# Longitudinal Polarization of $\Lambda$ and $\bar{\Lambda}$ Hyperons in Deep-Inelastic Scattering at COMPASS

M.G.Sapozhnikov (on behalf of the COMPASS Collaboration)

*Joint Institute for Nuclear Research, Dubna*

The longitudinal polarization of $\Lambda$ and $\bar{\Lambda}$ hyperons produced in deep-inelastic scattering of 160 GeV/c polarized positive muons is studied in the COMPASS (CERN NA58) experiment.

The study of longitudinal polarization of $\Lambda$ and $\bar{\Lambda}$ hyperons in the deep-inelastic scattering is important for understanding fundamental properties of the nucleon. Comparing the longitudinal polarizations of $\Lambda$ and $\bar{\Lambda}$ in DIS one could test if the strange and antistrange quark distributions are equal and, in principle, it would be possible to obtain information about the polarization of the strange quarks in the nucleon. Also useful information about the spin structure of the $\Lambda$ could be obtained.

The data sample contains about $10^5$ $\Lambda$ and $5\ 10^4$ $\bar{\Lambda}$. Large and comparable statistics on both $\Lambda$ and $\bar{\Lambda}$ hyperons is a distinct feature of the COMPASS experiment. Preliminary results on the dependence of the longitudinal polarization of $\Lambda$ and $\bar{\Lambda}$ on different kinematical variables are presented.