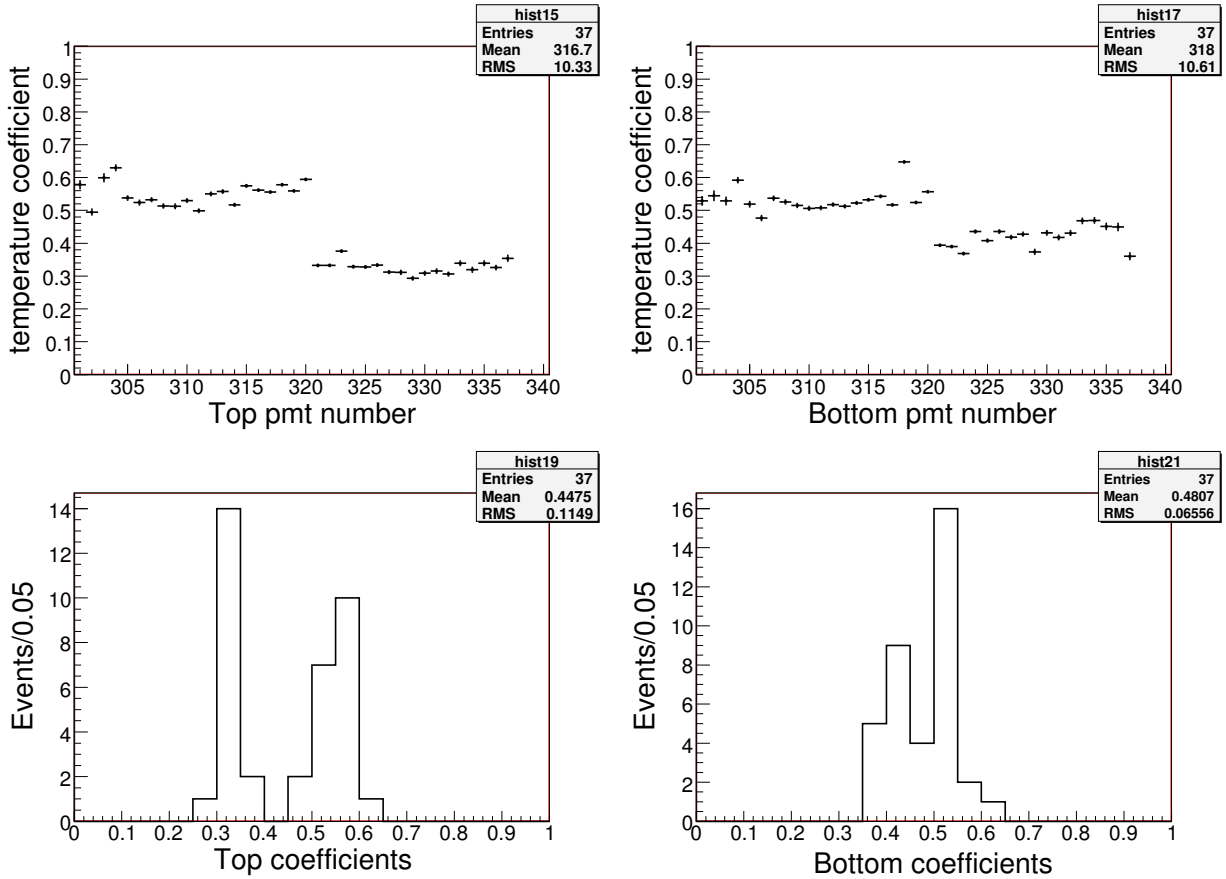
Outline

- renew the temperature cofficients plot. It was mistake.

- revisit the speed of light in bar with the new temperature coefficients.

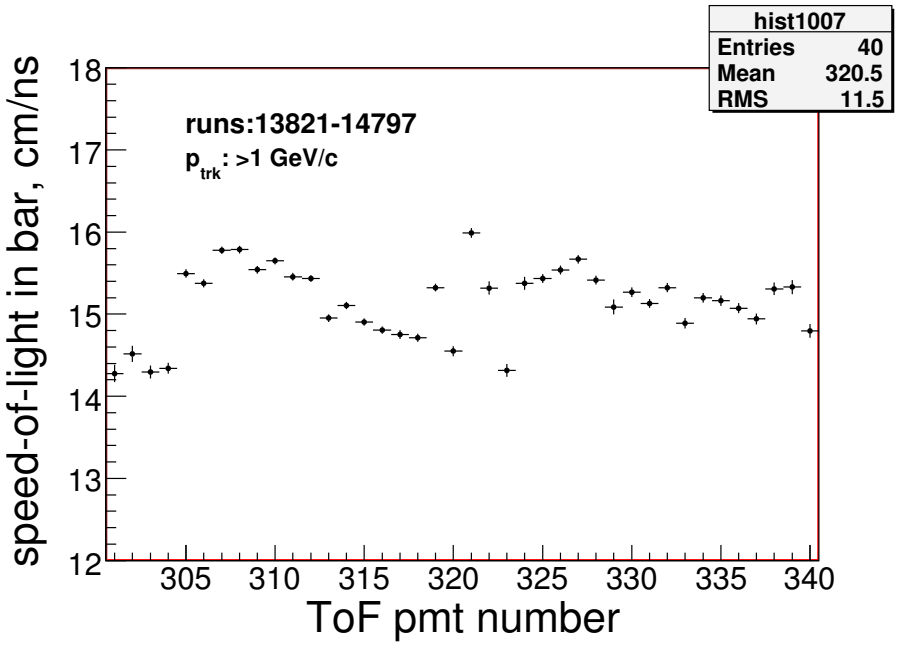
- what is the ToF resolution with the latest updates?

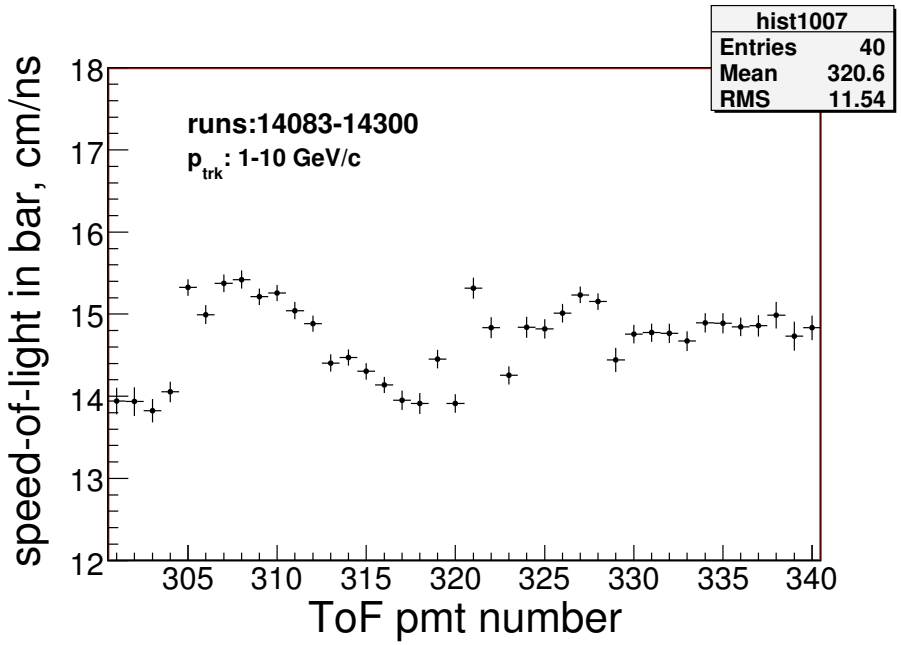
the temperature coefficients



The temperature coefficients can be divided in two groups: first group include bars 301-320 (East), second - bars 321-340 (West). Top is more distinguished than bottom. Why? The temperature is higher. East vs West is due to of the fan(?)

