A CBM/FAIR szimuláció használata és részecske klaszterezés nehézion ütközésekben

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Vázlat

- QCD a CBM-ben
- A CBM detektor
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- A szimulációs program
- Nehézion fizika itthon
- Részecske klaszterezés - MST (/ BFS)
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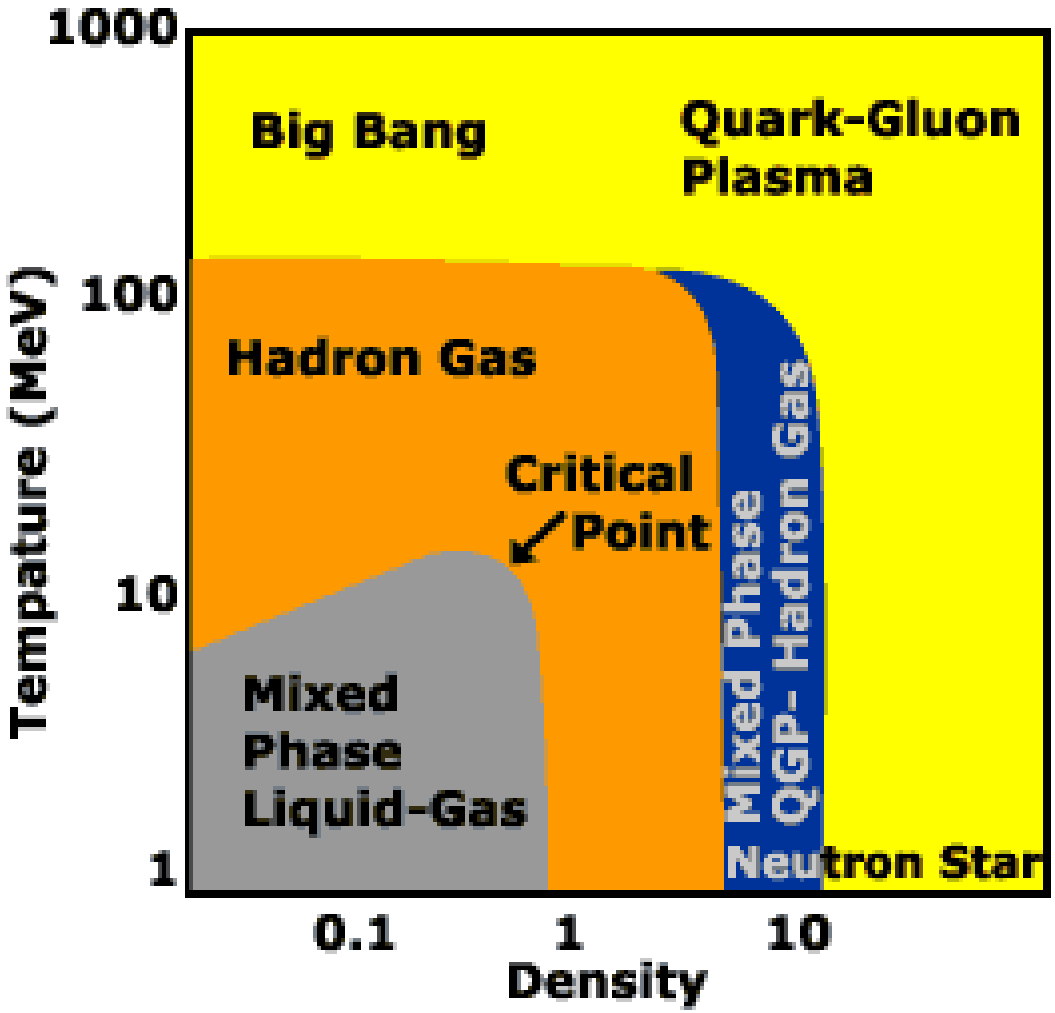
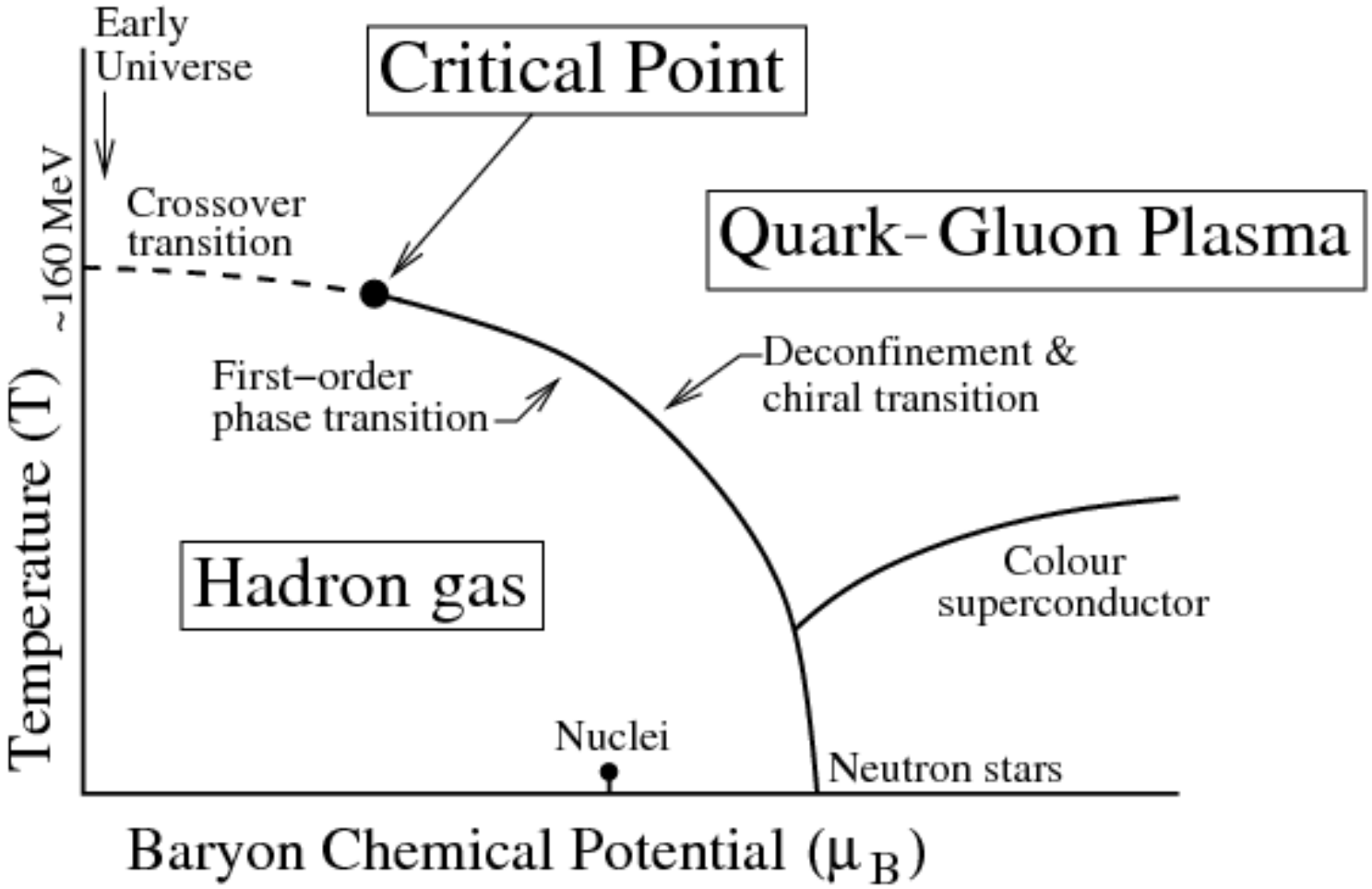
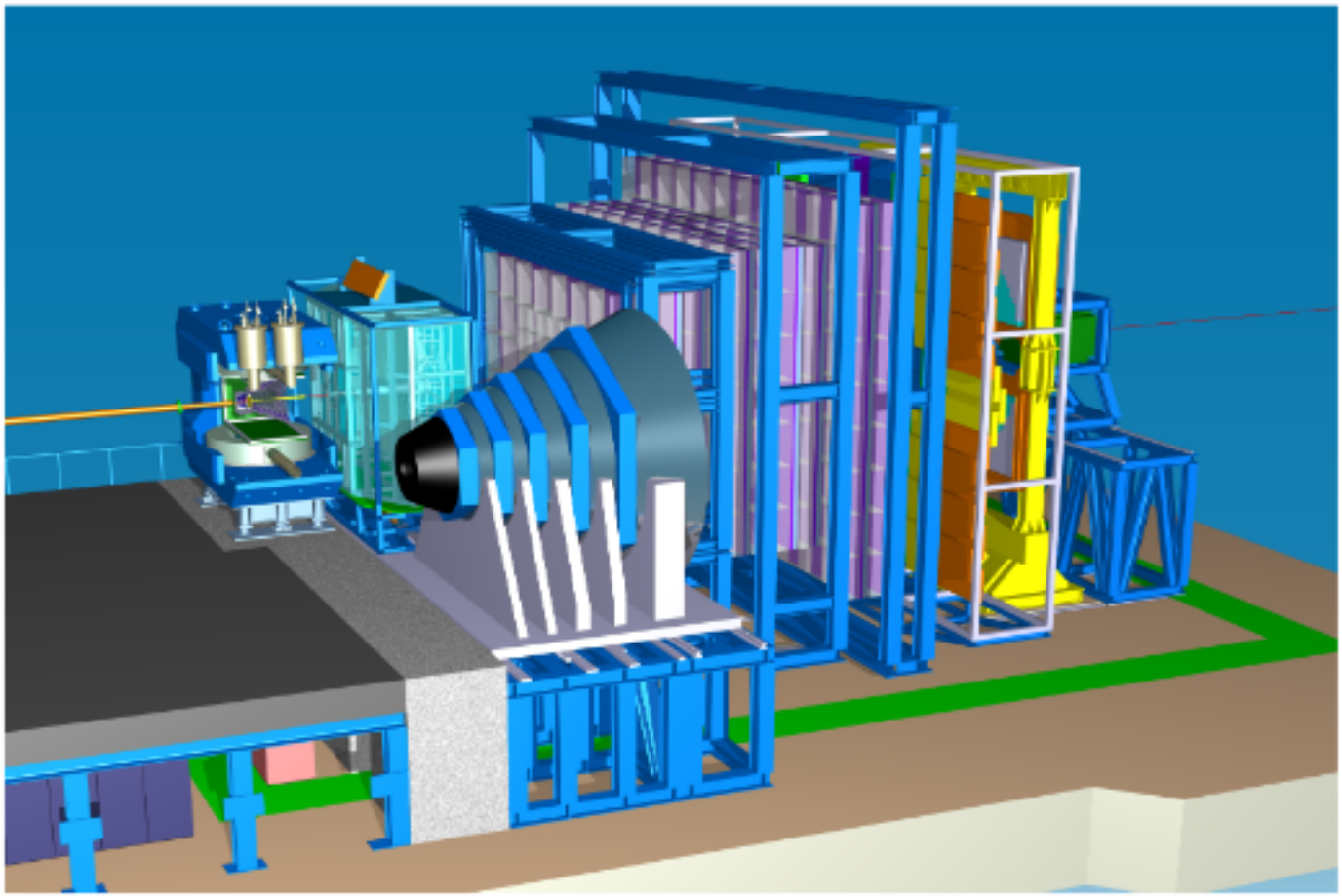
QCD a CBM-ben


