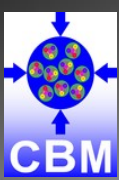


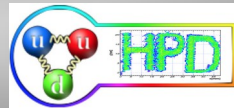
Trd2d Bug Fix in Read-out

Alex Bercuci and Claudiu Schiaua

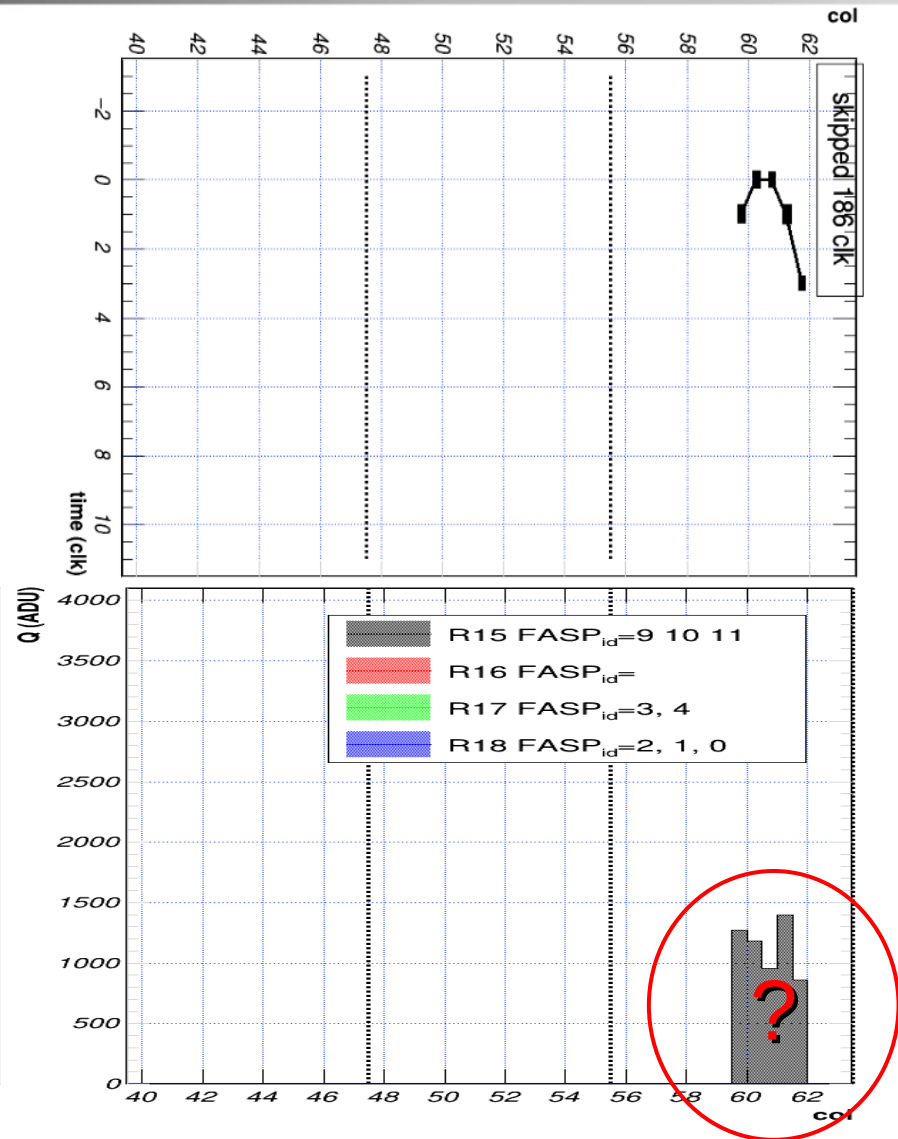
*mCBM Data Analysis Meeting
14th June 2022*



Wrong PRF



A. Bercuci, TRD summary ;39th CBM Collaboration meeting

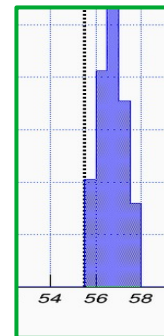


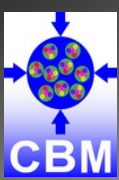
The observation

- Digi times OK,
- Cluster size OK
- Pulser (charge) tests OK
- **Pad Response Function (PRF) WRONG**

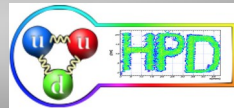
Consequences

- Heavily decreased position resolution
- Energy deposit reconstruction spoiled





The problem and the fix

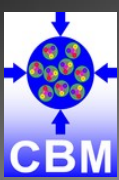


The ADC (LTC-2315-12) from each channel reported for a prompt trigger the **previous** value. Claudiu could identify such a interpretation on the documentation

