



ORCA6 Data at TSU-Tier2 (Preliminary analysis)

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Introduction

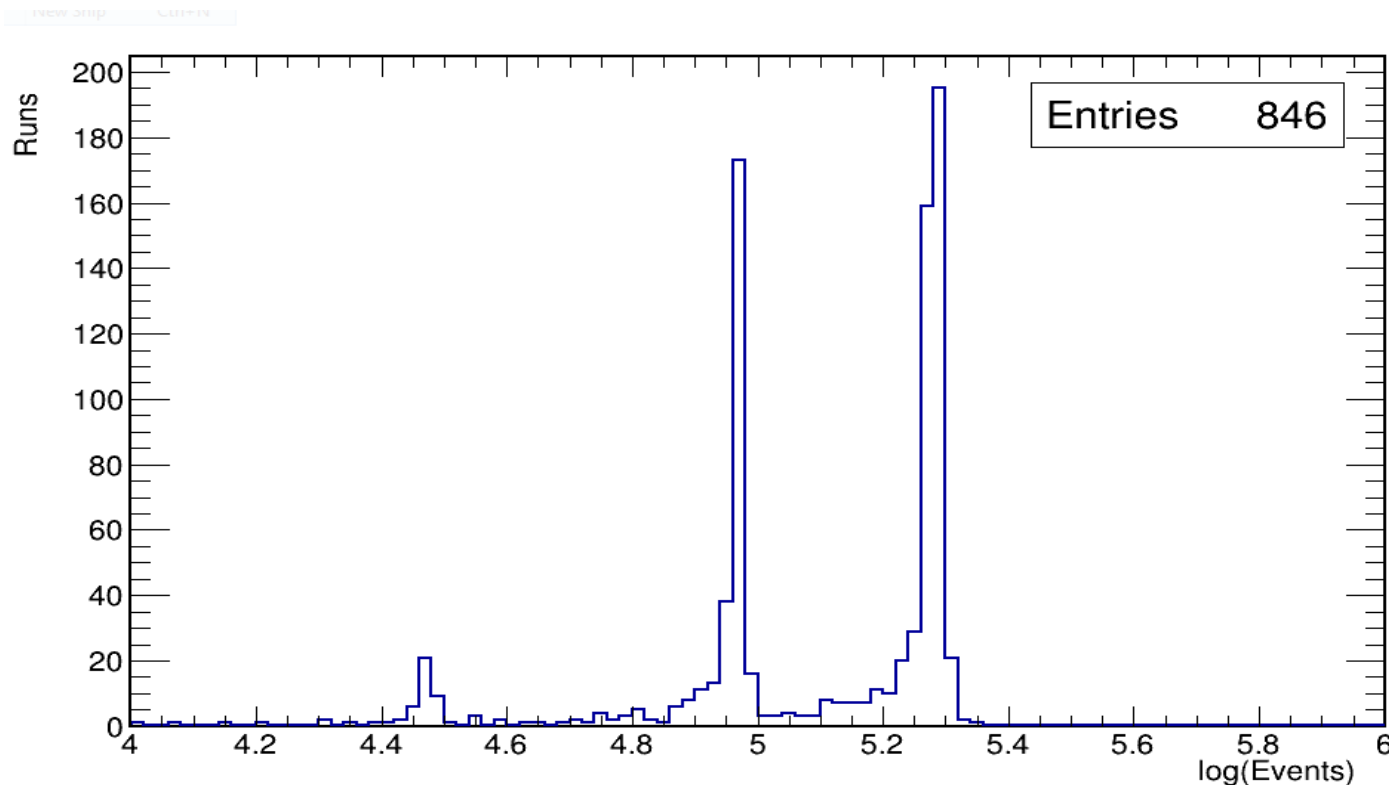
- Reconstructed ORCA6 data in TSU
- Basic distributions
- Summary and Outlook

ORCA6 Event Sample

- First runs of ORCA6 processed data were released on 29 July 2020 by Luigi Fusco
/in2p3/km3net/data/KM3NeT_00000049/v5.42/reco

853 files (aanet-format): datav5.42.jchain.aanet.0000**7231**.root (Jan 27/2020, 12:29)
datav5.42.jchain.aanet.0000**8292**.root (Jul 11/2020 5:59)

846 runs in our analysis: 117 136 924 (1.2×10^8 events)