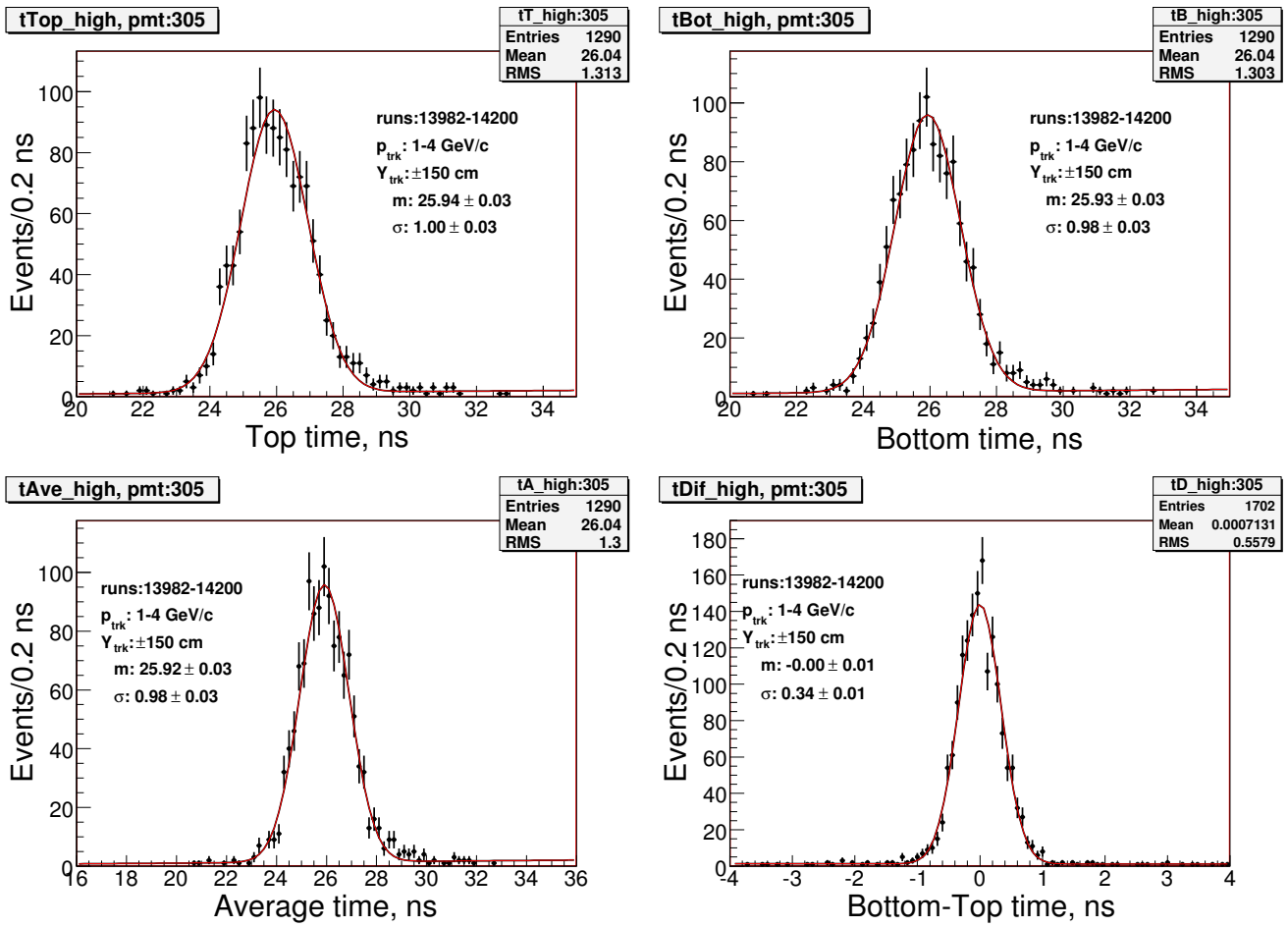
the speed of light in the scintillator





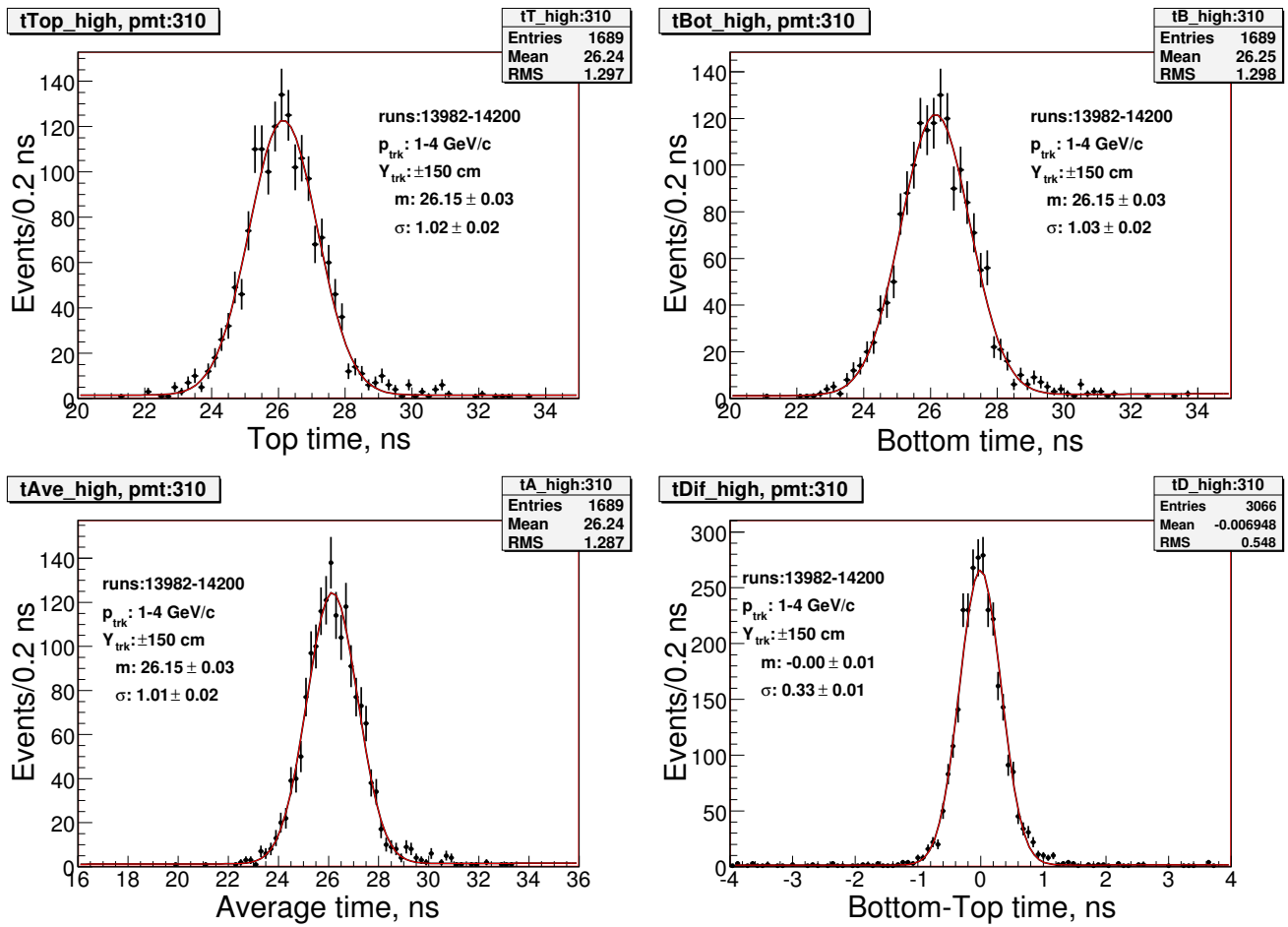
Latest the speed of light in scintillator (left plot) and previous (right). What is new? The adjacent bar cut and the temperature coefficients per each pmt.

