Event selection algorithm

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Outline

- Statistics after primary processing of data

- Event selection algorithm

- Reconstruction of muon track

- Result histograms

Statistics

Total number of hits 71220555 (RMM108-RMM132)

Number of hits with pattern missing 3377111

Number of hits with time missing 129272

Number of events containing:
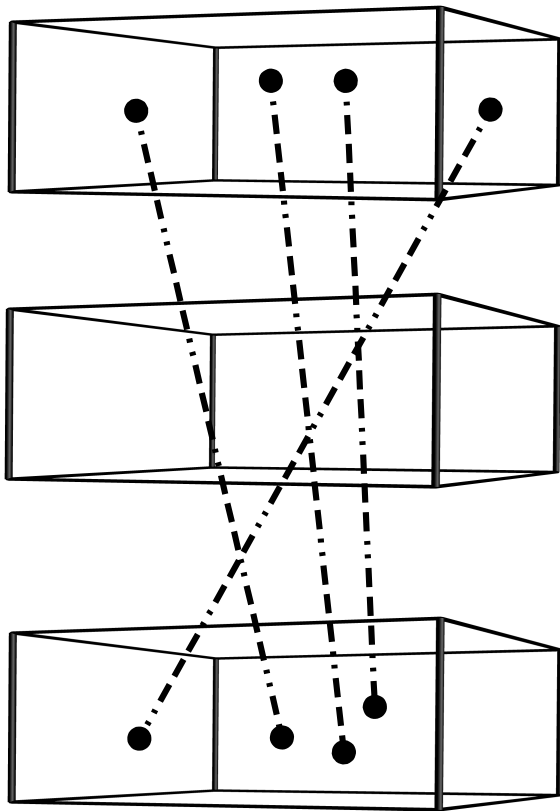**2 hits – 31735252**
3 hits – 109083
4 hits – 64177
6 hits – 14842
7 hits – 7623
8 hits – 4661

Number of events containing more than 2 hits 251001

Event selection algorithm

Number of detector

Number of pixel

'77_1', '81_15', '91_13' - event

Pixels on top and bottom level are chosen

Two points inside these pixels are acted out and direct line is created

Cycle 1500 iterations

Intersection with pixel on middle level is checked

If the number of intersections < 5 the event will be rejected

Experimental data: 109083

After cut: 95634

Reconstruction of muon track

Task: to reconstruct direction of muon using positions of triggered pixels.