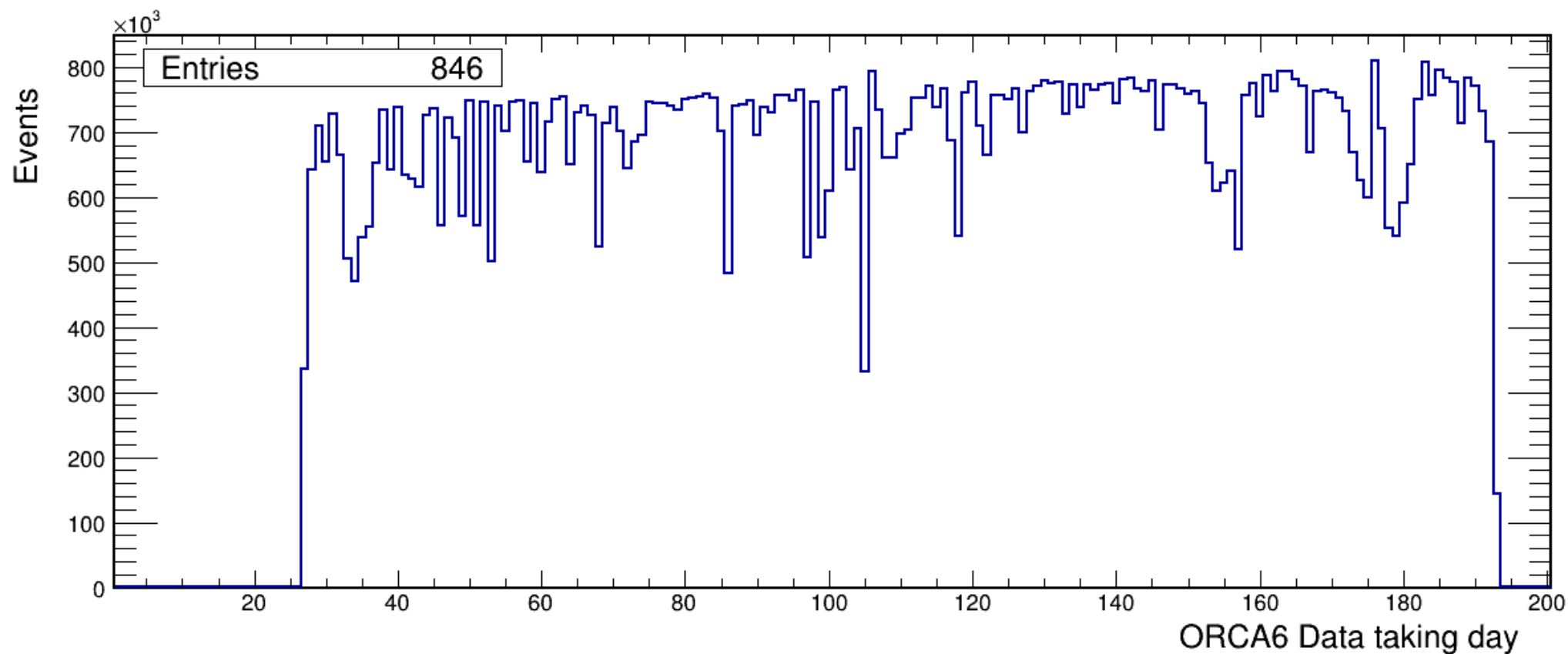
Corrupted runs (7):