the resolution for bar 305



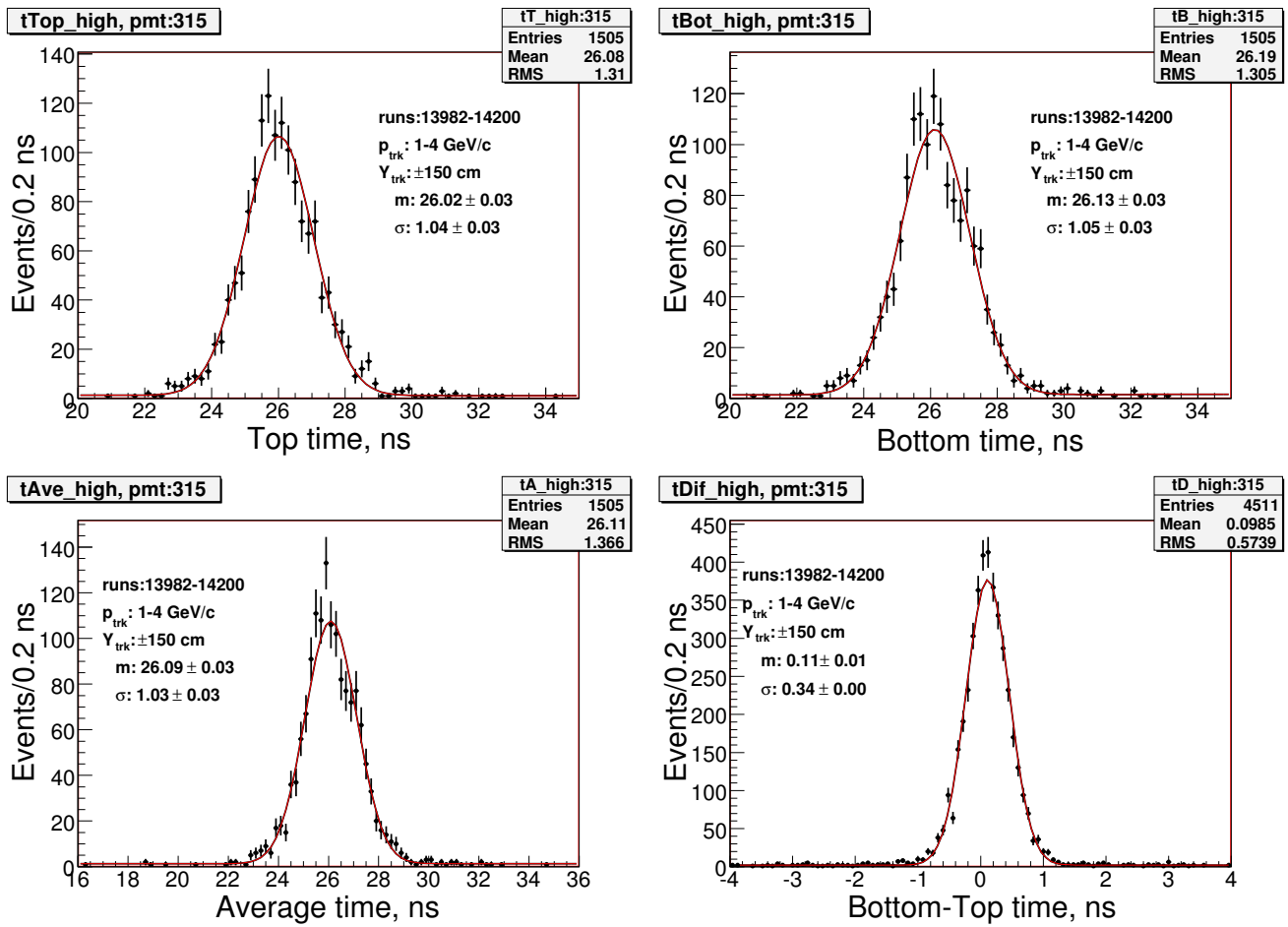
Data runs: 13982-14200. Top left - the Top time, top right - the Bottom time, bottom left - the Average time, bottom right - the Bottom-Top time. Corrections taken on an account: the temperature variations, the time from both pmt's are consistent with the particles position, the particles flight time with the pion hypothesis and the speed of light in bar.

the resolution for bar 310



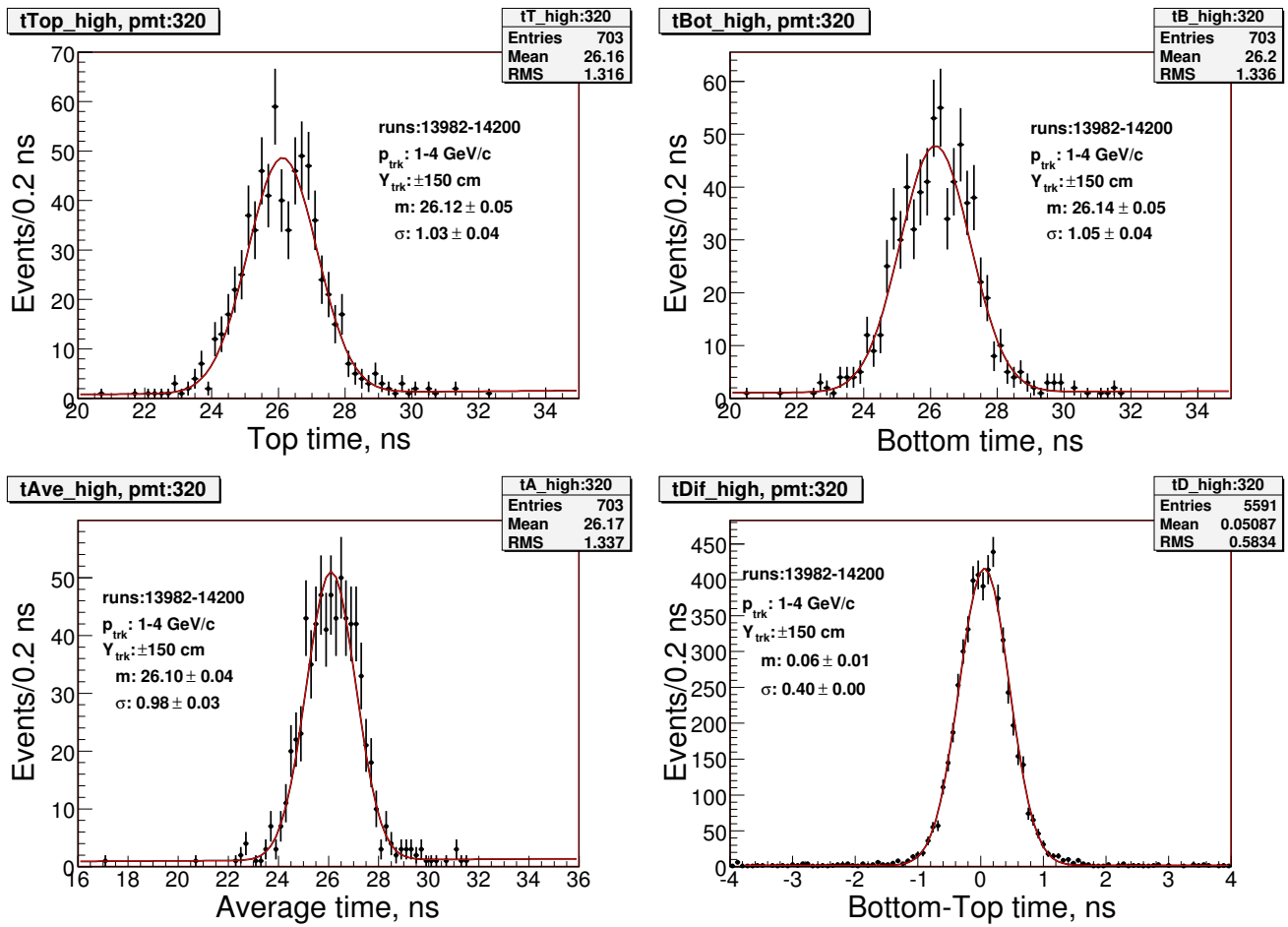
Data runs: 13982-14200. Top left - the Top time, top right - the Bottom time, bottom left - the Average time, bottom right - the Bottom-Top time. Corrections taken on an account: the temperature variations, the time from both pmt's are consistent with the particles position, the particles flight time with the pion hypothesis and the speed of light in bar.

