

STATUS OF COSMIC ANALYSIS

ES

TRACKER WORKSHOP, 15 DEC 2011

OVERVIEW

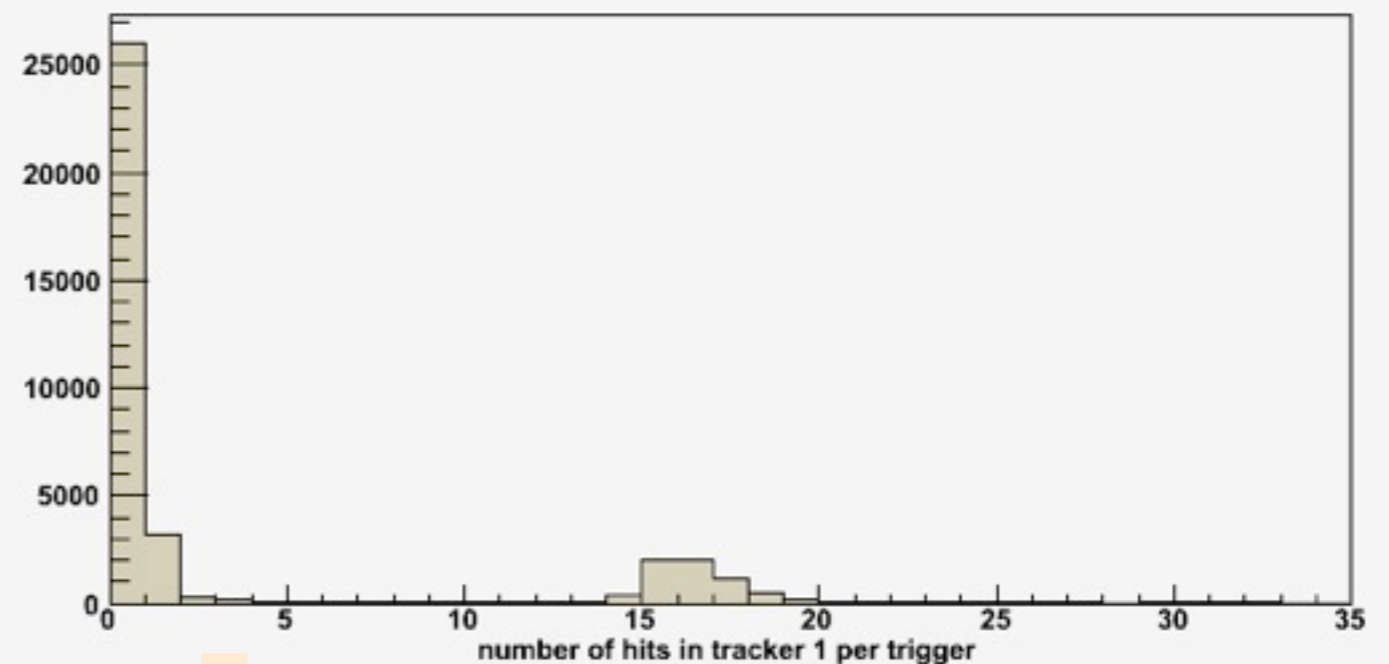
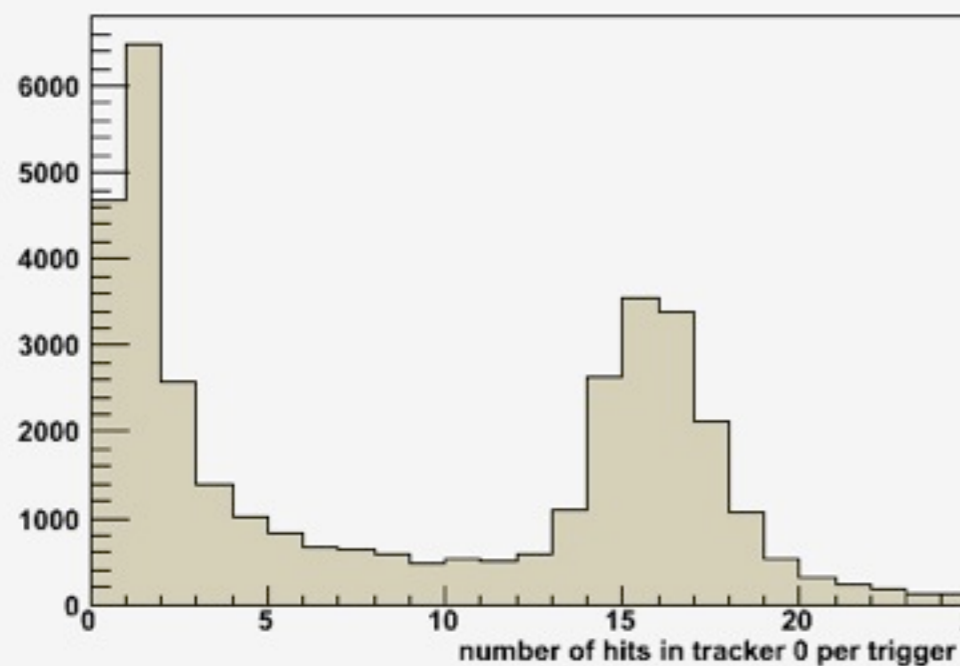
1. General Comments
2. Light Yield
3. Pending Issues
4. Requests for the Future Runs