7305
7306
7312
7313
7332
7792
8117

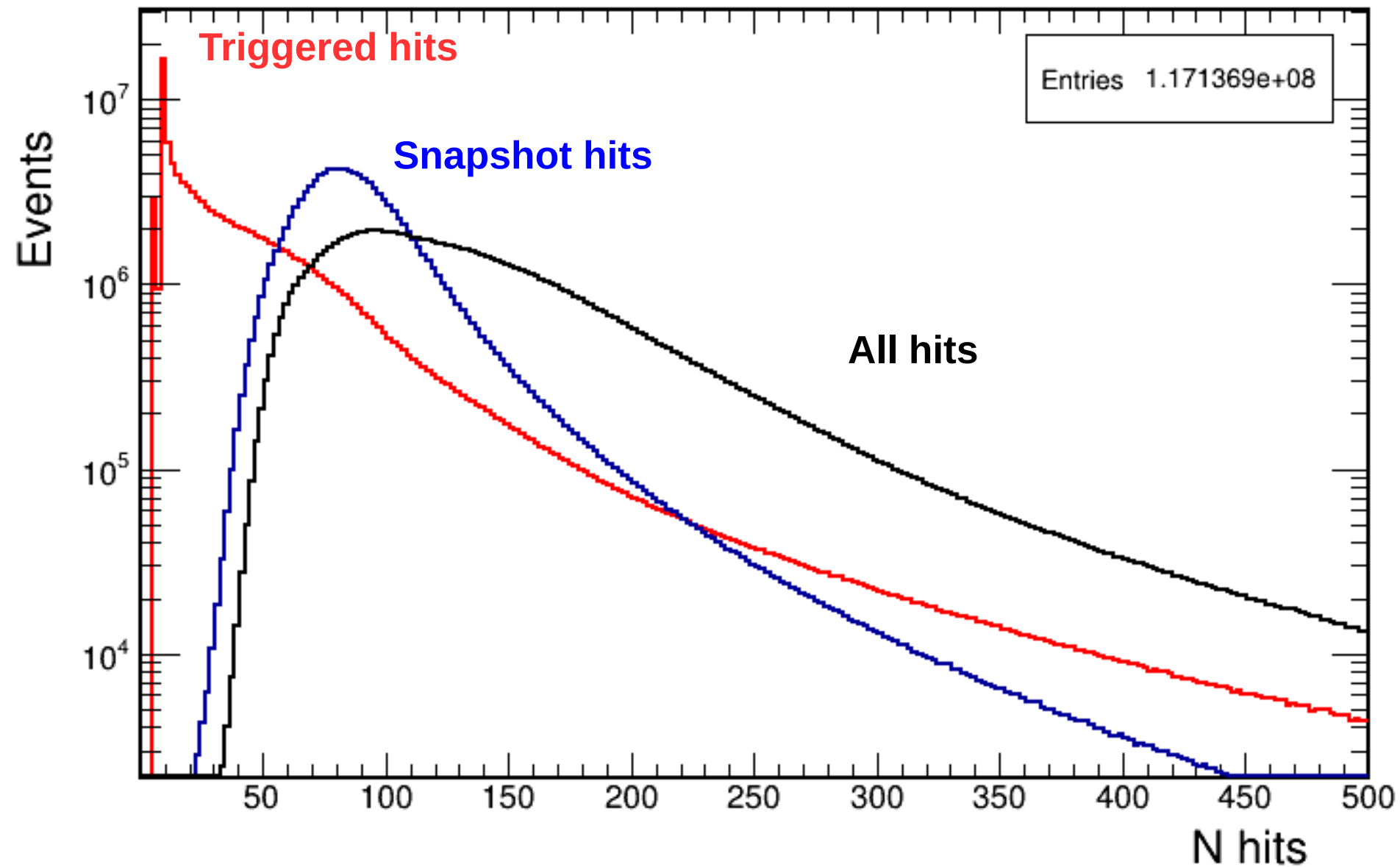
Average event rates: about 9 Hz

ORCA6: Data taking

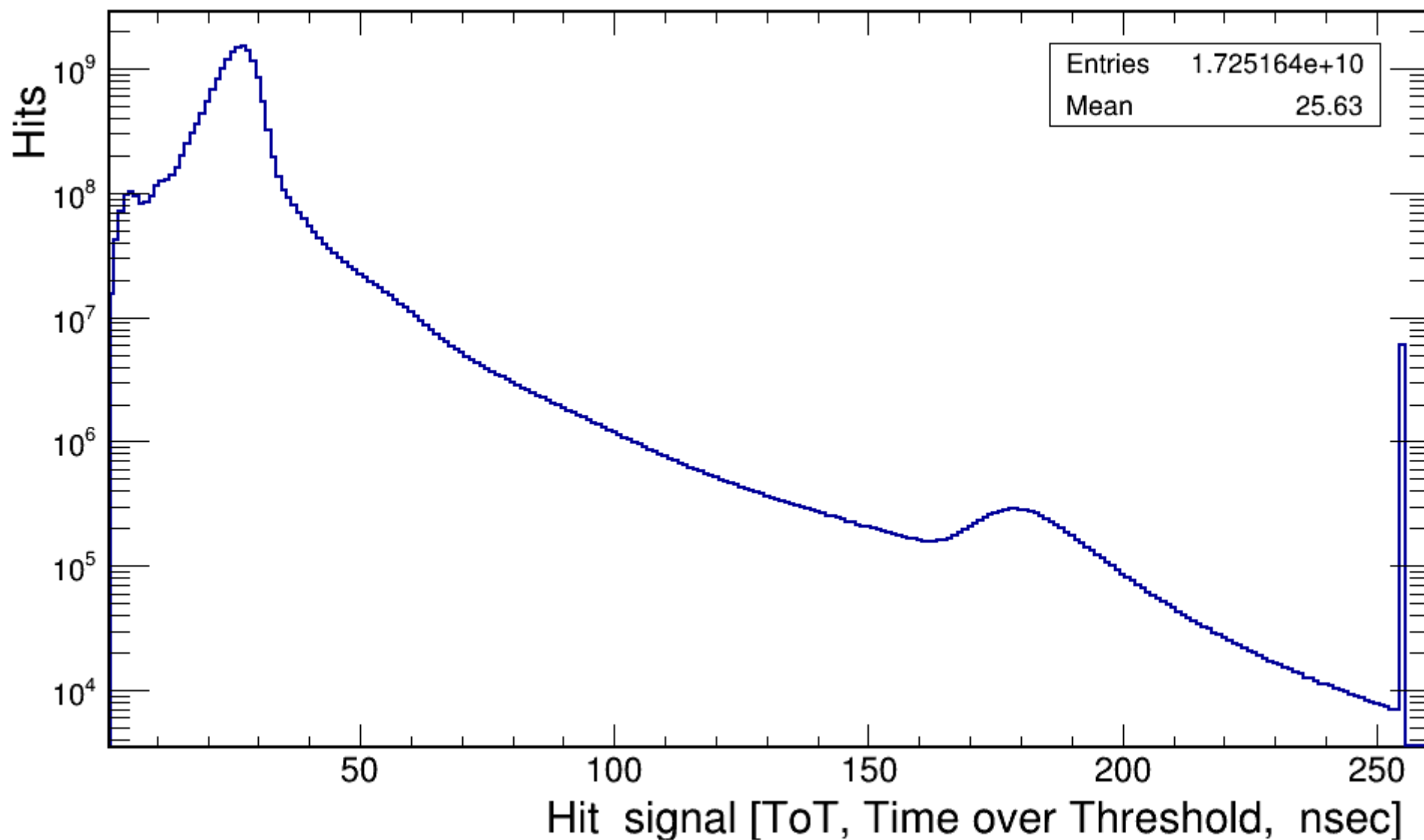
ORCA6 processed events vs day of 2020. Data taking started on January 27.



