The last two models significantly better describe the

**Conclusions**

The efficiency of the criteria is about 96%, and the rejection factor is \( \sim 10^{-3} \).

Zenith and azimuth angle distributions of selected events

Experimental data

\[ dN_{\text{mu}} = N_{\text{H}} - N_{\text{A}} \]

Difference between the total number of opposite PMTs

Relative difference between the total amplitudes of opposite PMTs

Time difference between the signals from DECOR supermodules

Selection of criteria for determining the track direction

The amplitude and time-of-flight methods are independent, therefore we can estimate the efficiency and the upper limit of the error of the criterion for the relative difference between the total amplitudes of PMTs by imposing rigid conditions for the time difference \( \Delta t \), and vice versa.

Estimated efficiency and error rate of the amplitude technique

Estimated efficiency and error rate of the time-of-flight technique

The final criteria are \( (S_A \geq 0.7 \text{ and } \Delta t \geq 50 \text{ ns}) \text{ or } (S_A < 0.7 \text{ and } \Delta t \leq 50 \text{ ns}) \). The efficiency of the criteria is about 96%, and the rejection factor is \( \sim 10^{-3} \).

Zenith and azimuth angle distributions of selected events

Experimental intensity of the muon flux and comparison with simulation results

Simulation of muon penetration through a flat layer of ground by means of MC method has been performed. In simulations, four models are used: multiple Coulomb scattering in Gaussian approximation; Moliere theory; model taking into account finite size of nuclei; point-like nuclei.

Muon energy was simulated as a function of zenith angle based on differential spectrum of muons, calculated by the formulas of L.Volkova and assuming about the power spectrum of primary cosmic rays with integral slope spectrum index \( \gamma = 1.7 \).

The number of albedo muons for Moliere theory coincides with the results of point-like nucleus model and with the increase of zenith angle decreases slower than in the model of finite-size nucleus. Results of calculations with Gaussian approximation are close to the dependence obtained for the model with a finite-size nucleus (with accurate nuclear formfactors). The last two models significantly better describe the experimental dependence.

Conclusions

Selection criteria for albedo events in the experimental complex NEVOD on the basis of amplitude and time-of-flight techniques have been developed. The intensity of muons with energies above 7 GeV in zenith angle range 85° - 94° has been measured. Simulation of muon penetration through a flat layer of ground shows that the main process of albedo muon flux formation in the range 91° - 94° is the multiple Coulomb scattering. The calculations for the model of point-like nuclei (including the Moliere theory) lead to an overestimation of the intensity of the albedo muons.