1 - GENERAL COMMENTS

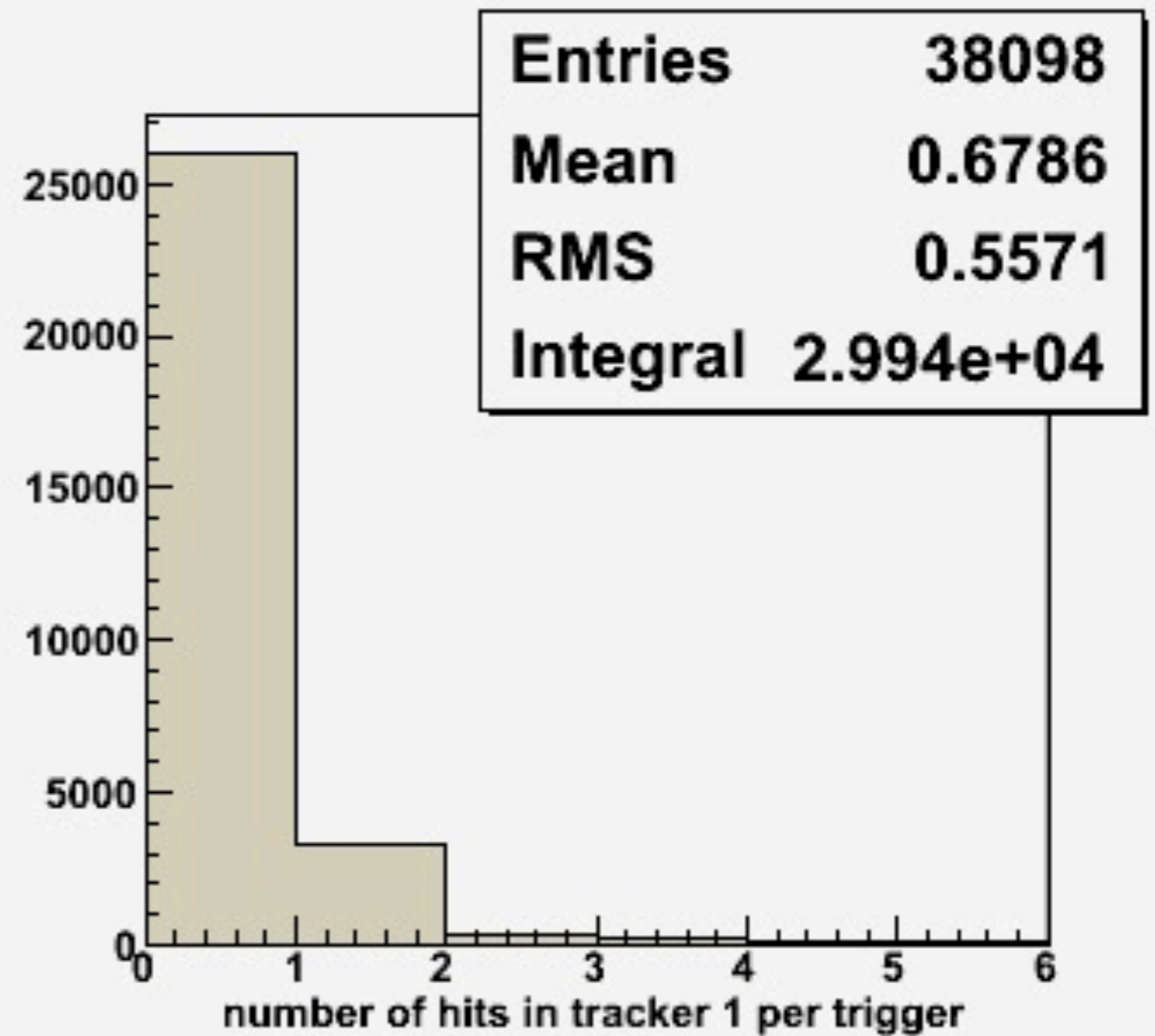
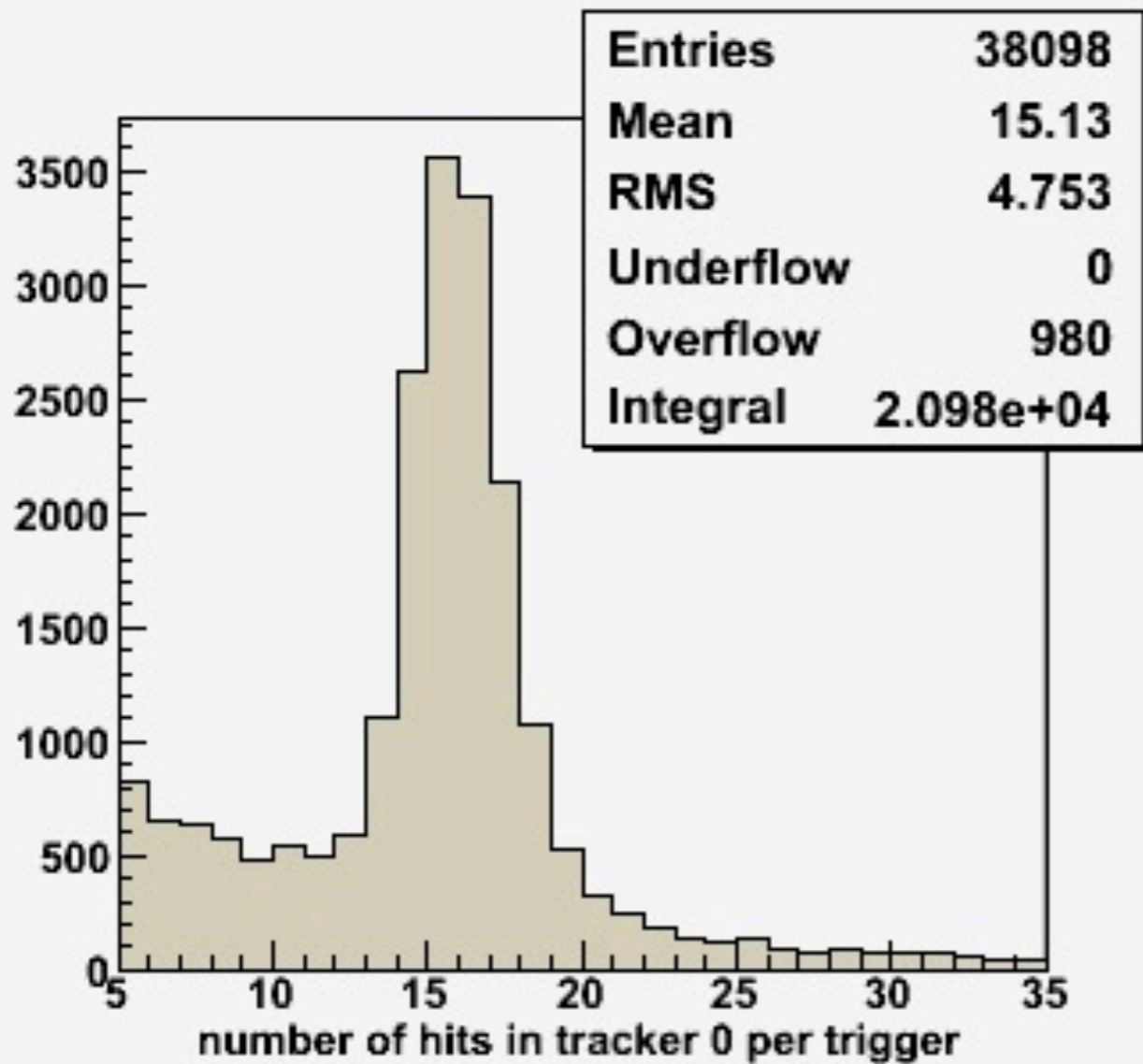
- ❖ Although feasible, it's hard to merge all data since the 23rd September on the same analysis
- ❖ different run modes
 - ❖ single tracker runs;
 - ❖ spill gate variations;
 - ❖ lead was moved around.