the resolution for bar 315



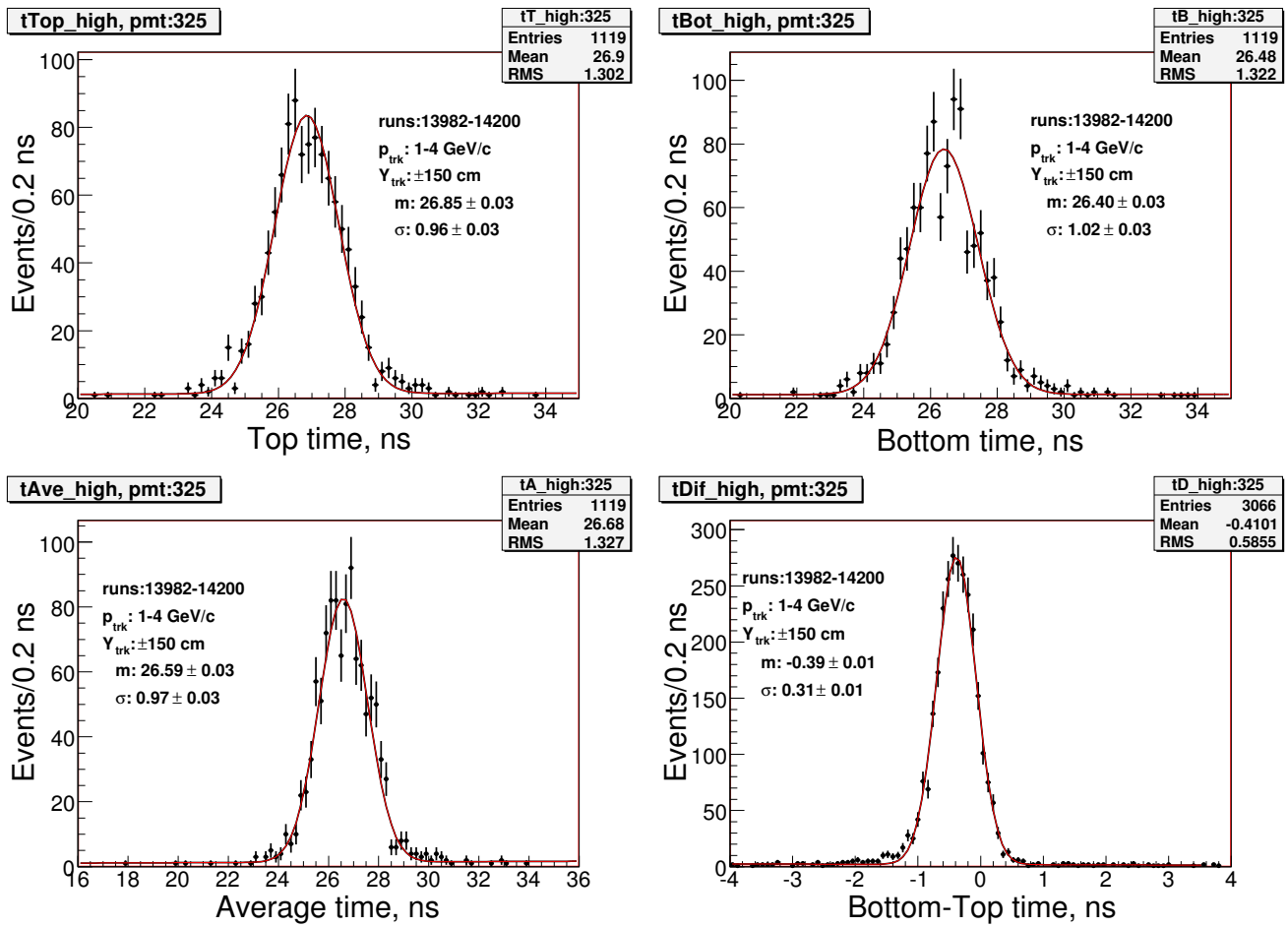
Data runs: 13982-14200. Top left - the Top time, top right - the Bottom time, bottom left - the Average time, bottom right - the Bottom-Top time. Corrections taken on an account: the temperature variations, the time from both pmt's are consistent with the particles position, the particles flight time with the pion hypothesis and the speed of light in bar.

the resolution for bar 320



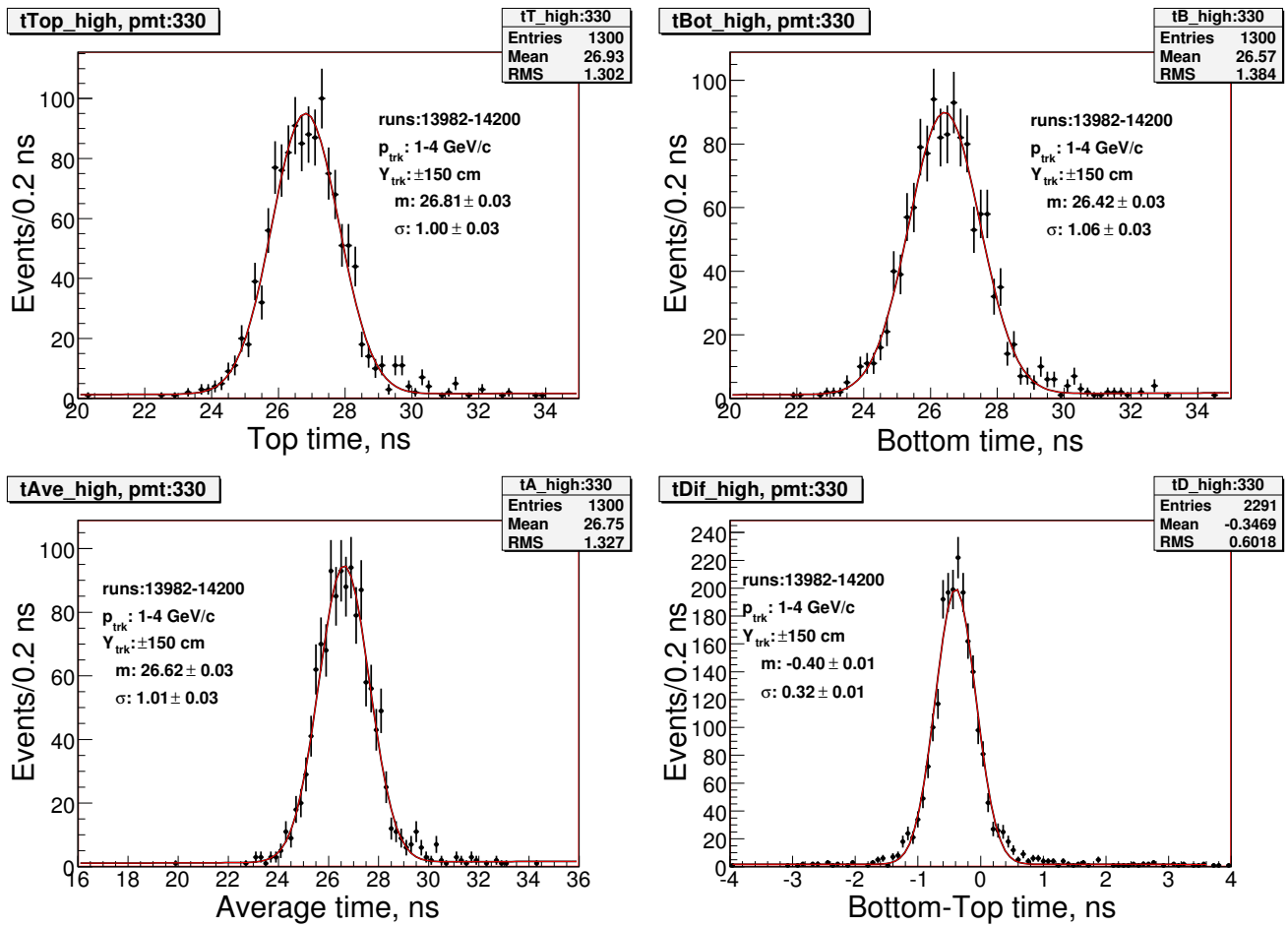
Data runs: 13982-14200. Top left - the Top time, top right - the Bottom time, bottom left - the Average time, bottom right - the Bottom-Top time. Corrections taken on an account: the temperature variations, the time from both pmt's are consistent with the particles position, the particles flight time with the pion hypothesis and the speed of light in bar.