Solution: use LSM

Algorithm:
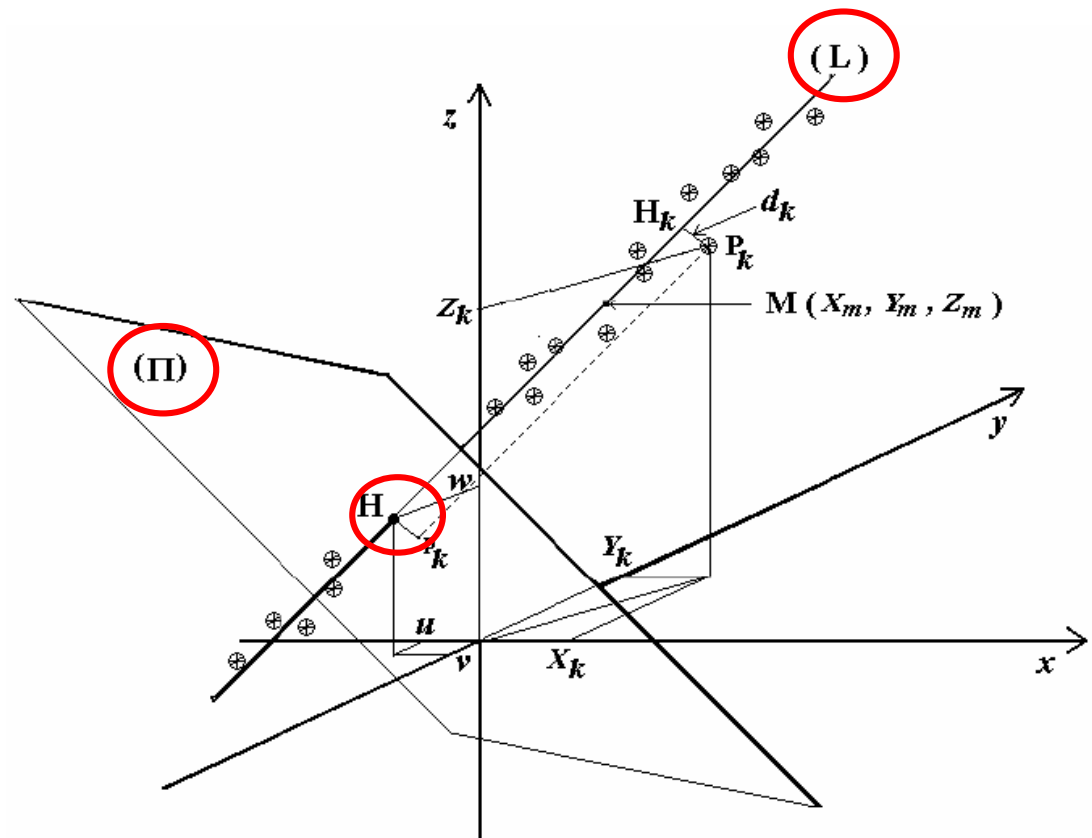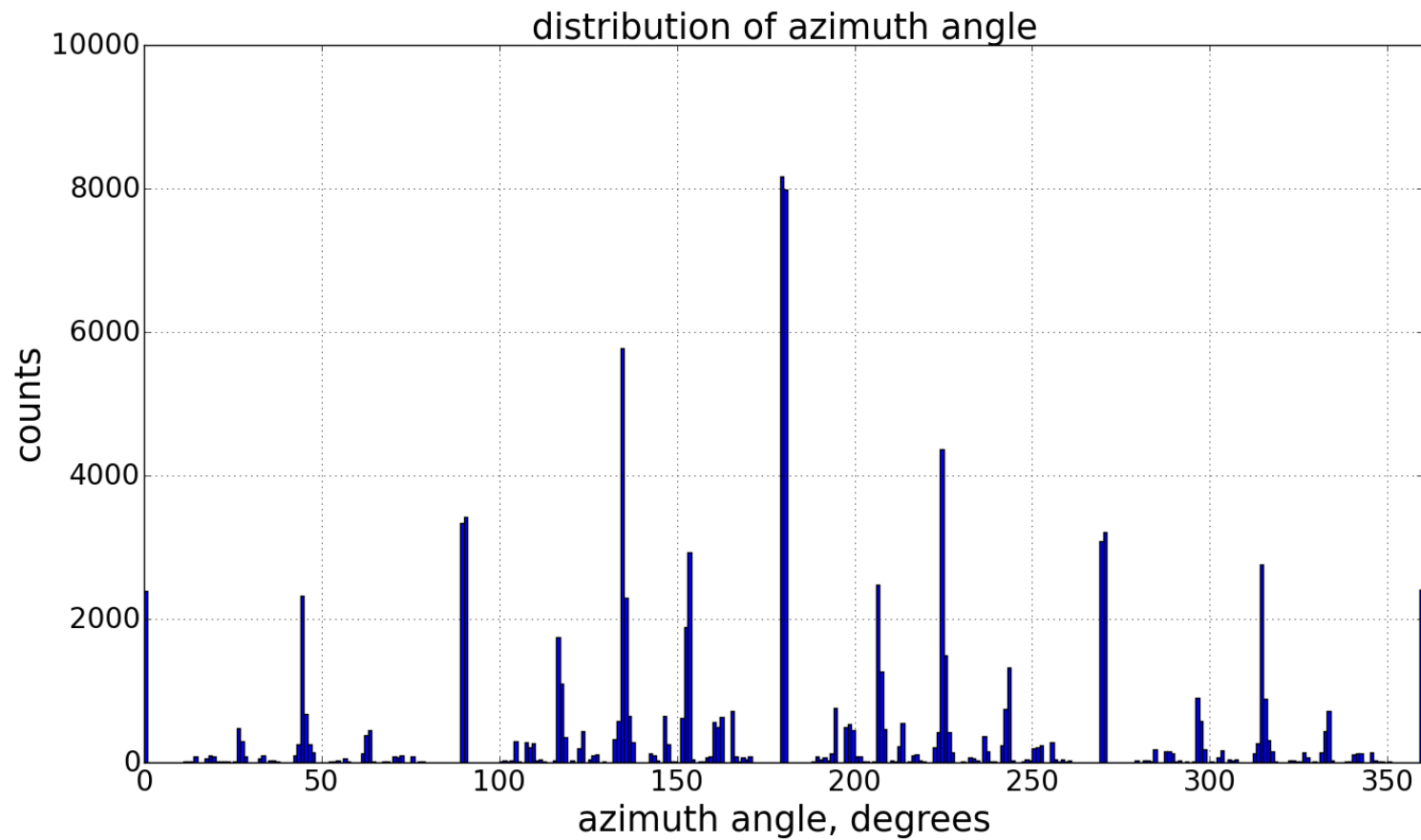REGRESSIONS et TRAJECTOIRES en 3D.
Jean Jacquelin
https://www.scribd.com/doc/31477