1 - GENERAL COMMENTS

- ❖ Overall, the data quality improved along the run.
- ❖ Main result is: the ratio noise:signal came down from a level of 6:1 (!?) to something more comprehensible (see the following; corresponds to this week's run 1851 - *the state of the art.*)



1 - GENERAL COMMENTS



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- ❖ Run 1851:
 - ❖ 8 days long;
 - ❖ 1.2 Gb of raw data;
 - ❖ 15019 spills recorded;
 - ❖ 4 spills discarded (bank lengths were not the same);
 - ❖ ~ 14 000 tracks in tracker 0
 - ❖ ~ 6500 tracks in tracker 1

1 - GENERAL COMMENTS

❖ Bad channel list consists of 6 channels

| board | bank | channel |
|--------------|-------------|----------------|
| 0 | 1 | 17 |
| 1 | 1 | 17 |
| 2 | 3 | 102 |
| 4 | 1 | 125 |
| 14 | 1 | 15 |
| 15 | 1 | 7 |

1 - GENERAL COMMENTS

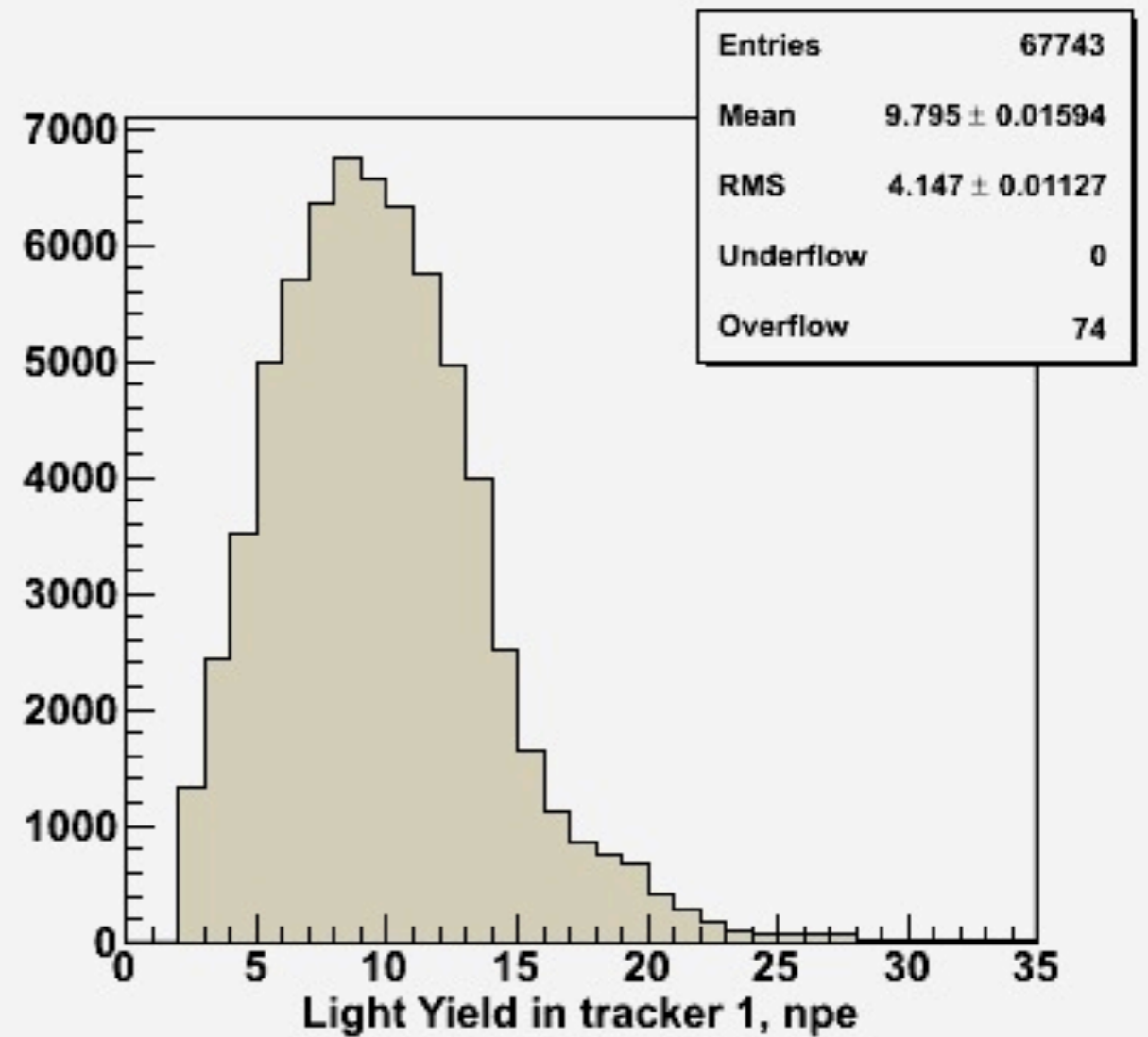
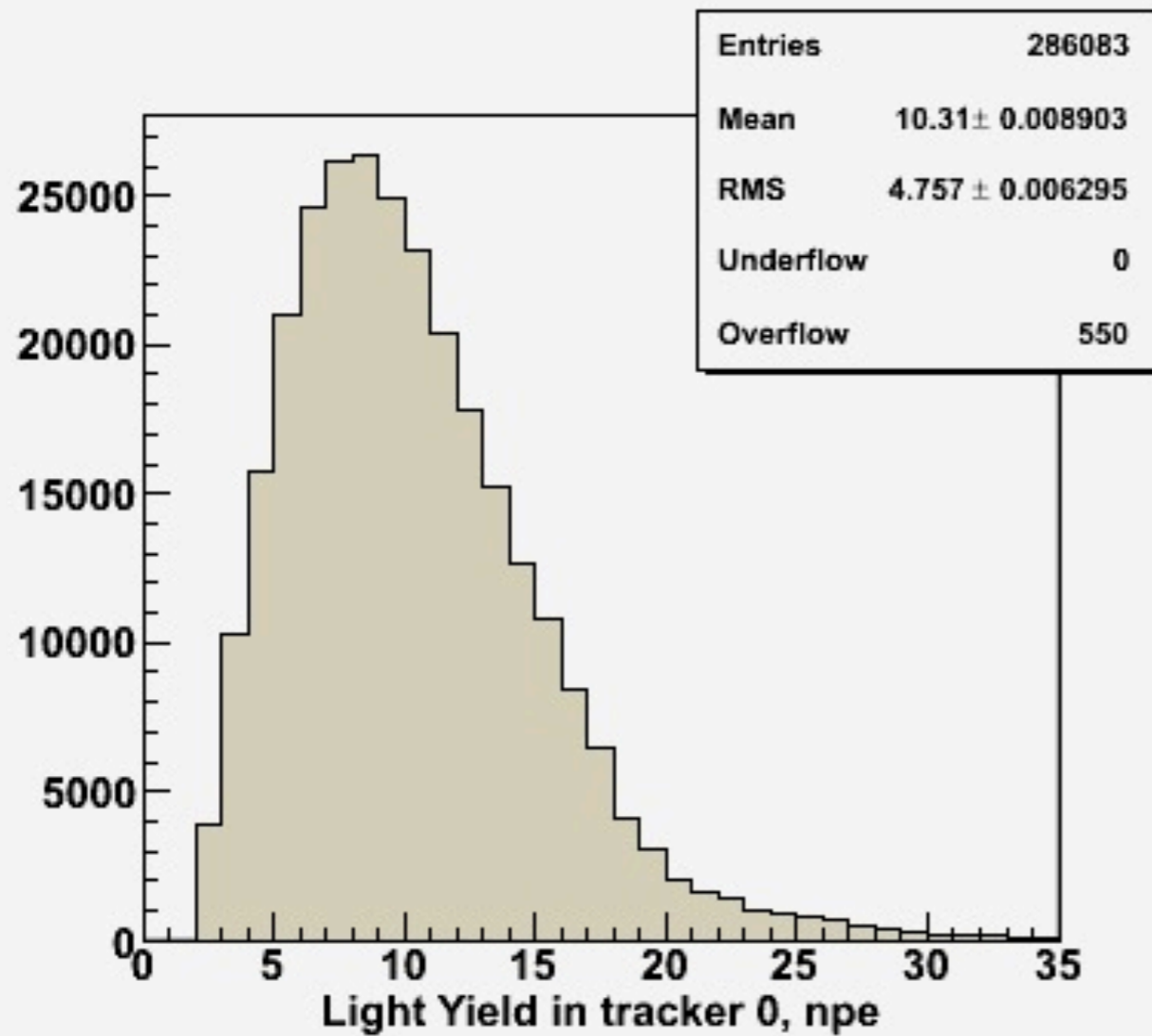
- ❖ Run your own analysis:
 - ❖ `bzr pull lp:e-santosio/maus/cosmics`
 - ❖ Instructions online.

2 - LIGHT YIELD

❖ **Cuts:**

- ❖ zero suppression: $\text{adc} > 60$
- ❖ $\text{npe} > 2$
- ❖ only accept digits that belong to **triplets**
- ❖ exclude overflow ($\text{adc} \neq 255$)

2 - LIGHT YIELD



3 - PENDING ISSUES

- ❖ ... besides the light yield...
- ❖ Discriminators are off
- ❖ Event numbers start from 1 (easy to solve during the unpacking - but do we want to keep it like this?)
- ❖ TDC calibration?

4 - REQUESTS FOR FUTURE RUNS

- ❖ Correct 180° connector flips (simplifies the work on the mapping).
- ❖ Change Equipment List - this will change the raw data structure. We should run the same unpacking code we will be running in MICE.