1000
100
10
1
Tempature (MeV)
Big Bang
Quark-Gluon Plasma
Hadron Gas
Critical Point
Mixed Phase Liquid-Gas
Mixed Phase QGP- Hadron Gas
Neutron Star
0.1
1
10
Density

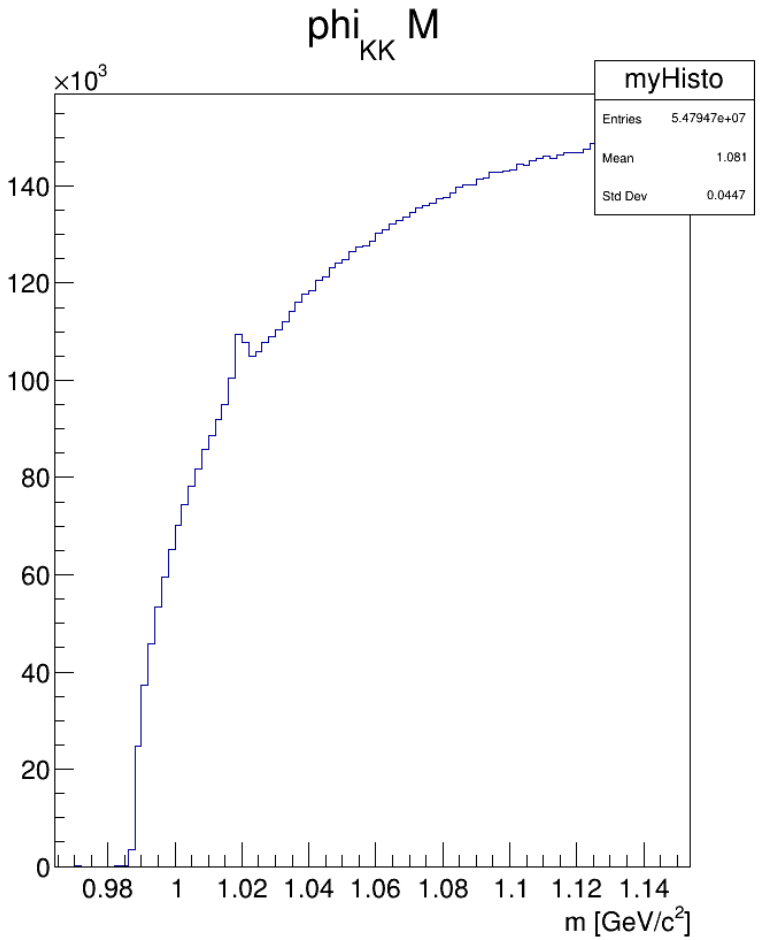
QCD a CBM-ben

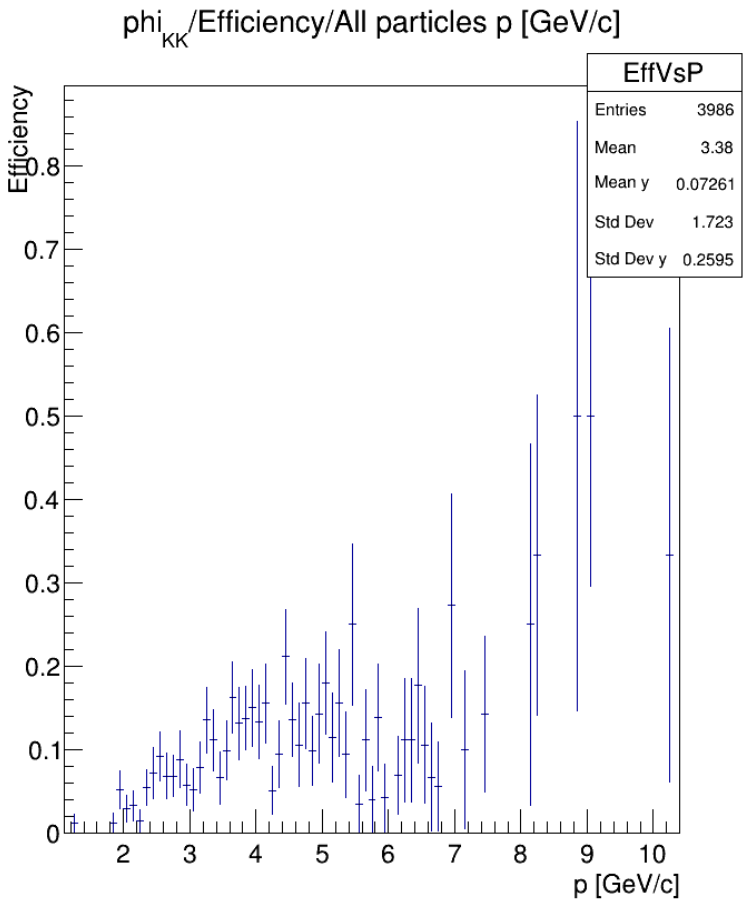

Early
Universe
Critical Point
Crossover
transition
~160 MeV
Quark-Gluon Plasma
First–order
phase transition
Deconfinement &
chiral transition
Hadron gas
Colour
superconductor
Nuclei
Neutron stars
Temperature (T)
Baryon Chemical Potential (μ_B)