The best direct line L is parametrized by plane z=ax+by and point (u, w, v) ~~on~~ this plane.

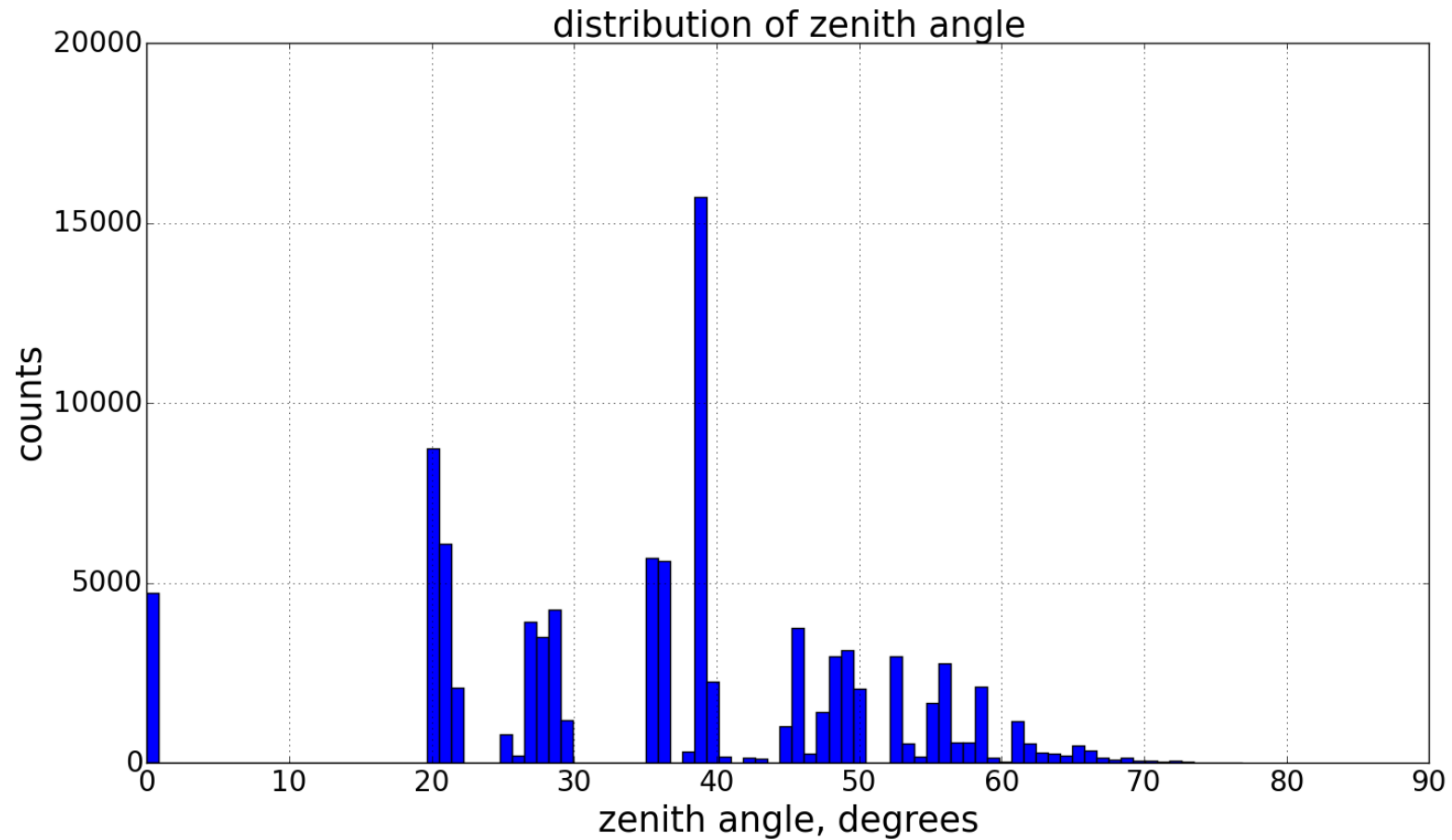