

# CRY library

- CRY muon flux =  $120 \text{ m}^{-2}\text{s}^{-2}$

Cosmic Rays at Earth - Grieder2001.pdf - Mozilla Firefox

theor.jinr.ru/~vnaumov/Eng/JINR\_Lectures/books/Grieder2001.pdf

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페이지 번호에 맞춤

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$$I_v(1 \text{ GeV}/c) = 3.09 \cdot 10^{-3} \text{ [cm}^{-2}\text{s}^{-1}\text{sr}^{-1}(\text{GeV}/c)^{-1}] , \quad (3.23)$$

which is 26% higher than the Rossi intensity. The vertical integral intensity, the flux and the omnidirectional intensity have been derived from this intensity and have been found to be 16% higher than the Greisen data (Greisen 1942; Allkofer et al. 1975a). They have the following values for a lower momentum cutoff at 0.35 GeV/c:

$$I_v(> 0.35 \text{ GeV}/c) = (0.94 \pm 0.05) \cdot 10^{-2} \text{ [cm}^{-2}\text{s}^{-1}\text{sr}^{-1}] \quad (3.24)$$

$$J_1(> 0.35 \text{ GeV}/c) = (1.44 \pm 0.09) \cdot 10^{-2} \text{ [cm}^{-2}\text{s}^{-1}] , \quad (3.25)$$

$$J_2(> 0.35 \text{ GeV}/c) = (1.90 \pm 0.12) \cdot 10^{-2} \text{ [cm}^{-2}\text{s}^{-1}] . \quad (3.26)$$

In 1970 worldwide re-measurement of the muon intensities had been initiated to clarify the situation. New differential and integral measurements were carried out, predominantly at sea level and at low momenta. The new values are between 10% and 30% higher. Table 3.12 gives a summary of the results obtained by various authors (see also Allkofer and Jokisch, 1973). A compilation of differential data is shown in Fig. 3.27 and of integral data

- # of hit muons  $\sim 55$  per event
- $\Delta(\text{The fastest hit time in an event}) \times 55$  for muon