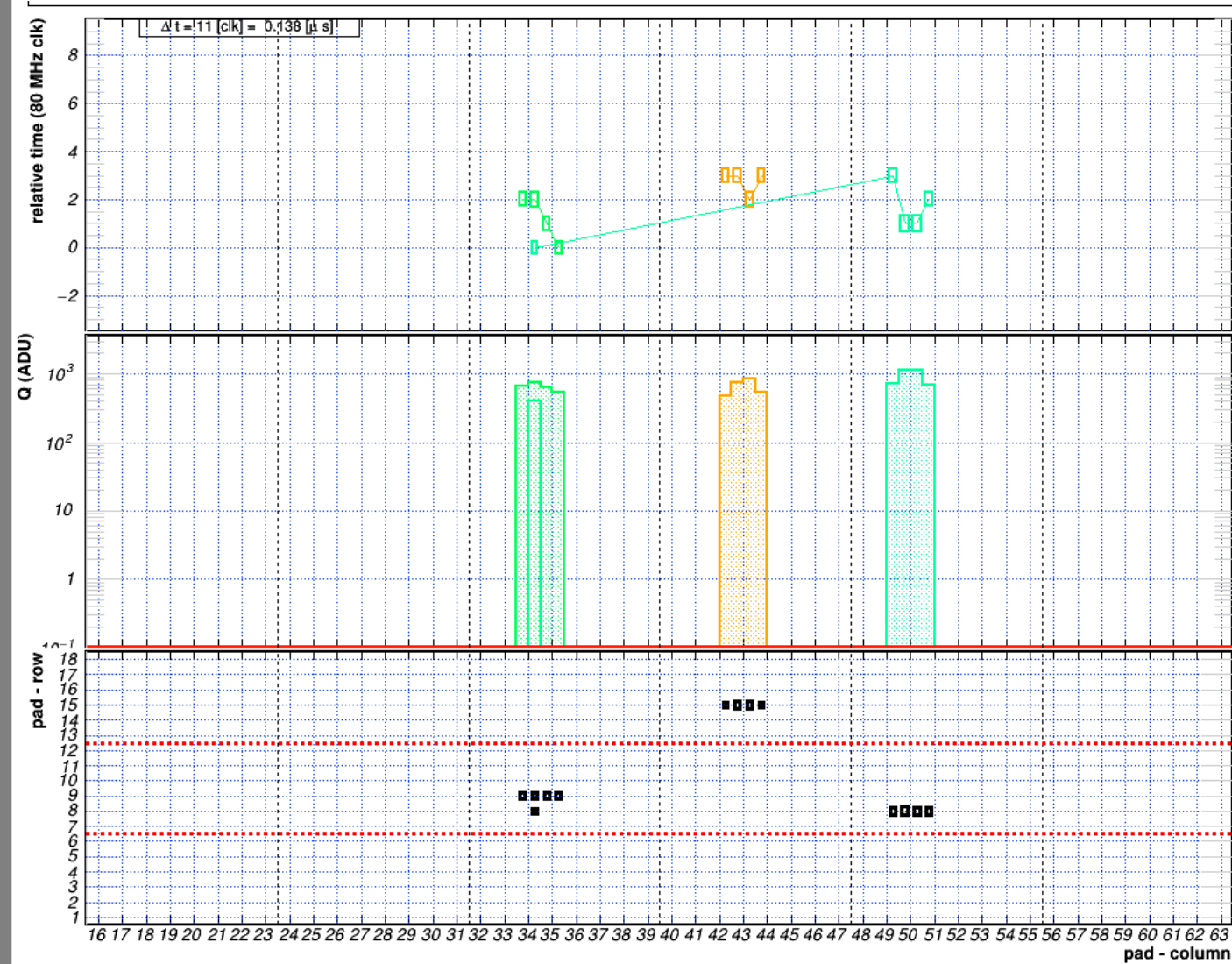
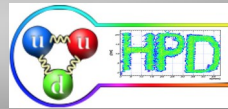
Consequences

- The “problem” is fully recoverable, all data (since 06-21) taken with TRD2D are correct
- Unpacking has to be redone with a version containing the commit

<https://git.cbm.gsi.de/a.bercuci/cbmroot-mcbm/-/commit/9748e7fd0f2e69673a298585035c72b6c1d77c75>