# Results histograms
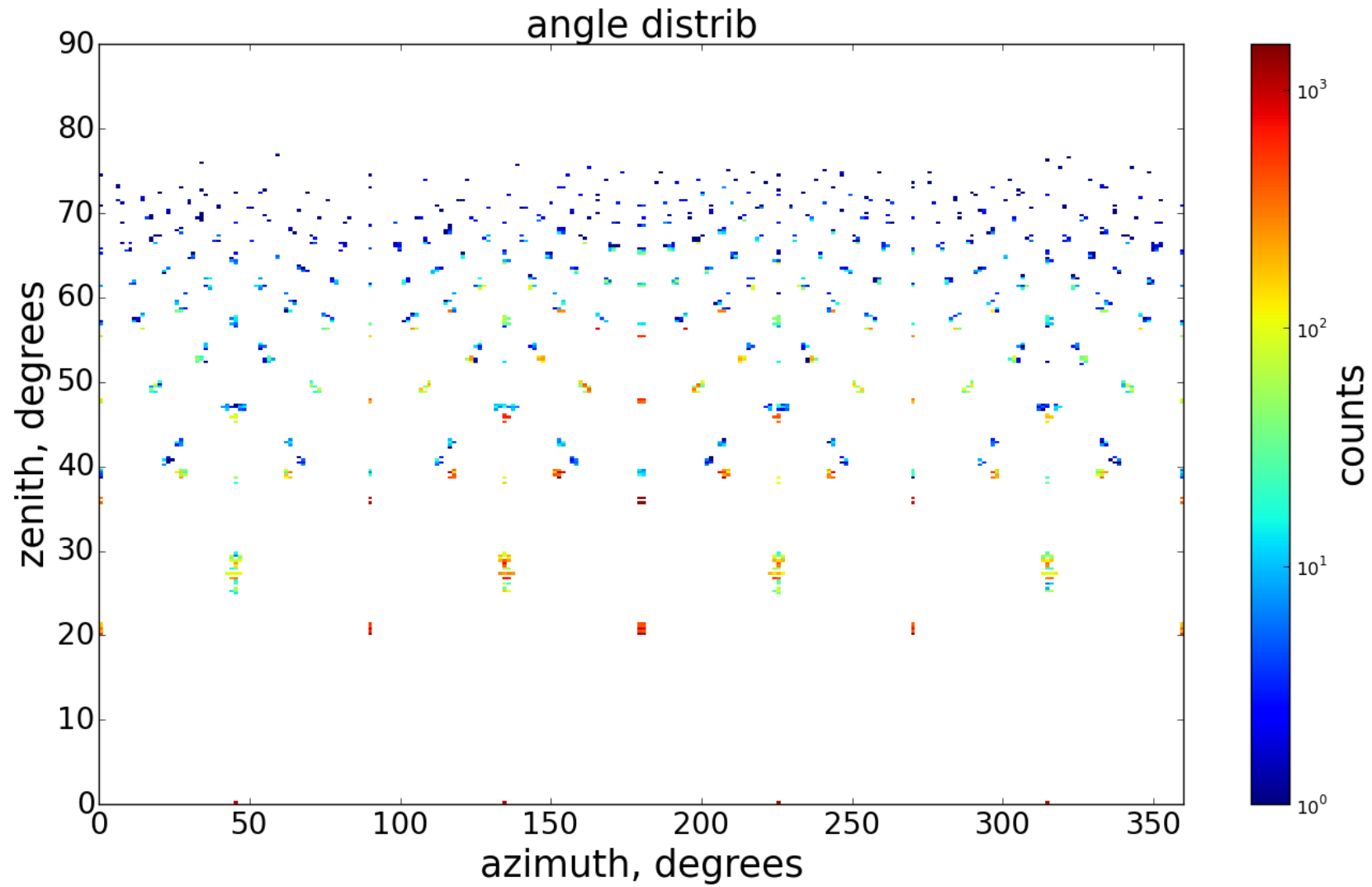
Experimental data: 109083   **After cut:** 95634

