Timing Note

Szabolcs Márka

Large time shifts (as detected by IRIG-B)

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H2
#Possible timestamp problem:
Seg#     Start       Stop     Length   Min[ms]   Max[ms]   Ave[ms]   Sig[ms]

310  755028478  755029244      766     0.00    -100.0     -15.38     29.24
311  755029258  755029264        6  2538.46   2538.46   2538.46      0.00
312  756651382  756672742    21360 -1000.00  -1000.00  -1000.00      0.00

H1
435  756641542  756672742    31200     0.00  -1000.00   -727.56    445.16

L1

124  753155725  753156160      435 -1000.12  -1000.12  -1000.12      0.00

And a lot more small ones in LLO...
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-------- Original Message --------
Subject: Re: fb3 problems;SYNC errors during S3 triple coincidence science mode on Sun Dec 28 2003.
From: **David Barker** <barker_d@apex.ligo-wa.caltech.edu>

I have analyzed the DAQ data for this time period, here is what I found.

On Sunday, 28th Dec.
from 12:34:27 UTC to 18:53:00 UTC (gps 756650080 to 756672784) the DAQ controller was in SYNC fault state.
The vxworks shell stdout was reporting a time difference of 2 seconds between the daq controller internal clock and
the GPS time. For historical reasons, when there is a time discrepancy then the internal time is used (there was a time when
the GPS was glitchy). When this SYNC error has happened before, we have always immediately reset the DAQ system. It was not
done at this time because we were in a triple coincidence state.

I looked at the fast RAMP signals and verified the frames during the SYNC event were aligned to the start of the GPS second (no
time slips within the current second).

I then decoded the fast IRIG-B signals, which are the only independent GPS times contained within the frame data. (I will
add the slow GPS channels after S3).

We have three IRIG-B signals, all H1, from EX, EY and 4k LVEA.

**During the sync event, all data which passed through the DAQ controller are delayed by one second. This applies to all
framed data except those which are acquired by the LVEA ADCU units.**
These ADCUs are directly connected to the frame builders and do not pass through the daq controller, and therefore were
not affected by the controller sync error.

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