A CBM detektor

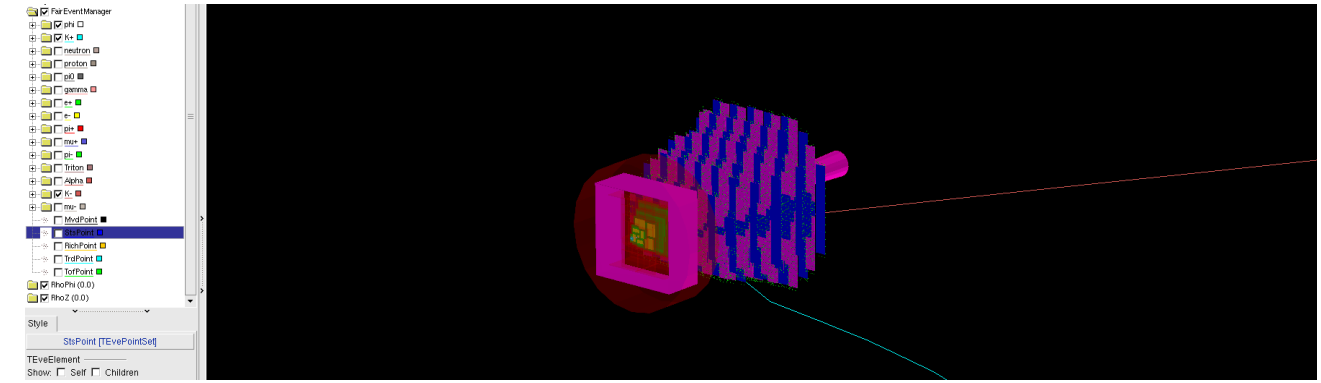


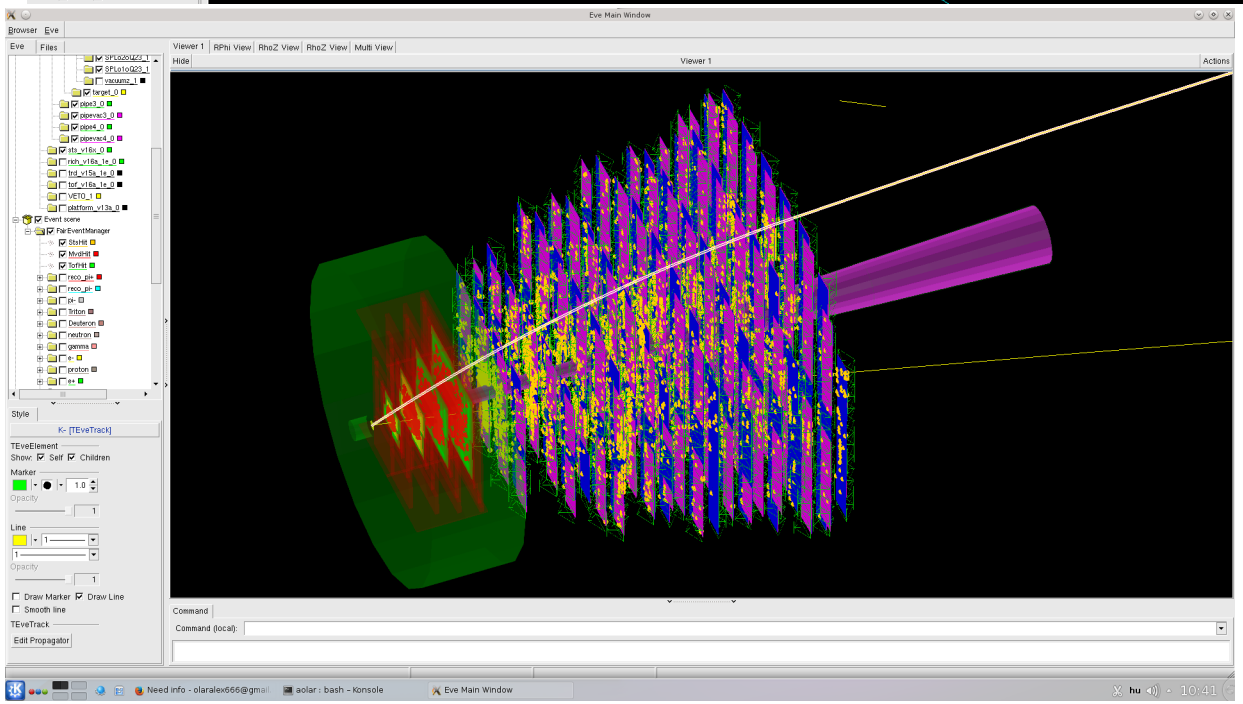
Φ-mezon


phi_KK M
×10^3
myHisto
Entries 5.47947e+07
Mean 1.081
Std Dev 0.0447
140
120
100
80
60
40
20
0
0.98
1
1.02
1.04
1.06
1.08
1.1
1.12
1.14
m [GeV/c^2]

