

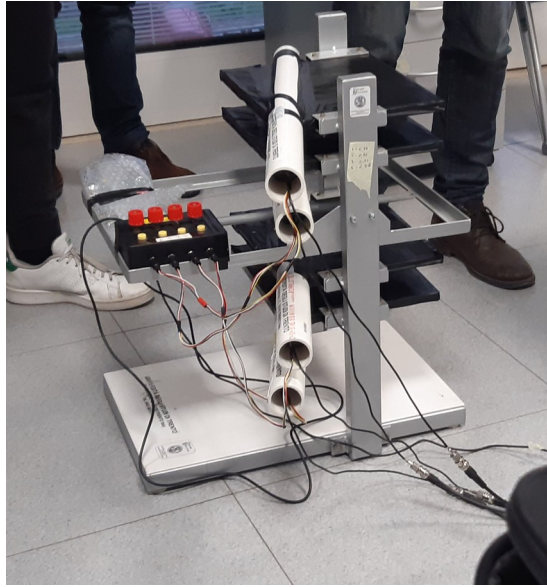


Trento Institute for
Fundamental Physics
and Applications



International Cosmic Rays Day

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Istituto di Istruzione “Martino Martini”, Mezzolombardo
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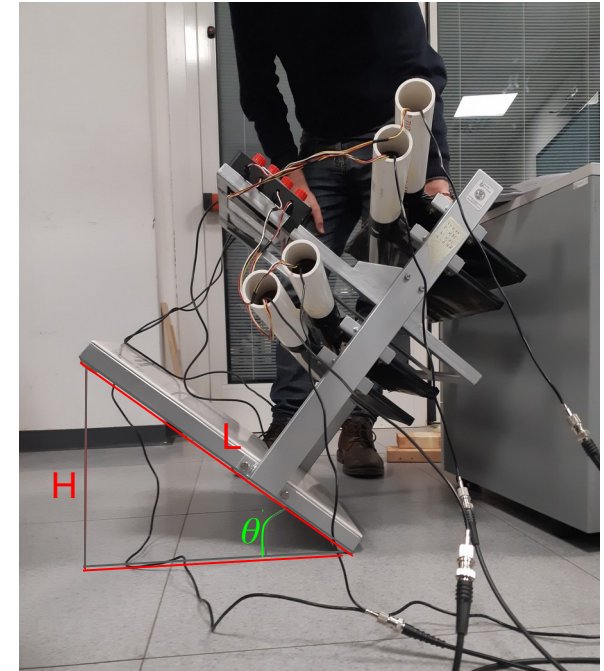
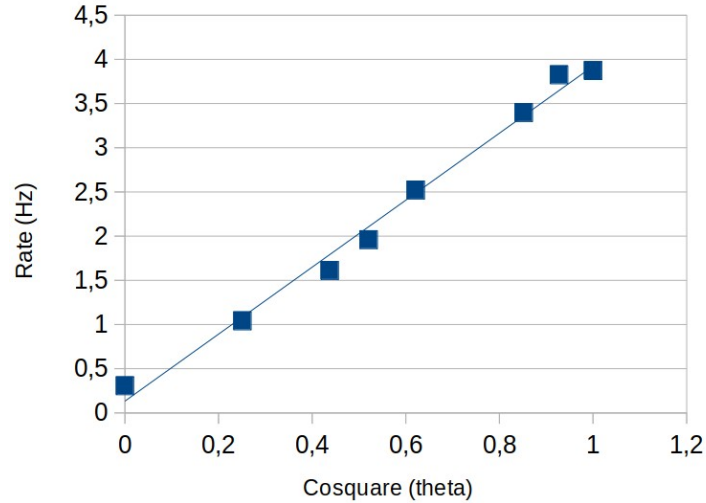


