WAAS Technical Memorandum William J. Hughes Technical Center Pomona, New Jersey 1/19/12

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DR #108: L2 Interference at Honolulu GPS Week/Day: W1667D1 (12/19/11)

Discussion:

On December 19, 2011, the L2 Signal to Noise Ratio at Honolulu was degraded below expected levels. The L2 Signal to Noise Ratio was degraded between about 22:58 GMT and 23:04 GMT. All satellites tracked by the Honolulu reference station had degraded L2 performance during this period.

L1 signal tracking was not affected during this event.

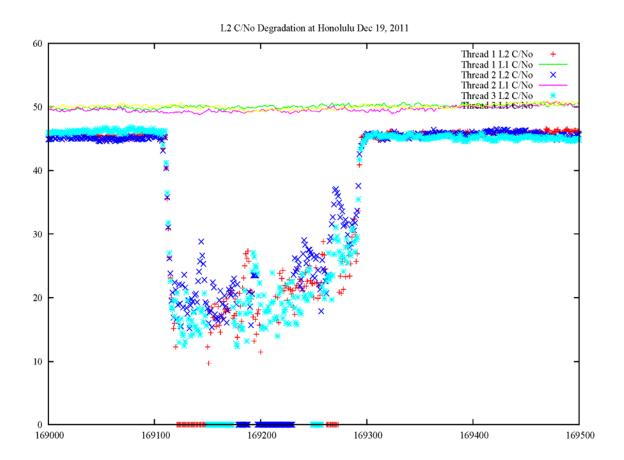
Figure 1 shows a plot of the reference station with antenna locations indicated. The antennae are mounted on the roof of the building pictured.

Figure 1: Satellite Image of Honolulu Reference Stations with threads labeled



An example of the L2 C/No degradtion is shown in Figure 2. PRN 19 L1 and L2 Signal to Noise ratios on all three threads are plotted.

Figure 2: L1 and L2 C/No(db) at Honolulu Reference Station



Conclusion:

L2 signal degradation was evident at all three Honolulu threads. The L1 signal was not affected, so there was no loss of service at the Honolulu WRS during this event.