VME BPM - Bug #10049

TB getting garbage attenuation values on most cycles (but not all!)

09/04/2015 09:58 AM - John Diamond

Status:	Closed	**Start date:**	09/04/2015
Priority:	Normal	**Due date:**	
Assignee:	John Diamond	**% Done:**	100%
Category:		**Estimated time:**	0.00 hour
Target version:		**Spent time:**	1.50 hour

Description

We expect the following:

```
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 7, atten = 0,
 data = 0700
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 6, atten = 0,
 data = 0600
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 5, atten = 0,
 data = 0500
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 4, atten = 0,
 data = 0400
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 3, atten = 0,
 data = 0300
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 2, atten = 0,
 data = 0200
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 1, atten = 17
2, data = 01ac
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 0, atten = 17
2, data = 00ac
(24) press q to quit, any other key to continue...
         0 uS       0       (null): TBPool.cpp:_handleCLStart() mcu id: 2, tb channel a set to 0,
b set to 0
         0 uS       0       (null): TBPool.cpp:_handleCLStart() mcu id: 2, tb channel a set to 0,
b set to 0
         0 uS       0       (null): TBPool.cpp:_handleCLStart() mcu id: 2, tb channel a set to 0,
b set to 0
         0 uS       0       (null): TBPool.cpp:_handleCLStart() mcu id: 1, tb channel a set to 0,
b set to 0
         0 uS       0       (null): TBPool.cpp:_handleCLStart() mcu id: 1, tb channel a set to 0,
b set to 0
         0 uS       0       (null): TBPool.cpp:_handleCLStart() mcu id: 0, tb channel a set to 0,
b set to 0
         0 uS       0       (null): TBPool.cpp:_handleCLStart() mcu id: 0, tb channel a set to 172
, b set to 172
         0 uS       0       (null): TBPool.cpp:_handleCLStart() mcu id: 1, tb channel a set to 0,
b set to 0
         0 uS       0       (null): TBPool.cpp:_handleCLStart() mcu id: 1, tb channel a set to 0,
b set to 0
         0 uS       0       (null): TBPool.cpp:_handleCLStart() mcu id: 0, tb channel a set to 0,
b set to 0
         0 uS       0       (null): TBPool.cpp:_handleCLStart() mcu id: 0, tb channel a set to 0,
b set to 0
         0 uS       0       (null): TBPool.cpp:_handleCLStart() Using intensity profile #0
         0 uS       0       (null): TBPool.cpp:_handleCLStart() i:beam = 0 E12
         0 uS       0       (null): TBPool.cpp:_handleCLStart() Received TYPE_SET_ATTENUATORS mess
age.
         0 uS       0       (null): DAQPool.cpp:arm() DAQ pool armed.
         0 uS       0       (null): Controller.cpp:_handleCycleReset() Handling Cycle Reset Comman
d
```

But we're seeing this for most spills (like 4/5):

```
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 7, atten = 0,
 data = 0700
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 6, atten = 0,
 data = 0600
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 5, atten = 0,
 data = 0500
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 4, atten = 0,
 data = 0400
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 3, atten = 0,
 data = 0300
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 2, atten = 0,
 data = 0200
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 1, atten = 0,
 data = 0100
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 0, atten = 0,
 data = 0000
         0 uS       0       (null): DAQPool.cpp:disarm() DAQ pool disarmed.
         0 uS       0       (null): Controller.cpp:_handleEndOfBeam() Handling End of Beam Command
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 7, atten = 76
, data = 074c
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 6, atten = 21
7, data = 06d9
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 5, atten = 29
, data = 051d
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 4, atten = 0,
 data = 0400
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 3, atten = 16
0, data = 03a0
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 2, atten = 23
8, data = 02ee
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 1, atten = 20
, data = 0114
         0 uS       0       (null): TransitionBoard.cpp:setAtten() mcu id: 0, chan = 0, atten = 13
, data = 000d
         0 uS       0       (null): TBPool.cpp:_handleCLStart() i:beam = 0 E12
         0 uS       0       (null): TBPool.cpp:_handleCLStart() Received TYPE_SET_ATTENUATORS mess
age.
         0 uS       0       (null): DAQPool.cpp:arm() DAQ pool armed.
         0 uS       0       (null): Controller.cpp:_handleCycleReset() Handling Cycle Reset Comman
d
```

History

#1 - 09/04/2015 10:54 AM - John Diamond

- Status changed from Assigned to Resolved

- % Done changed from 0 to 100

When we're running no beam in the MI the DCCT may report a negative intensity which would mean that the intensity is below the threshold for the first row in the attenuation table. To fix, after I:BEAM is read we clamp negative readings to 0.

#2 - 09/04/2015 12:39 PM - John Diamond

- Status changed from Resolved to Closed