distribution of azimuth angle

Results histograms

Experimental data: 109083   **After cut:** 95634
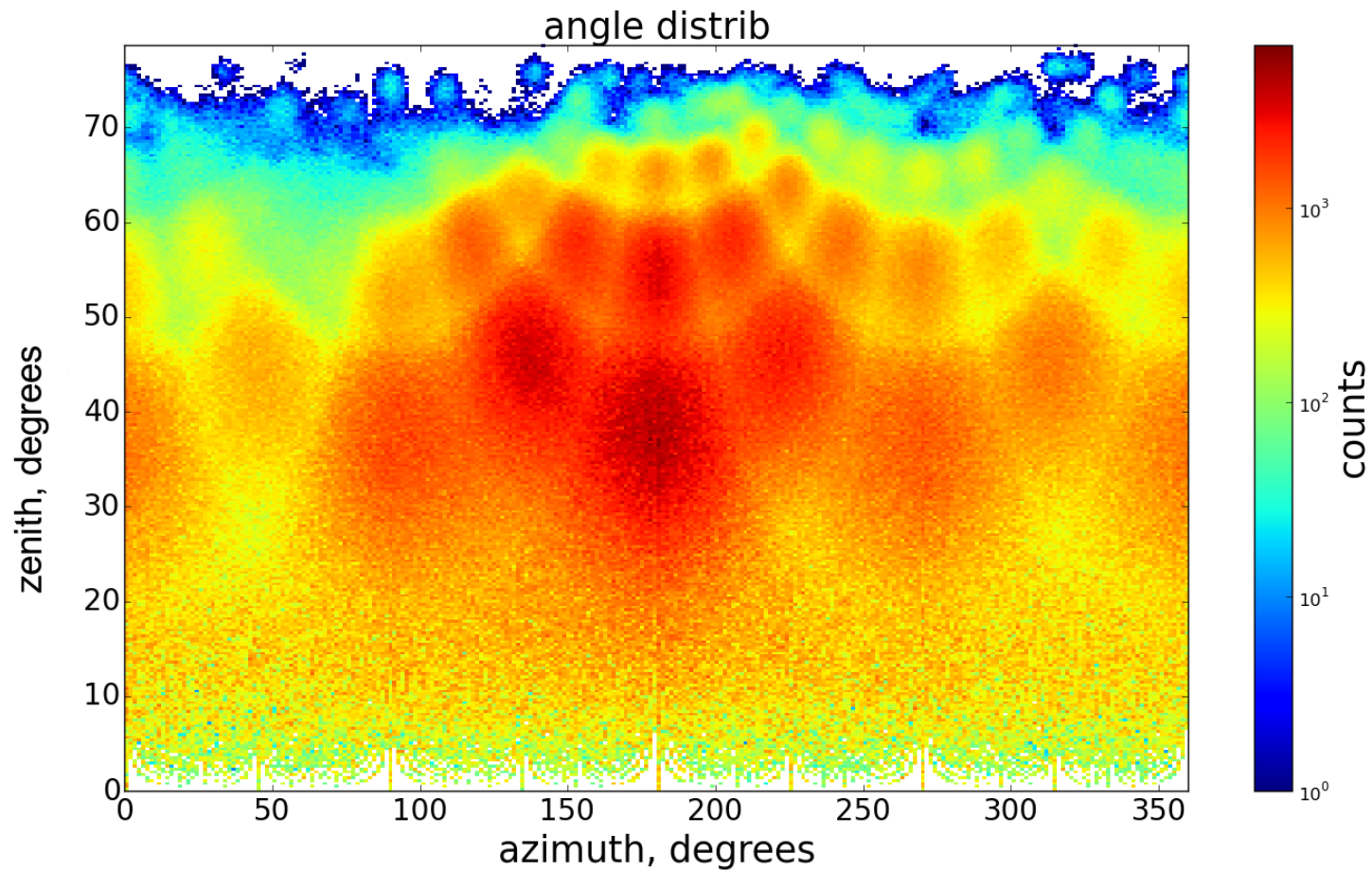

distribution of zenith angle

angle distrib

Muon angular distribution map

Conclusion

- The method for selection of muon events was created

- A way for reconstruction of the track of muon was created

- The histograms for distribution of zenith and azimuth angle were obtained