ORCA6: Hits

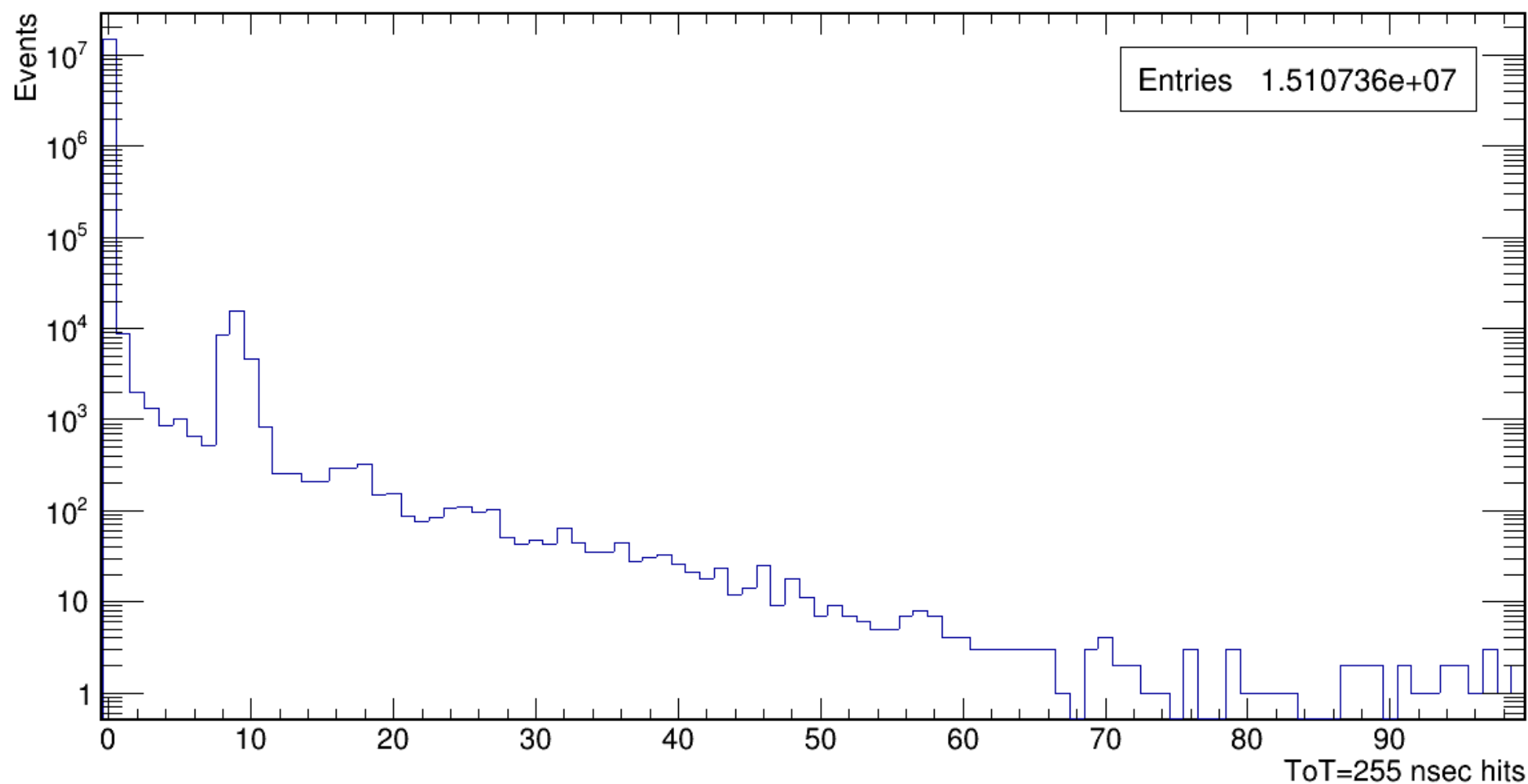


ORCA6: Hit ToT signals



ORCA6: ToT=255 nsec signals