the resolution for bar 325



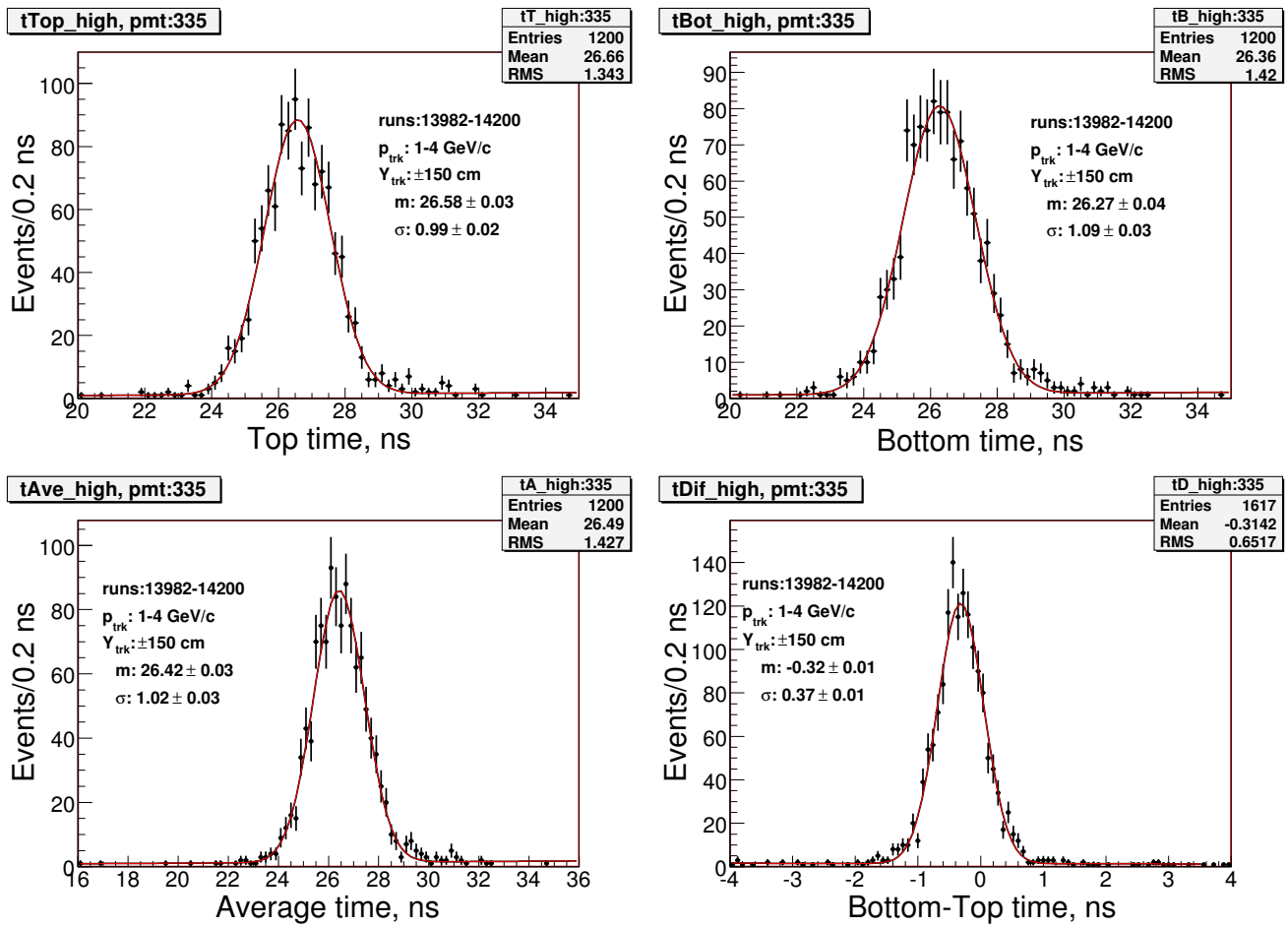
Data runs: 13982-14200. Top left - the Top time, top right - the Bottom time, bottom left - the Average time, bottom right - the Bottom-Top time. Corrections taken on an account: the temperature variations, the time from both pmt's are consistent with the particles position, the particles flight time with the pion hypothesis and the speed of light in bar.

the resolution for bar 330



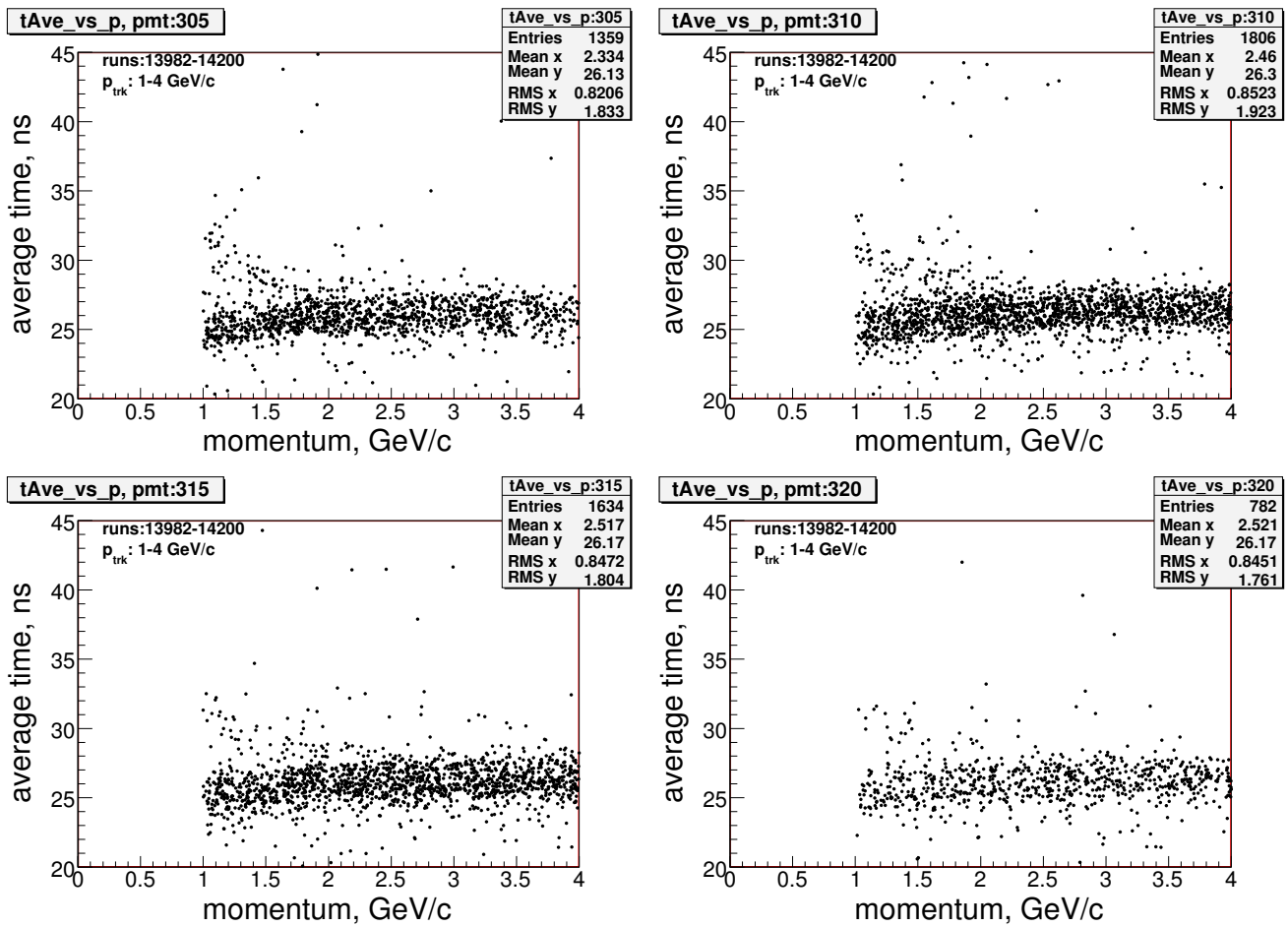
Data runs: 13982-14200. Top left - the Top time, top right - the Bottom time, bottom left - the Average time, bottom right - the Bottom-Top time. Corrections taken on an account: the temperature variations, the time from both pmt's are consistent with the particles position, the particles flight time with the pion hypothesis and the speed of light in bar.

