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Study of Hyperon and Antihyperon Production in Deep Inelastic Muon Scattering

The yields of heavy hyperons and antihyperons have been studied in deep inelastic scattering at the COMPASS experiment at CERN.

The relative yields of $\Sigma(1385)^+$, $\Sigma(1385)^-$, $\bar{\Sigma}(1385)^-$, $\bar{\Sigma}(1385)^+$, $\Xi(1321)^-$, and $\bar{\Xi}(1321)^+$ hyperons decaying into $\Lambda(\bar{\Lambda})\pi$ were measured. The ratios of Σ^{\pm}/Λ , $\bar{\Sigma}^{\pm}/\bar{\Lambda}$, $\Xi/\bar{\Lambda}$ and $\bar{\Xi}/\Lambda$ were determined.

The measured yields were used to tune the parameters of the LEPTO generator simulating the DIS events.

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