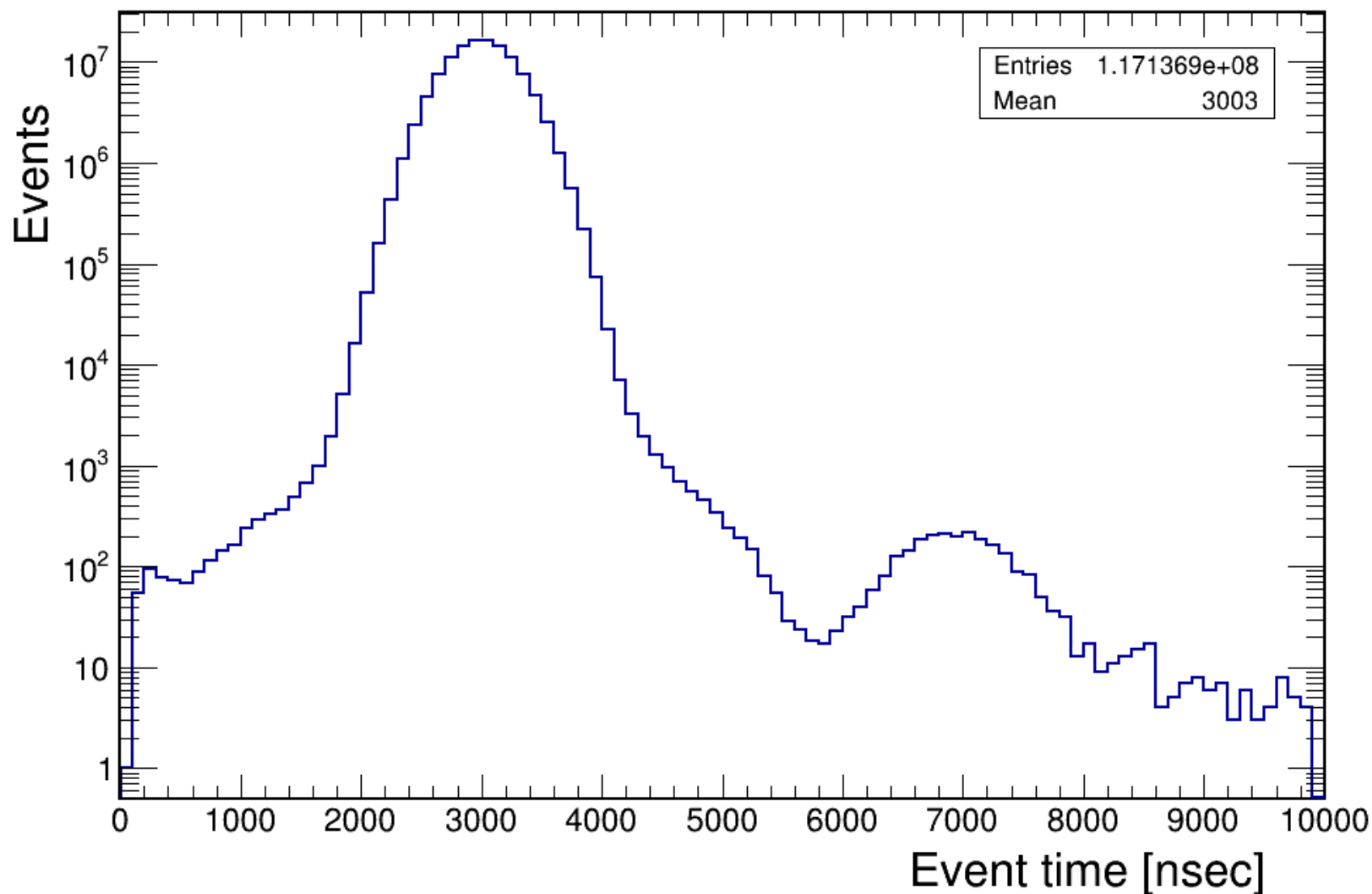
First 200 runs of ORCA6



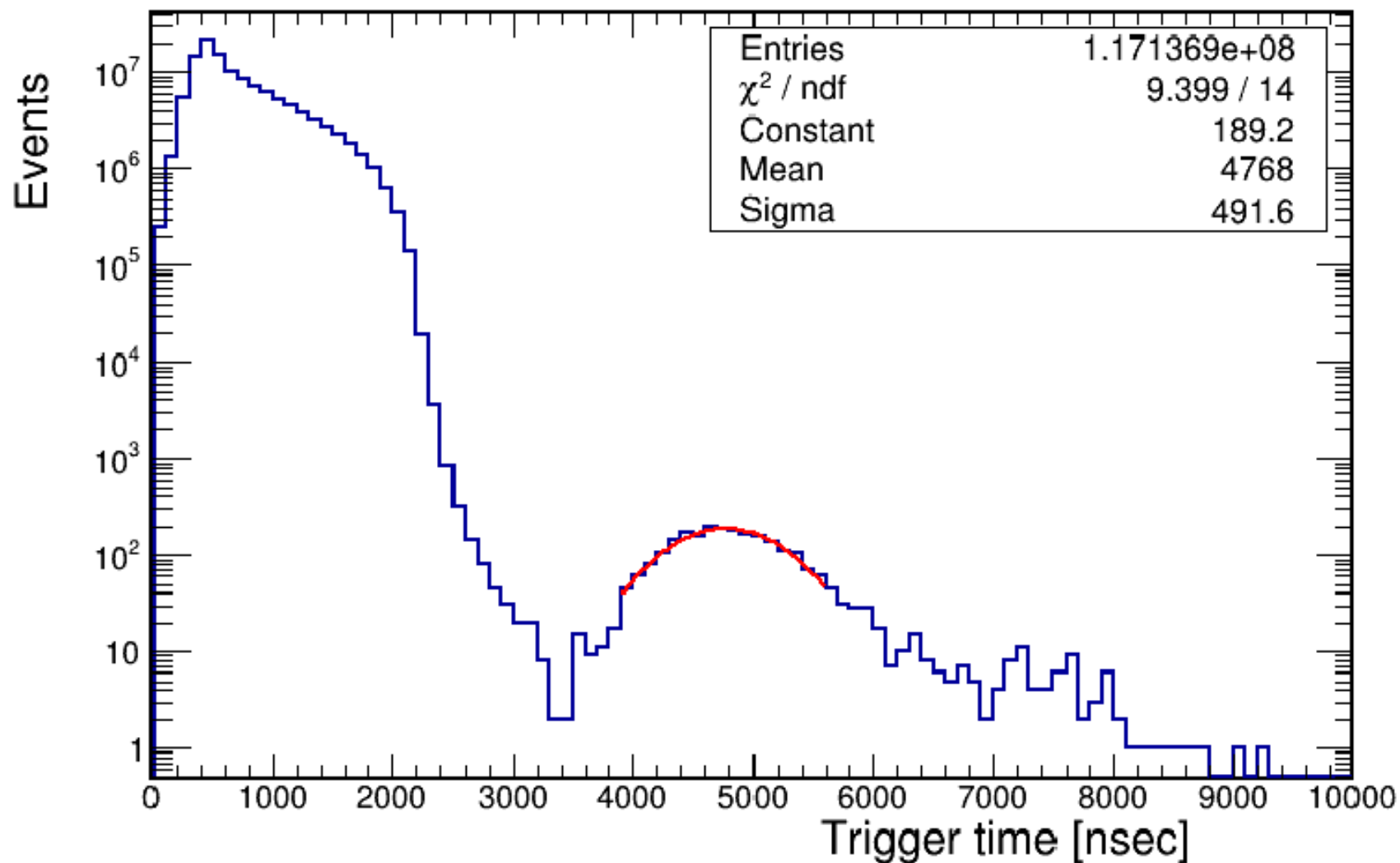
ToT 255 rate $\sim 0.3\%$