the resolution for bar 335



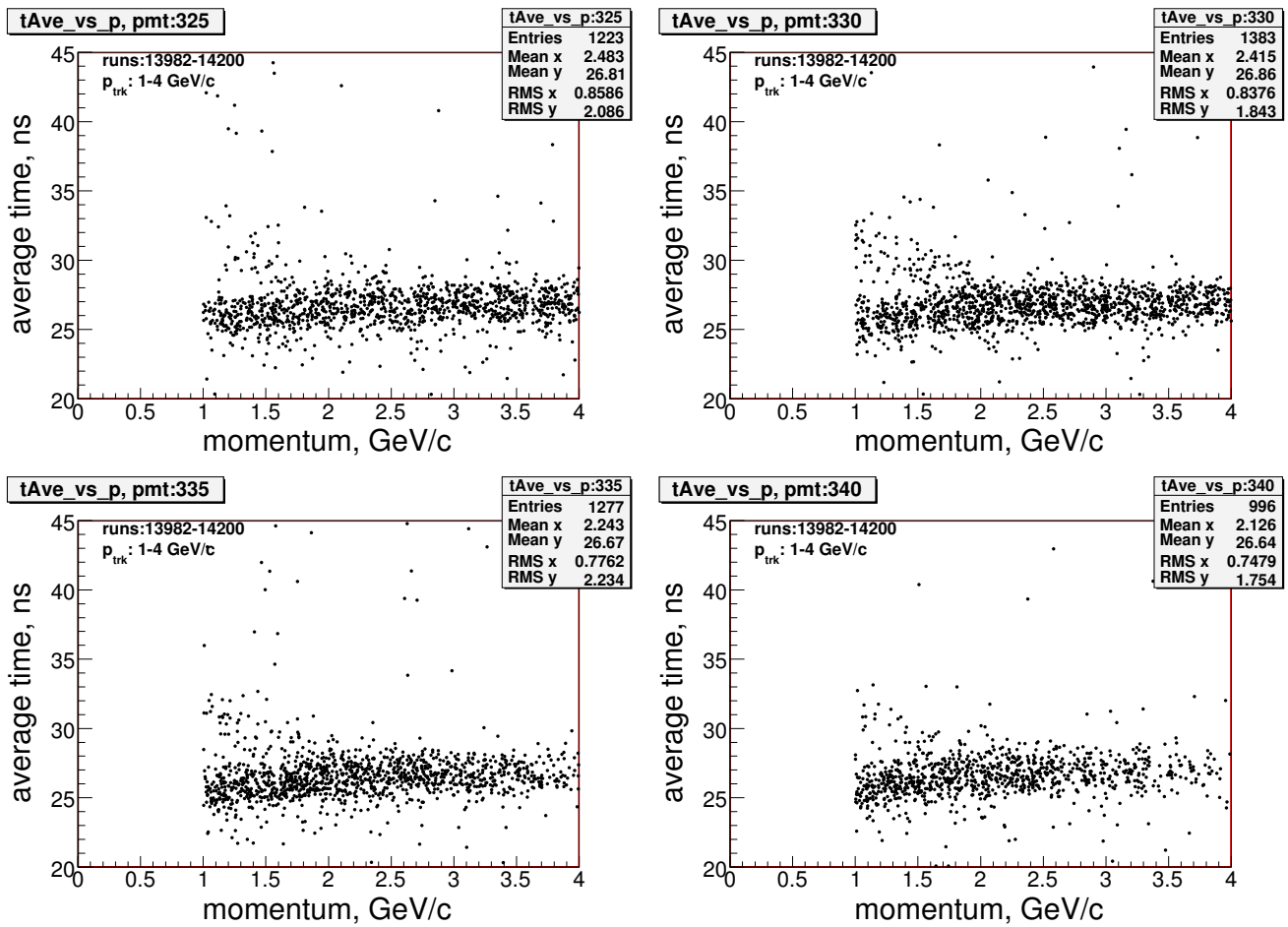
Data runs: 13982-14200. Top left - the Top time, top right - the Bottom time, bottom left - the Average time, bottom right - the Bottom-Top time. Corrections taken on an account: the temperature variations, the time from both pmt's are consistent with the particles position, the particles flight time with the pion hypothesis and the speed of light in bar.

average time vs momentum, bars: 305,310,315 and 320



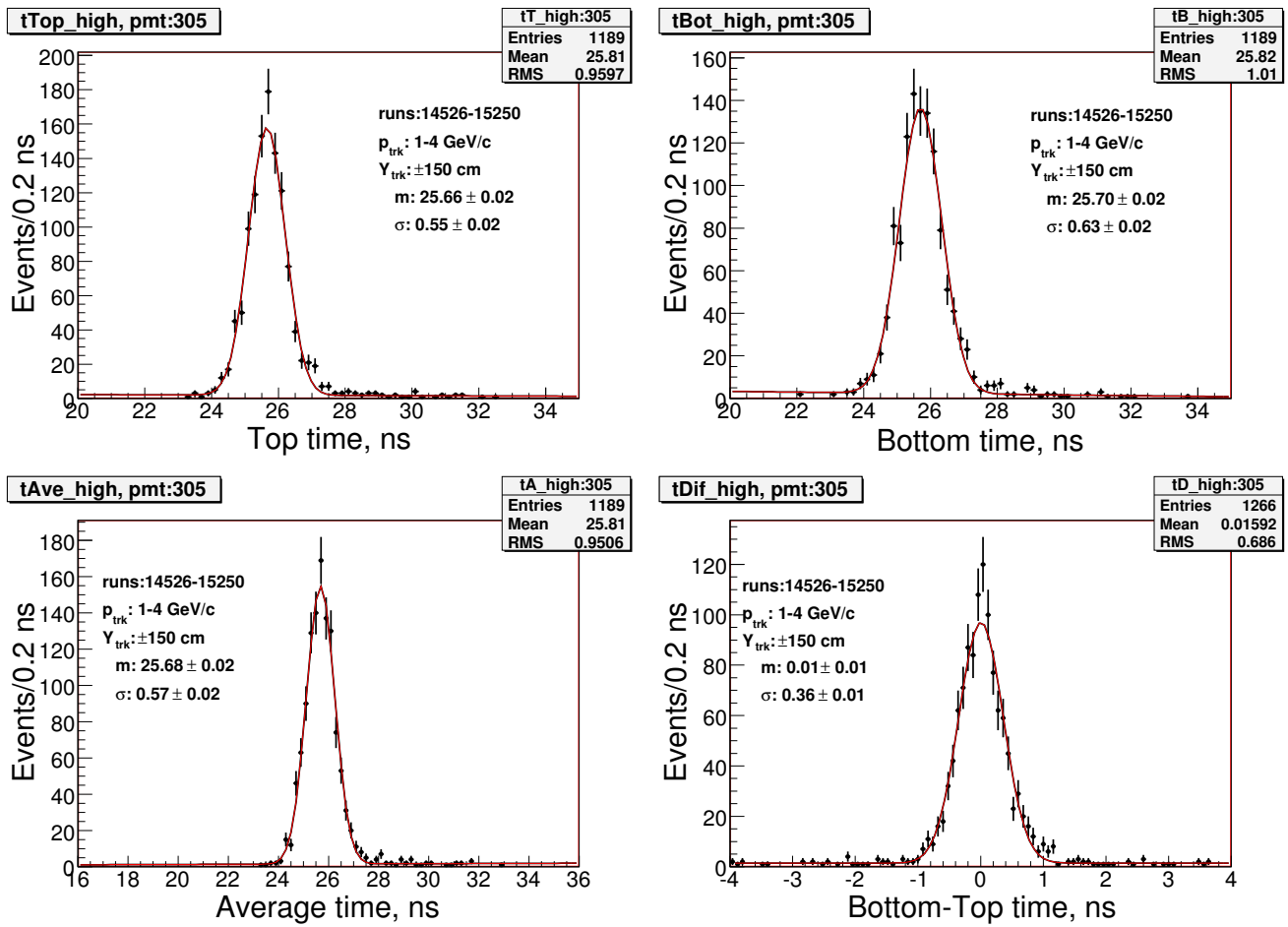
The average time vs the particles momentum distributions. The most populated band of the data points represents the pions. The small band within 1-2 GeV/c region, pointing to 31 ns at 1 GeV/c, might be indicates presence of the kaons. The expected separation at 1 GeV/c is about 6 ns, at 2 GeV/c - 3 ns.

