PARTICLE FLUX CALCULATION-II

Sergei Striganov
Fermilab
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Detector positions
detector 1 – rectangle - $12 \times 12 \times 0.1$ cm
detector 2 – ring - $122 \times 3 \times 0.1$ cm
detector 3 – ring - $88.5 \times 3 \times 0.1$ cm
detector 4 - rectangle - $10 \times 10 \times 0.1$ cm
Energy spectra (detector 1)

Energy spectra at 0 degree

Energy spectra of charged particles at 0 degree (detector 1)
Energy spectra (detector 1):
red line – from attenuator
green line – from target

Energy spectra of 0 degree (detector 1)
Time distribution (detector 1)

Time distribution at 0 degree (detector 1)
Energy spectra (detector 2 – 90 degree)

Energy spectra at 90 degree

Energy spectra of charged particles at 90 degree
Time distribution (detector 2 – 90 degree)
Energy spectra (detector 3 – 10 degree)

- Charged
- Neutral
- Muon
- Electron
- Neutron
- Gamma
- Pion
- Proton

Energy spectra at 10 degree
Energy spectra of charged particles at 10 degree
Time distribution (detector 3 – 10 degree)
Angular distributions

Angular distributions at 10 degree

Angular distributions at 90 degree
Energy spectra (detector 4 – 0 degree)

Energy spectra at 0 degree (detector 4)

Energy spectra of charged particles at 0 degree (detector 4)
Time distributions (detector 4 – 0 degree)
Energy spectra (detector 1 – 0 degree):
red line – Hg target
blue line – air target
Cerenkov detector 100 cm long, 7.9 cm radius.
Number of charged pions (p>5 GeV/c) – 1.6 $10^{-6}$ per proton,
number of electrons with same $\beta$ (p>18 MeV/c) - 9. $10^{-4}$ per proton,
1 cm Pb shield installed before detector - 1. $10^{-3}$ per proton.
Electron track inside detector > 90 cm - 1.1 $10^{-4}$ per proton,
1 cm Pb shield installed before detector - 6.2 $10^{-5}$ per proton.