ORCA6: Event time

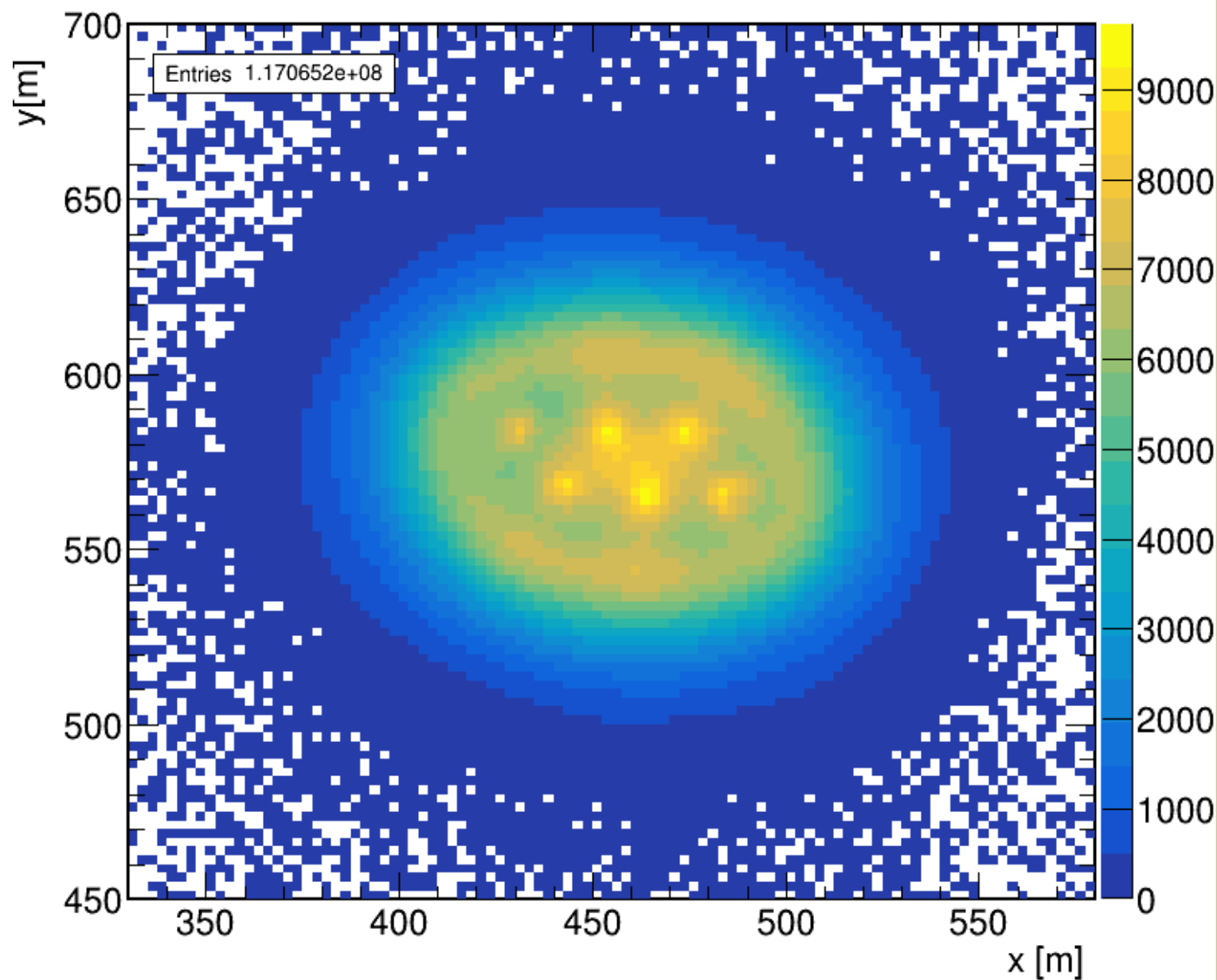
Event time = time (last hit) - time (first hit) $\Delta t = t_n - t_0$