Set up



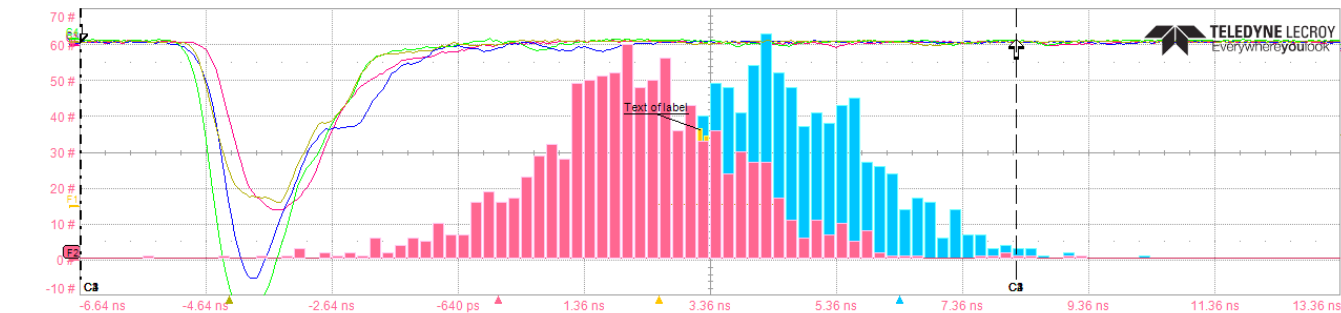
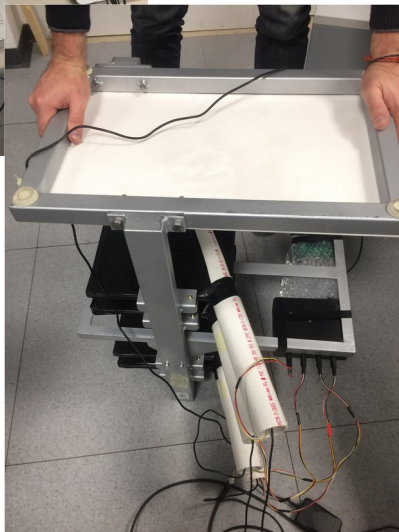
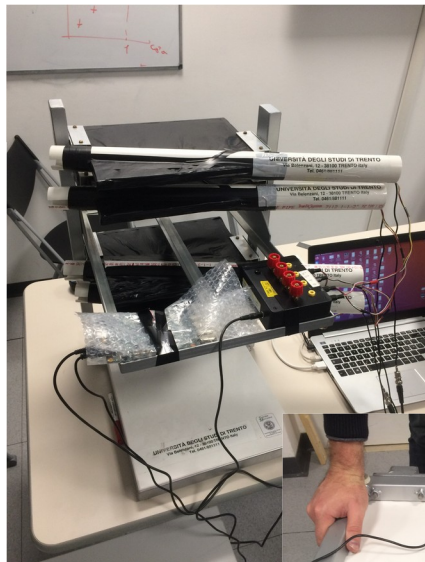
h