average time vs momentum, bars: 325,330,335 and 340



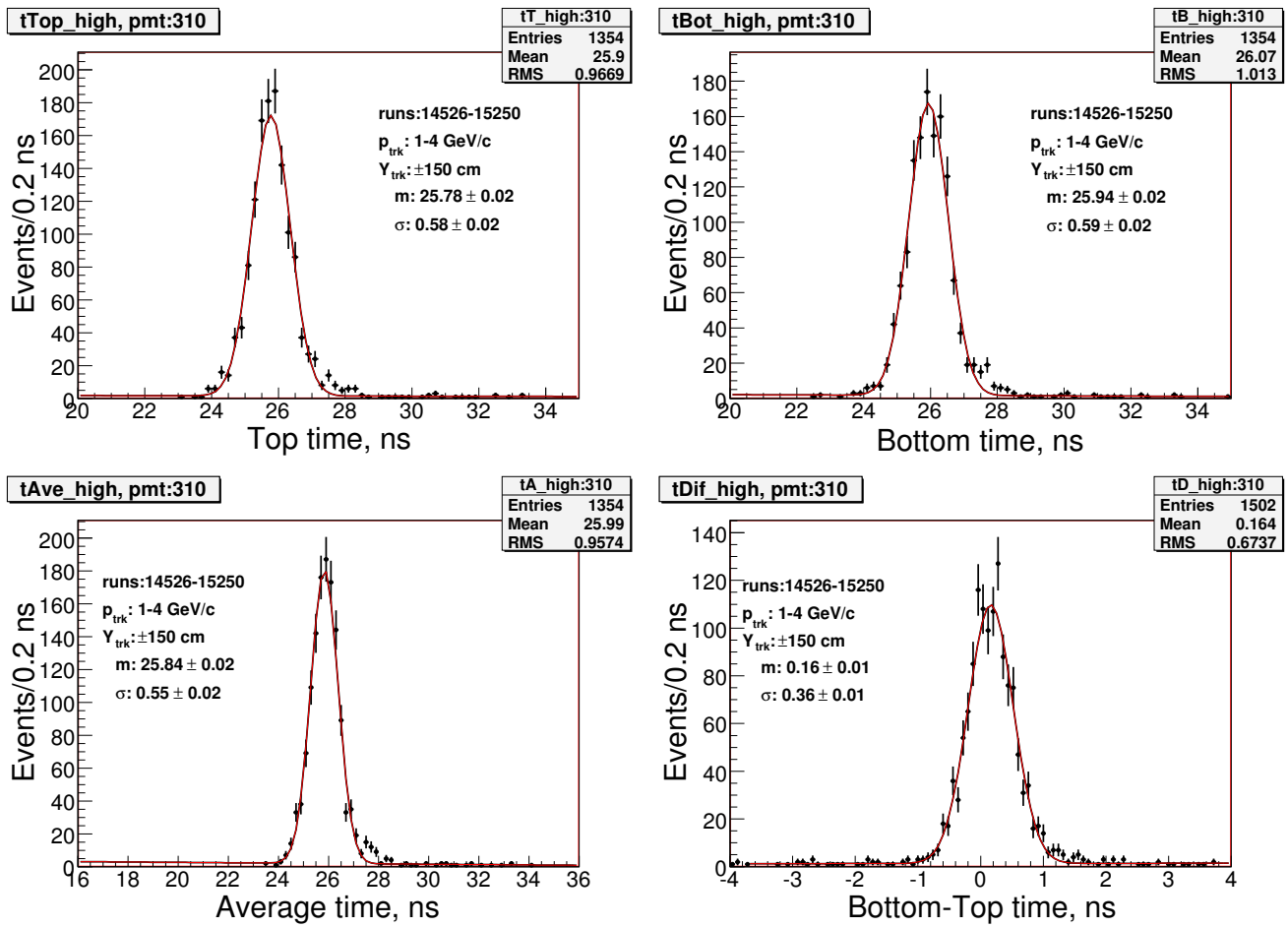
The average time vs the particles momentum distributions. The most populated band of the data points represents the pions. The small band within 1-2 GeV/c region, pointing to 31 ns at 1 GeV/c, might be indicates presence of the kaons. The expected separation at 1 GeV/c is about 6 ns, at 2 GeV/c - 3 ns.

the resolution for bar 305, NuMI target



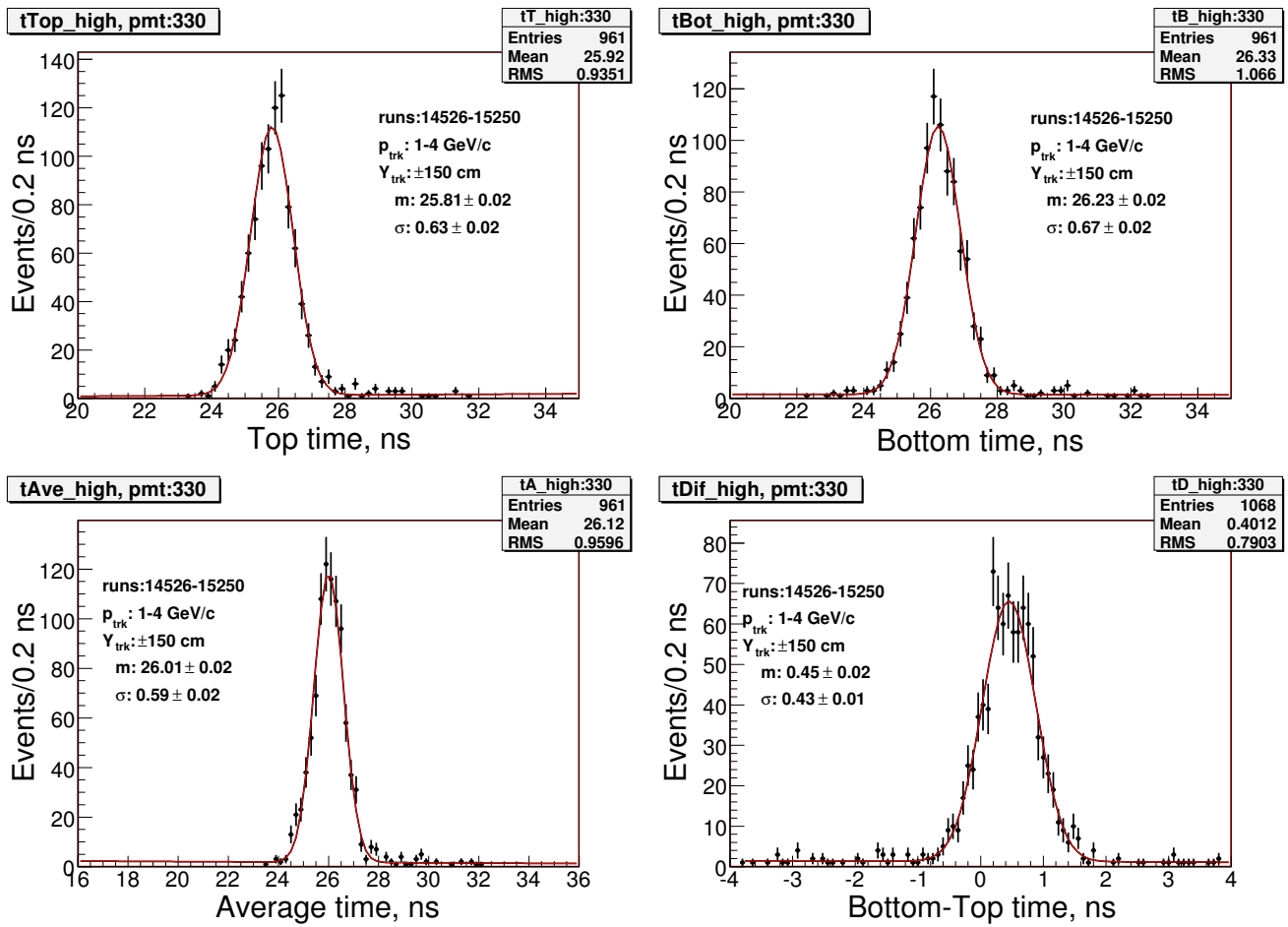
NuMI target data. Top left - the Top time, top right - the Bottom time, bottom left - the Average time, bottom right - the Bottom-Top time. Corrections taken on an account: the temperature variations, the time from both pmt's are consistent with the particles position, the particles flight time with the pion hypothesis and the speed of light in bar.