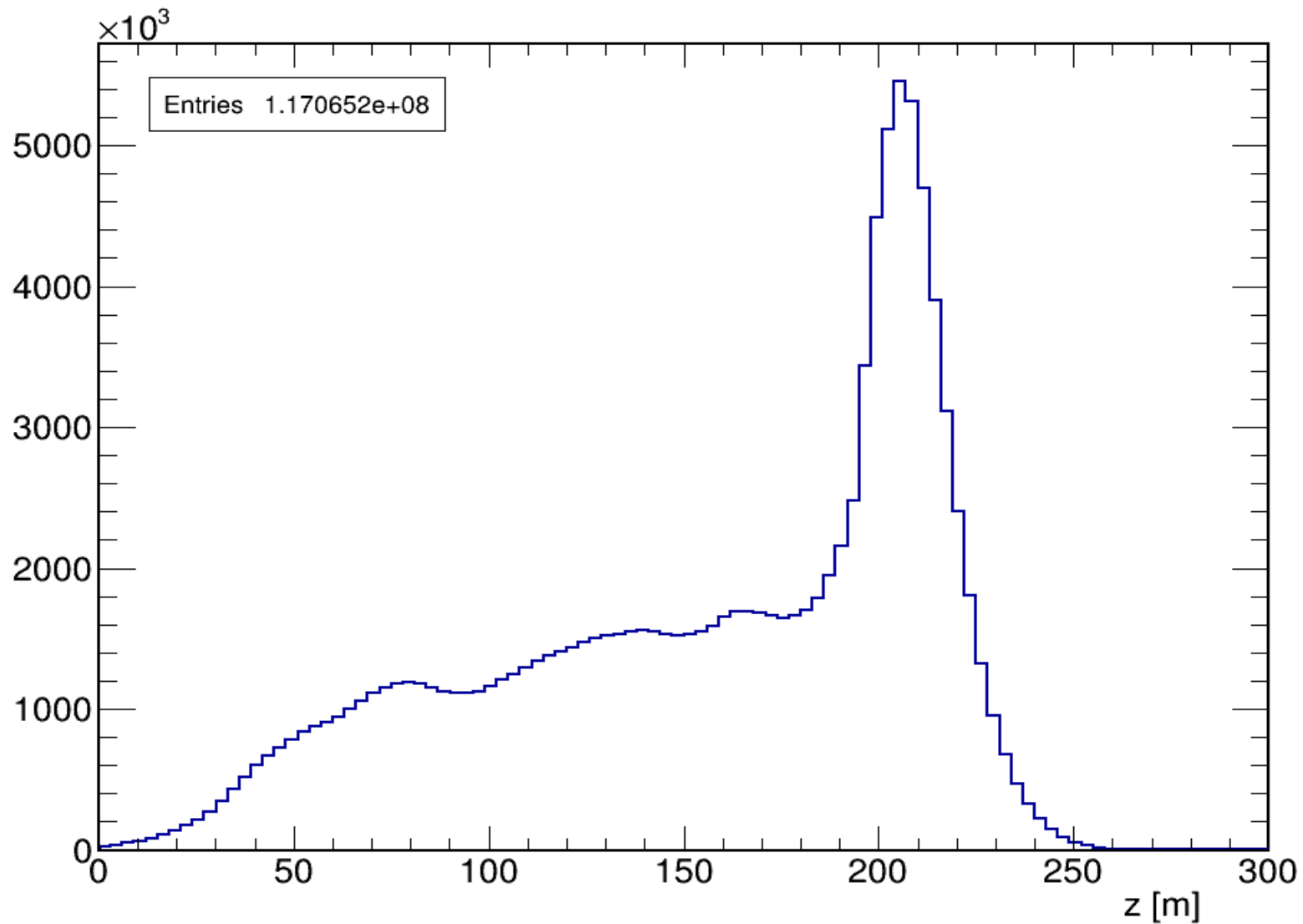
ORCA6: Trigger Time



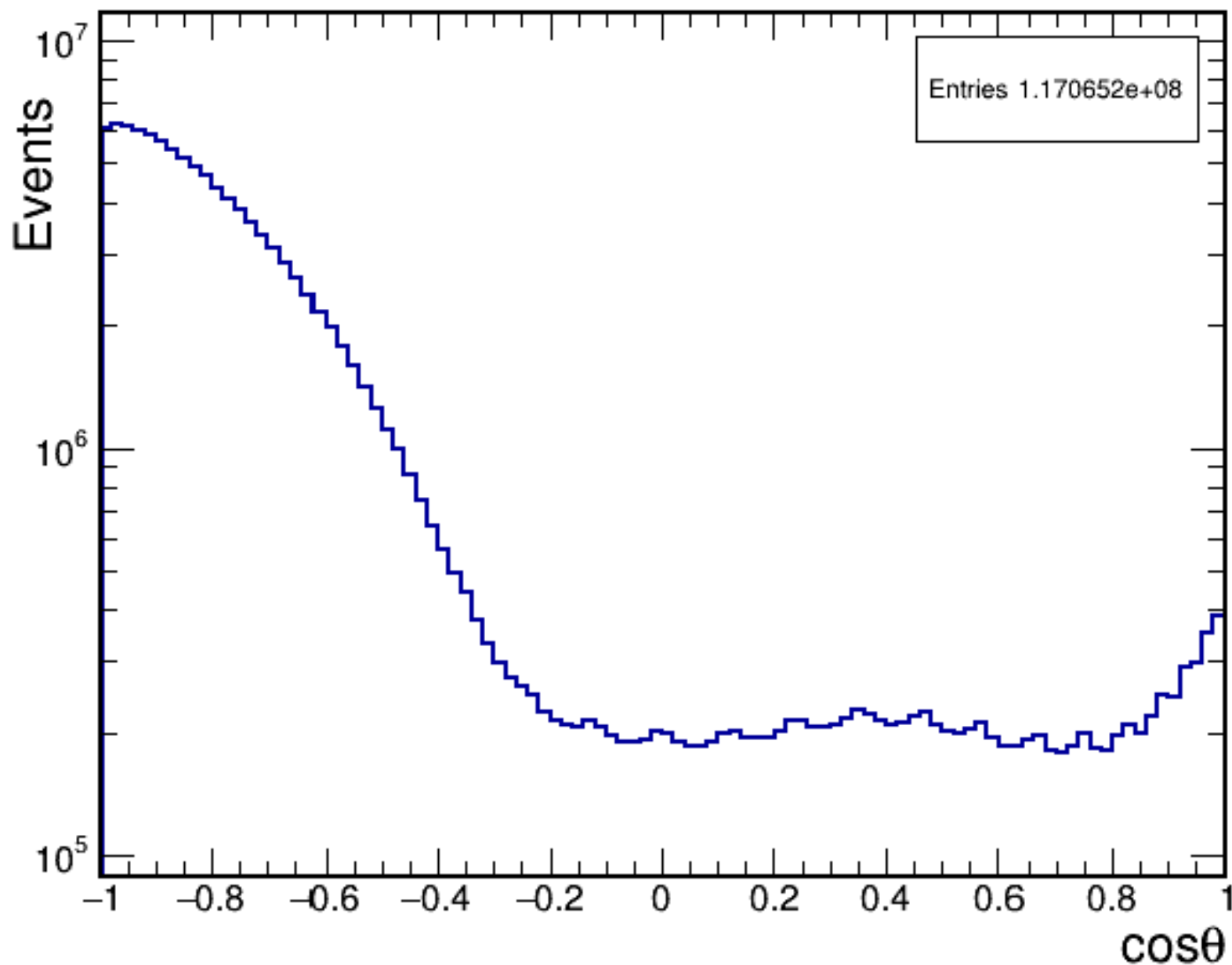
ORCA6: Reconstructed Track Starting Point (x,y)



