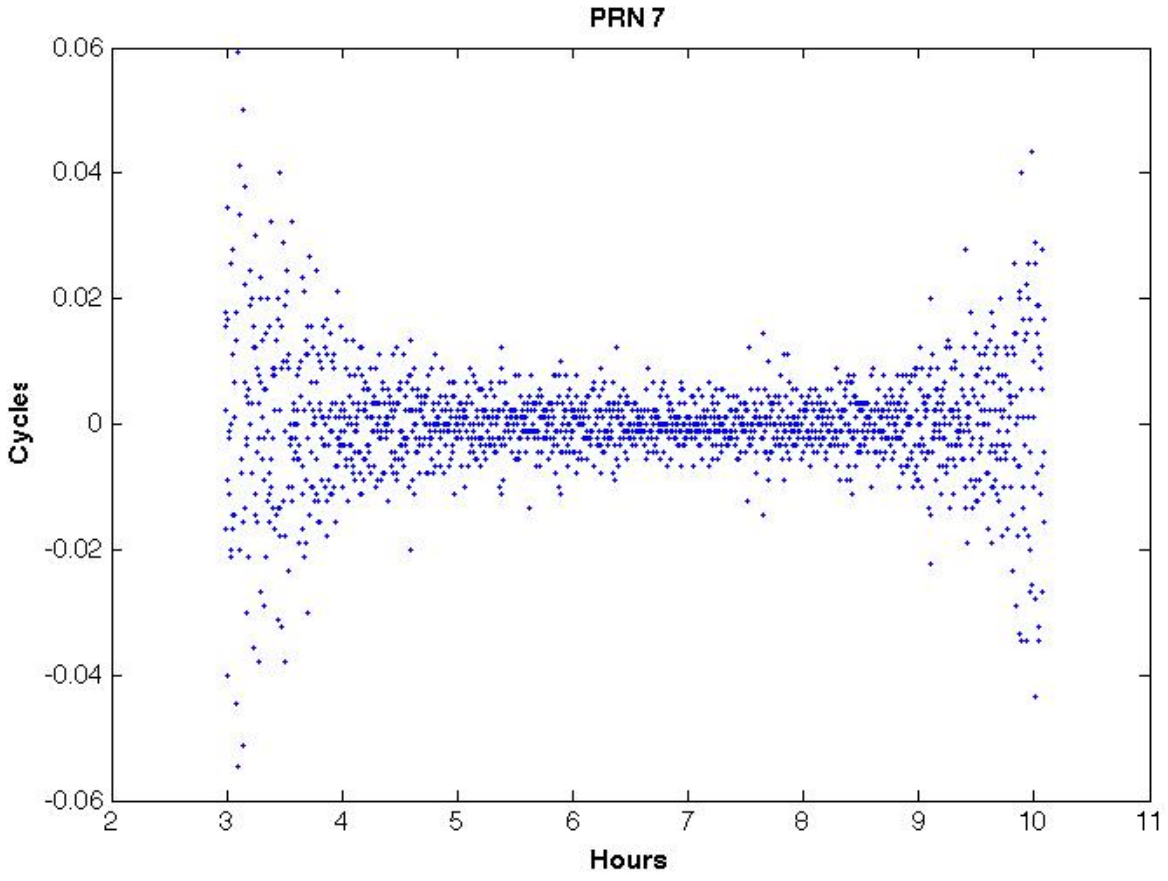
While differencing the L2 and L2C carrier phase measurements made with a Javad Sigma receiver, we have observed a banding pattern; the difference between each band is ~0.001116499 cycles.

Multiplying the phase by the L2 wavelength we found that 0.001116499 cycles = ~0.273 mm

This banding demonstrates that the digitizing resolution of the Sigma receiver is ~0.273 mm for the L2 signal.

This analysis was done using a translation of jps-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 Javad Sigma receiver.



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