

**WAAS Technical Report**  
**William J. Hughes Technical Center**  
**Pomona, New Jersey**  
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*Author(s): David A. Nelthropp*

***DR#18: Miami Thread 3 WAAS G2 Receiver (CRR) sending WAAS navigation message with incorrect time received.***

***GPS Week/Day: Week 1340 Day1 (9/12/2005)***

**Discussion:**

The WAAS navigation message from Miami WAAS reference station (WRS) thread 3 G2 receiver has an incorrect time tag starting on Sept 12, 2005. All the WAAS messages from Miami WRS thread 3 are one second late when compared to the time stamp of all other WAAS reference equipment (WRE) messages. Table 1 contains 30 seconds of PRN 122 GEO message stream received from Miami WRE 3. Table 2 contains 30 seconds of PRN 122 GEO message stream received from Kansas City WRE 1. When the time and message type in the two tables are compared it is clear that messages from Miami WRE 3 are transmitted with a time tag one second later than Kansas City WRE 1.

Table 1 WAAS Messages Miami WRE 3

Time	WAAS type	Preamble	Receiver 3	GEO
87000	63	c6	Miami	122
87001	9	53	Miami	122
87002	3	9a	Miami	122
87003	2	c6	Miami	122
87004	24	53	Miami	122
87005	63	9a	Miami	122
87006	63	c6	Miami	122
87007	63	53	Miami	122
87008	3	9a	Miami	122
87009	2	c6	Miami	122
87010	24	53	Miami	122
87011	1	9a	Miami	122
87012	26	c6	Miami	122

Table 2 WAAS Messages Kansas City WRE 1

Time	WAAS type	Preamble	Receiver 1	GEO
87000	9	53	Kansas City	122
87001	3	9a	Kansas City	122
87002	2	c6	Kansas City	122
87003	24	53	Kansas City	122
87004	63	9a	Kansas City	122
87005	63	c6	Kansas City	122
87006	63	53	Kansas City	122
87007	3	9a	Kansas City	122
87008	2	c6	Kansas City	122
87009	24	53	Kansas City	122
87010	1	9a	Kansas City	122
87011	26	c6	Kansas City	122
87012	63	53	Kansas City	122

In addition to too sending WAAS messages with incorrect time tags the measurement data for the GEO satellite PRN 122 was marked valid with pseudo range and carrier set to zero meters. Many carrier cycle slips were also observed while tracking the GEO satellite. The malfunction of WRE 3 at Miami started on Sept 12 2005 and has continued until Sept 16 2005. Miami WRE 1 & 2 threads appear to be functioning normally and do not exhibit any problems tracking the GEO satellite PRN 122.