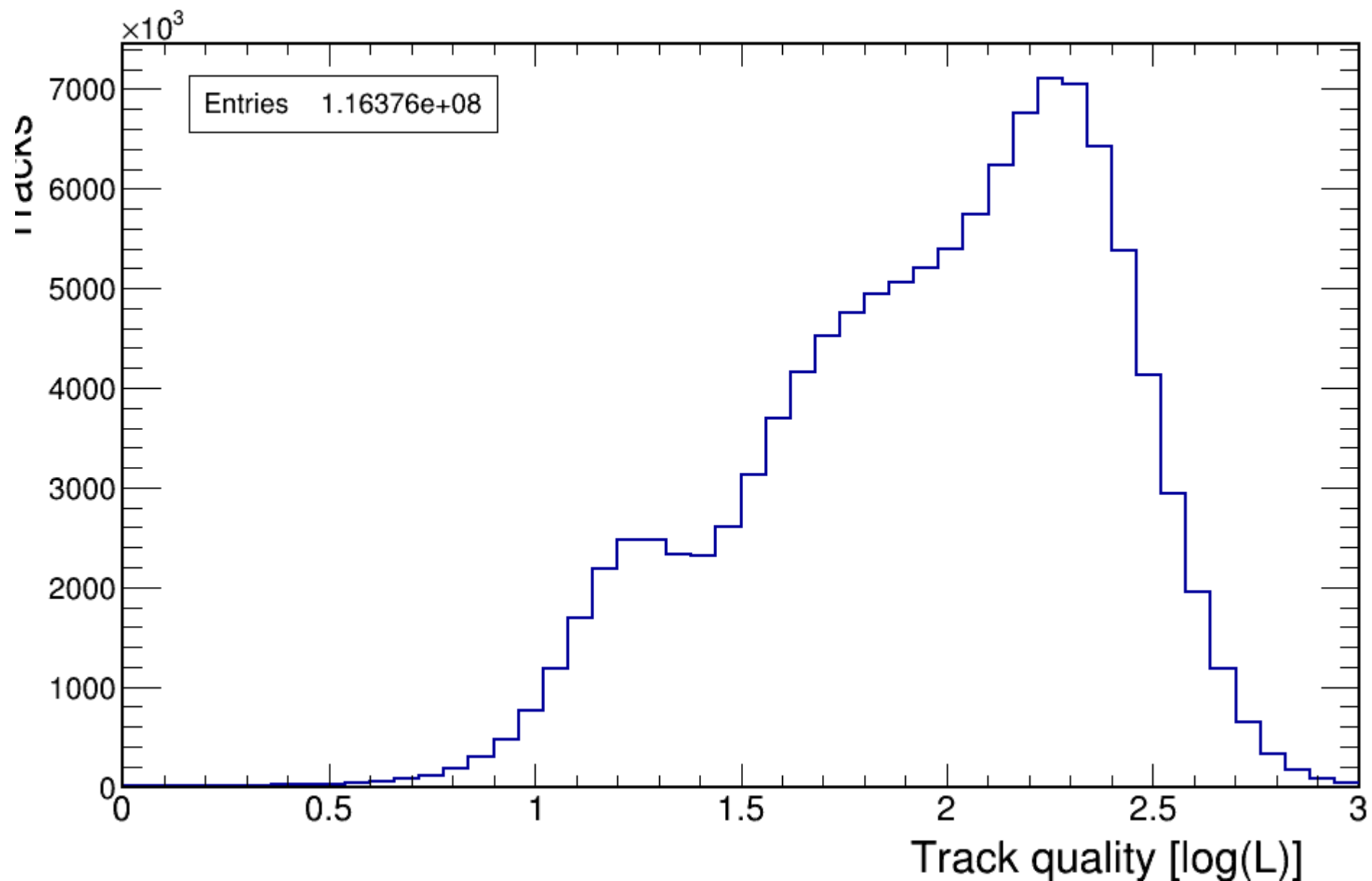
ORCA6: Reconstructed Track Starting Point (z)



ORCA6: Zenith Angle



ORCA6: Track Quality



Summary and Outlook

- All processed ORCA6 data was analysed and the „standard distributions“ were obtained.
- ORCA6 data distributions are similar to the ORCA4
- Rate of ToT255 events in the ORCA6 data is about 0.3%
- The further analysis and the comparisons of ORCA6 data to the MC and ORCA4 data be done