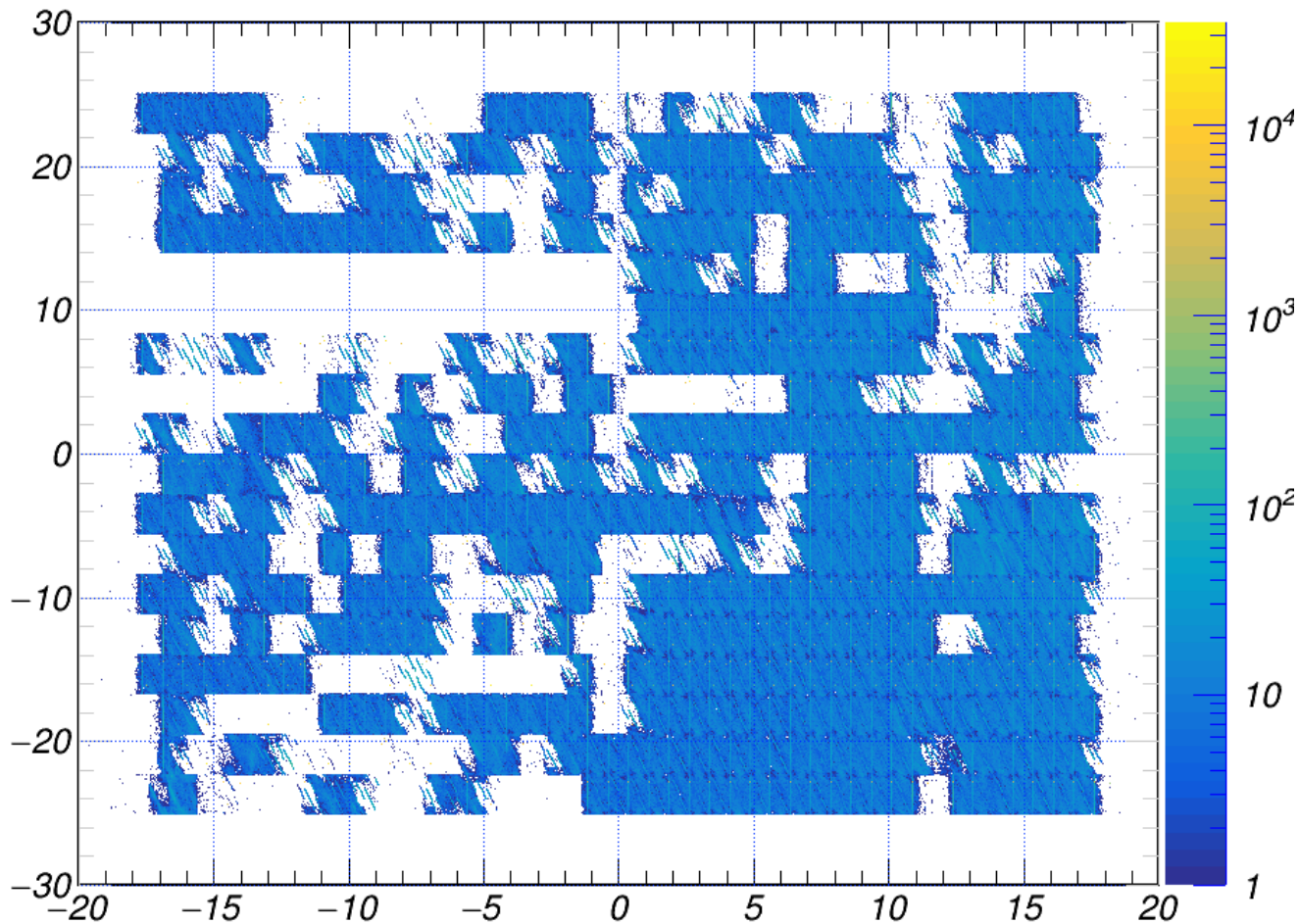
Correct PRF in run 2365




row=1 FASP _u 99, 100, 101, 105, 106, 107	row=7 FASP _u 63, 64, 65, 69, 70, 71	row=13 FASP _u 27, 28, 29, 33, 34, 35
row=2 FASP _u 98, 97, 96, 104, 103, 102	row=8 FASP _u 62, 61, 60, 68, 67, 66	row=14 FASP _u 26, 25, 24, 32, 31, 30
row=3 FASP _u 87, 86, 89, 93, 94, 95	row=9 FASP _u 51, 52, 53, 57, 58, 59	row=15 FASP _u 15, 16, 17, 21, 22, 23
row=4 FASP _u 86, 85, 94, 92, 91, 90	row=10 FASP _u 50, 49, 48, 56, 55, 54	row=16 FASP _u 14, 13, 12, 20, 19, 18
row=5 FASP _u 75, 76, 77, 81, 82, 83	row=11 FASP _u 39, 40, 41, 45, 46, 47	row=17 FASP _u 3, 4, 5, 9, 10, 11
row=6 FASP _u 74, 73, 72, 80, 79, 78	row=12 FASP _u 38, 37, 36, 44, 43, 42	row=18 FASP _u 2, 1, 0, 8, 7, 6

Trd2d position

-TrdHit.fY:TrdHit.fX {TrdHit.GetClassType()==1}



Beam
pipe



Thu Jun 9 16:04:07 2022