the resolution for bar 310, NuMI target



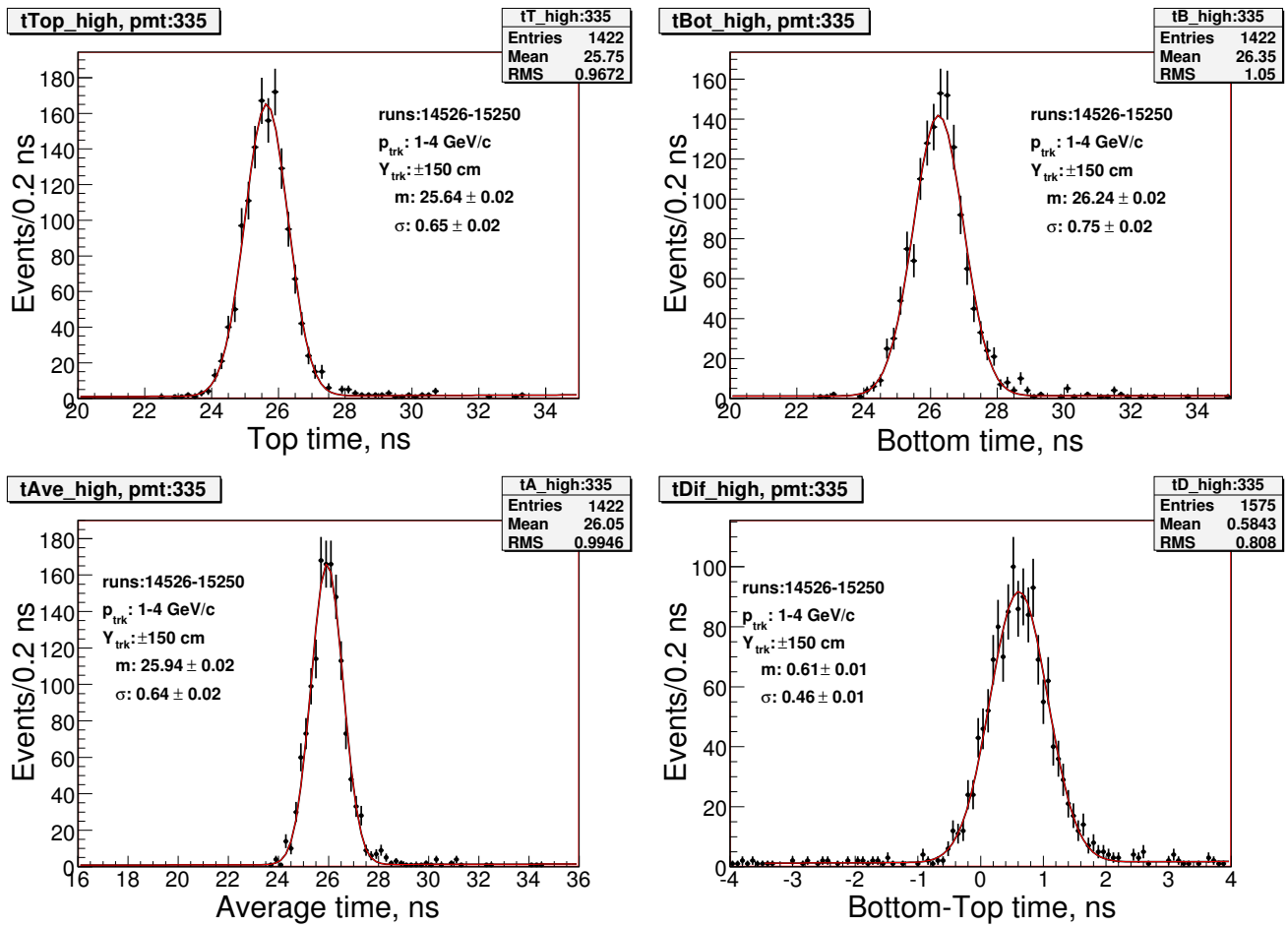
NuMI target data. Top left - the Top time, top right - the Bottom time, bottom left - the Average time, bottom right - the Bottom-Top time. Corrections taken on an account: the temperature variations, the time from both pmt's are consistent with the particles position, the particles flight time with the pion hypothesis and the speed of light in bar.

the resolution for bar 330, NuMI target



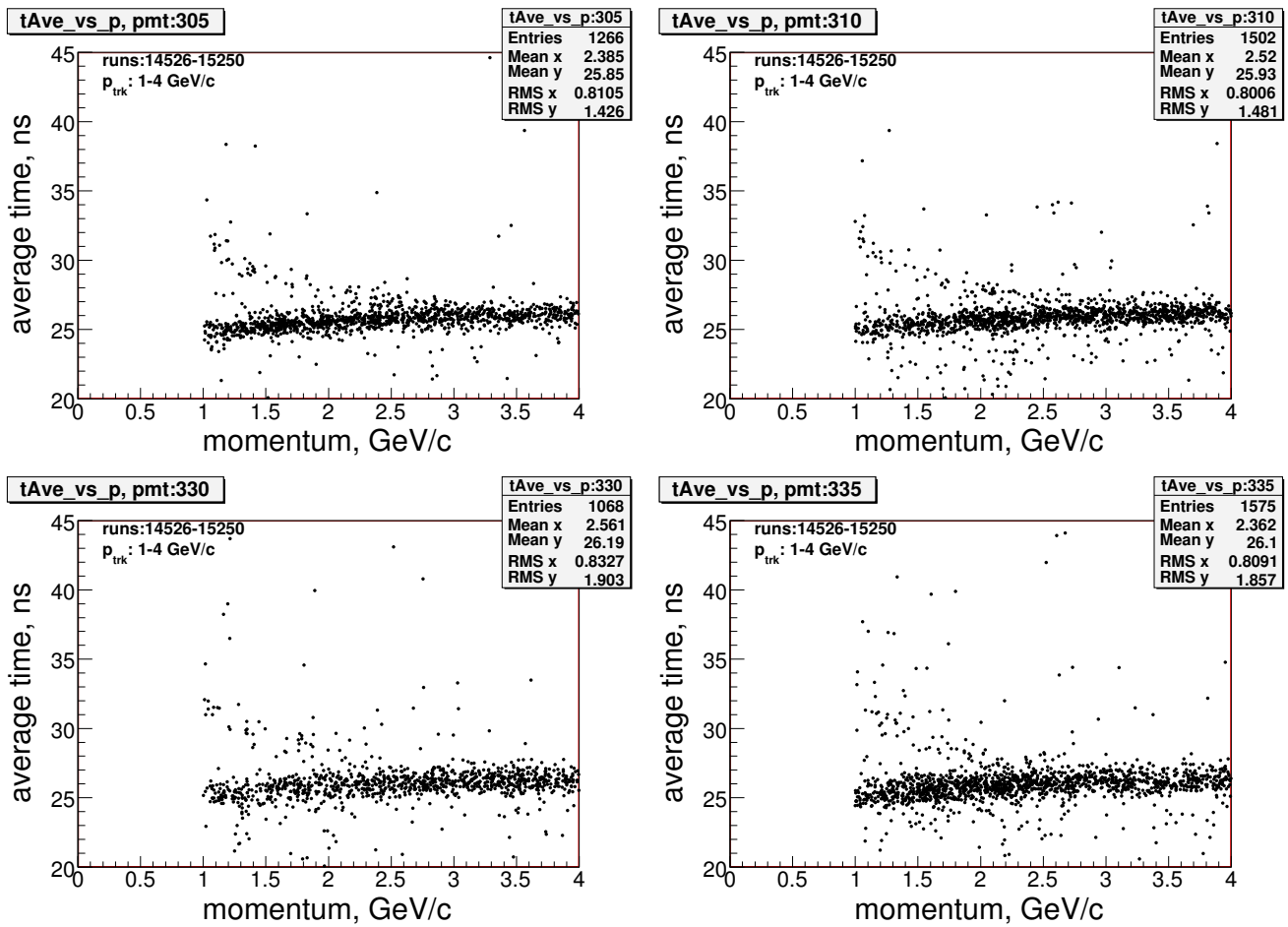
NuMI target data. Top left - the Top time, top right - the Bottom time, bottom left - the Average time, bottom right - the Bottom-Top time. Corrections taken on an account: the temperature variations, the time from both pmt's are consistent with the particles position, the particles flight time with the pion hypothesis and the speed of light in bar.

the resolution for bar 335, NuMI target



NuMI target data. Top left - the Top time, top right - the Bottom time, bottom left - the Average time, bottom right - the Bottom-Top time. Corrections taken on an account: the temperature variations, the time from both pmt's are consistent with the particles position, the particles flight time with the pion hypothesis and the speed of light in bar.

average vs p, NuMI target data, bars: 305,310,330 and 3



The average time vs the particles momentum distributions. The most populated band of the data points represents the pions. The small band within 1-2 GeV/c region, pointing to 31 ns at 1 GeV/c, might be indicates presence of the kaons. The expected separation at 1 GeV/c is about 6 ns, at 2 GeV/c - 3 ns.