Angular dependence

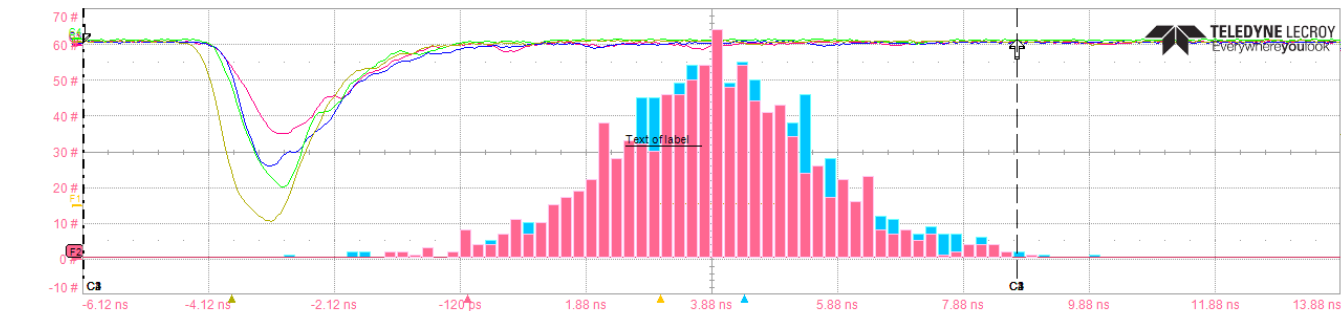


H (cm)	H/L = sen	COS	N	T(s)	<u>CosqQ</u>	R=N/T (Hz)	T1-T3 (ns)	T2-T4(ns)	NOTE
0	0	1				1	3,82	-0,372	flipped
0	0	1	1162	300	1	3,873333333	2,199	-2,065	
14	0,269230769	0,963075694	918	240	0,927514793	3,825			
20	0,384615385	0,923076923	3160	930	0,852071006	3,397849462			
32	0,615384615	0,788226982	605	240	0,621301775	2,520833333			
36	0,692307692	0,721602425	823	420	0,520710059	1,95952381			
39	0,75	0,661437828	290	180	0,4375	1,611111111			
45	0,865384615	0,501108239	250	240	0,251109467	1,041666667			
52	1	0	129	420	0	0,307142857			

Average muon velocity



Measure	P1:ampl(C4)	P2:ampl(F1)	P3:ampl(F1)	P4:dt@lv(C1...	P5:dt@lv(C2...	P6:---	P7:---	P8:---	P9:---	P10:---	P11:---	P12:---
value	> 1.5309 V	> 216.0 #	> 216.0 #	1.028 ns	-3.282 ns	---	---	---	---	---	---	---
mean	> 837.5 mV	> 216.0 #	> 216.0 #	2.199 ns	-2.065 ns	---	---	---	---	---	---	---
min	> 70.1 mV	> 216.0 #	> 216.0 #	-5.464 ns	-8.487 ns	---	---	---	---	---	---	---
max	> 1.5480 V	> 216.0 #	> 216.0 #	9.265 ns	3.845 ns	---	---	---	---	---	---	---
sdev	> 281.5 mV	---	---	1.751 ns	1.665 ns	---	---	---	---	---	---	---
num	1.163e+3	1	1	1.162e+3	1.160e+3	0	0	0	0	0	---	---
status	⌵	⌵	⌵	✓	⌵	---	---	---	---	---	---	---



Measure	P1:ampl(C4)	P2:ampl(F1)	P3:ampl(F1)	P4:dt@lv(C1...	P5:dt@lv(C2...	P6:---	P7:---	P8:---	P9:---	P10:---	P11:---	P12:---
value	830.8 mV	> 180.0 #	> 180.0 #	2.913 ns	893 ps	---	---	---	---	---	---	---
mean	> 877.8 mV	> 180.0 #	> 180.0 #	3.820 ns	-372 ps	---	---	---	---	---	---	---
min	> 87.7 mV	> 180.0 #	> 180.0 #	-1.303 ns	-7.126 ns	---	---	---	---	---	---	---
max	> 1.5469 V	> 180.0 #	> 180.0 #	8.909 ns	6.053 ns	---	---	---	---	---	---	---
sdev	> 310.8 mV	---	---	1.672 ns	1.700 ns	---	---	---	---	---	---	---
num	1.178e+3	1	1	1.178e+3	1.174e+3	0	0	0	0	0	---	---
status	⌵	⌵	⌵	✓	✓	---	---	---	---	---	---	---

Average velocity

T3-T1(ns)	T2-T4(ns)	V1,3	V2,4	media	errore
2,199	-2,065	29,61135102	28,3520378	28,98169441	0,629656608
3,82	-0,372				

$$V=29,0 \pm 0,6 \text{ cm/ns}$$