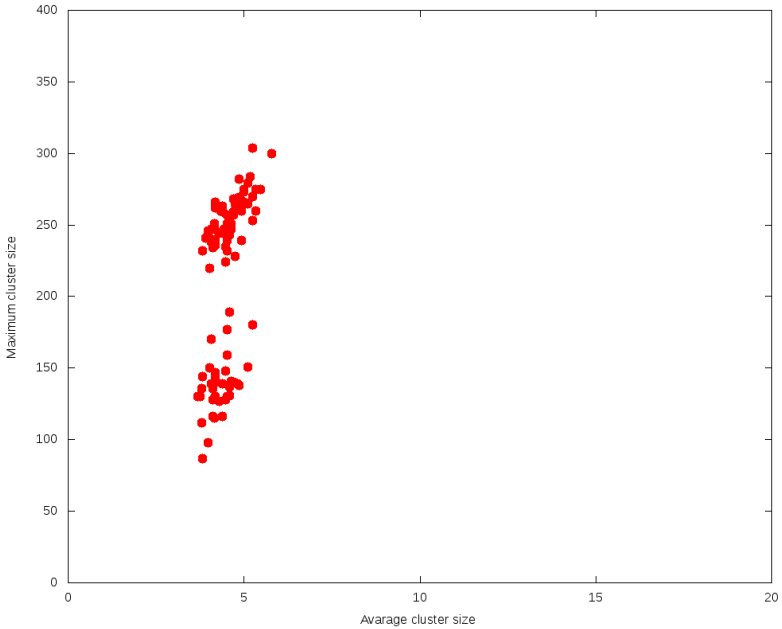

phi_KK/Efficiency/All particles p [GeV/c]
EffVsP
Entries 3986
Mean 3.38
Mean y 0.07261
Std Dev 1.723
Std Dev y 0.2595
Efficiency
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
2
3
4
5
6
7
8
9
10
p [GeV/c]

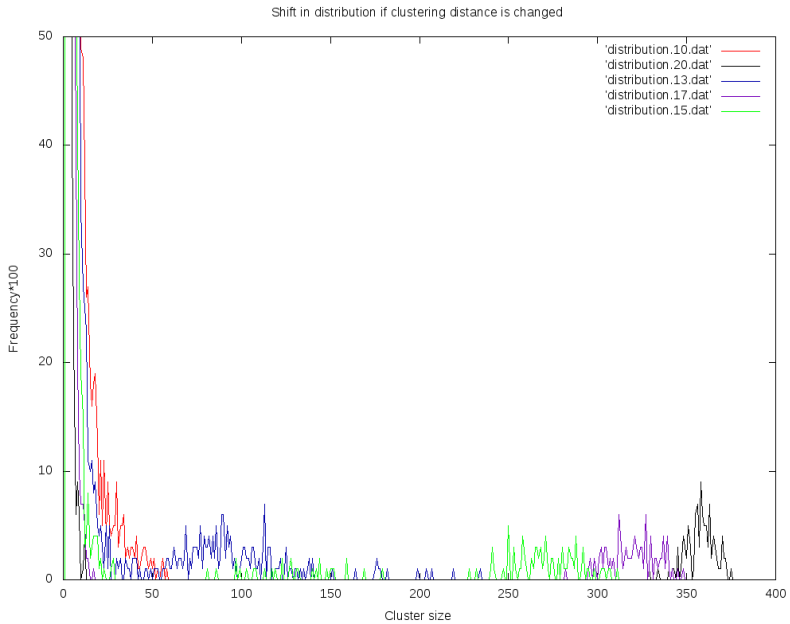
A szimulációs program

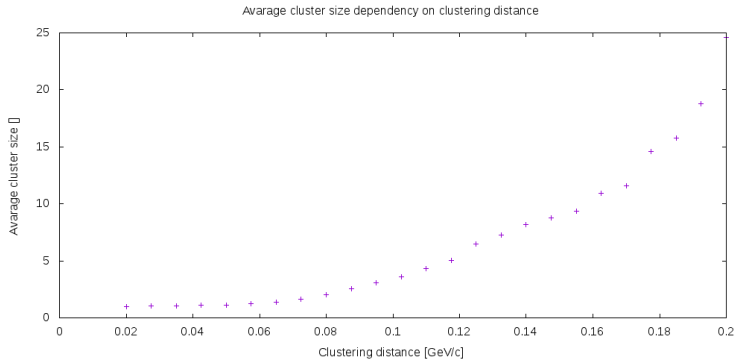




Nehézion fizika itthon - Részecske klaszterezés - MST







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