

$$\varphi = 5000 \text{ m}^{-2} \text{ sec}^{-1}$$

$$E \sim 1 \text{ GeV}$$

$$\sigma \sim 10^{-38} \text{ cm}^2$$

$$\text{Nucleons} = 6 \times 10^{29} \text{ ton}^{-1}$$

$$N = \varphi \cdot \sigma \cdot 6 \times 10^{29} \cdot 3 \times 10^7 \text{ ton}^{-1} \text{ yr}^{-1}$$

$$N = 0.1 \text{ events / ton / yr}$$