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K_L cross-sections at KLF

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KL total cross-section

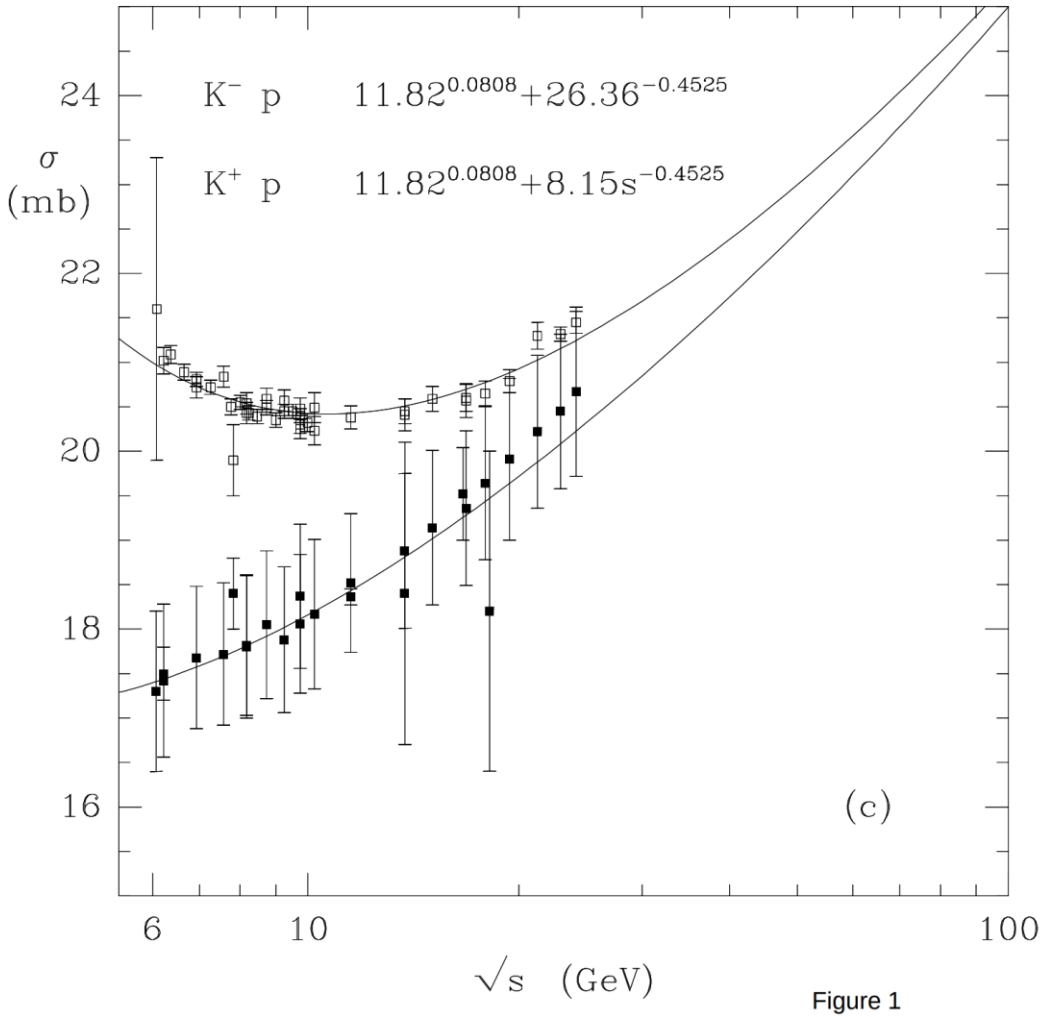
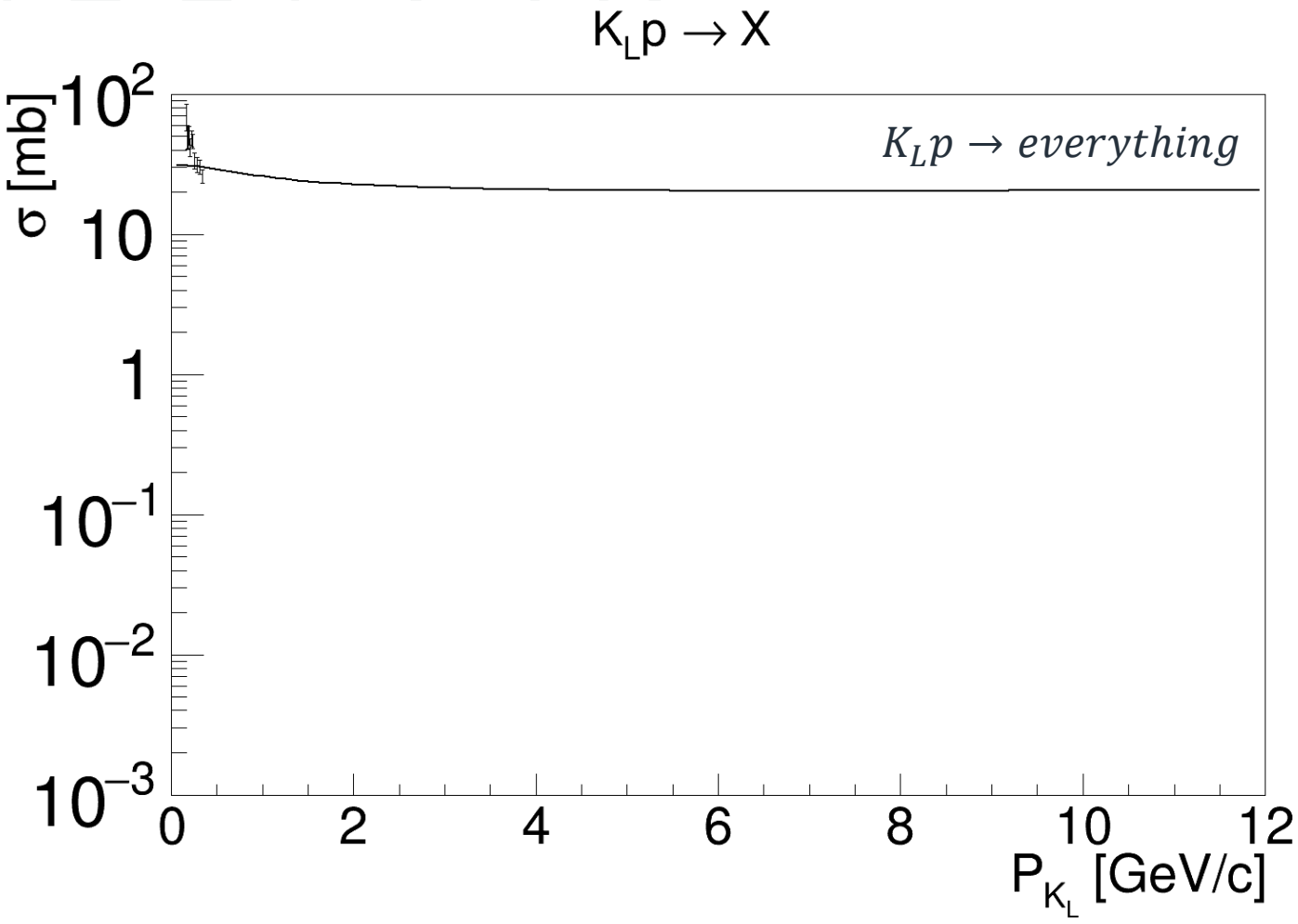


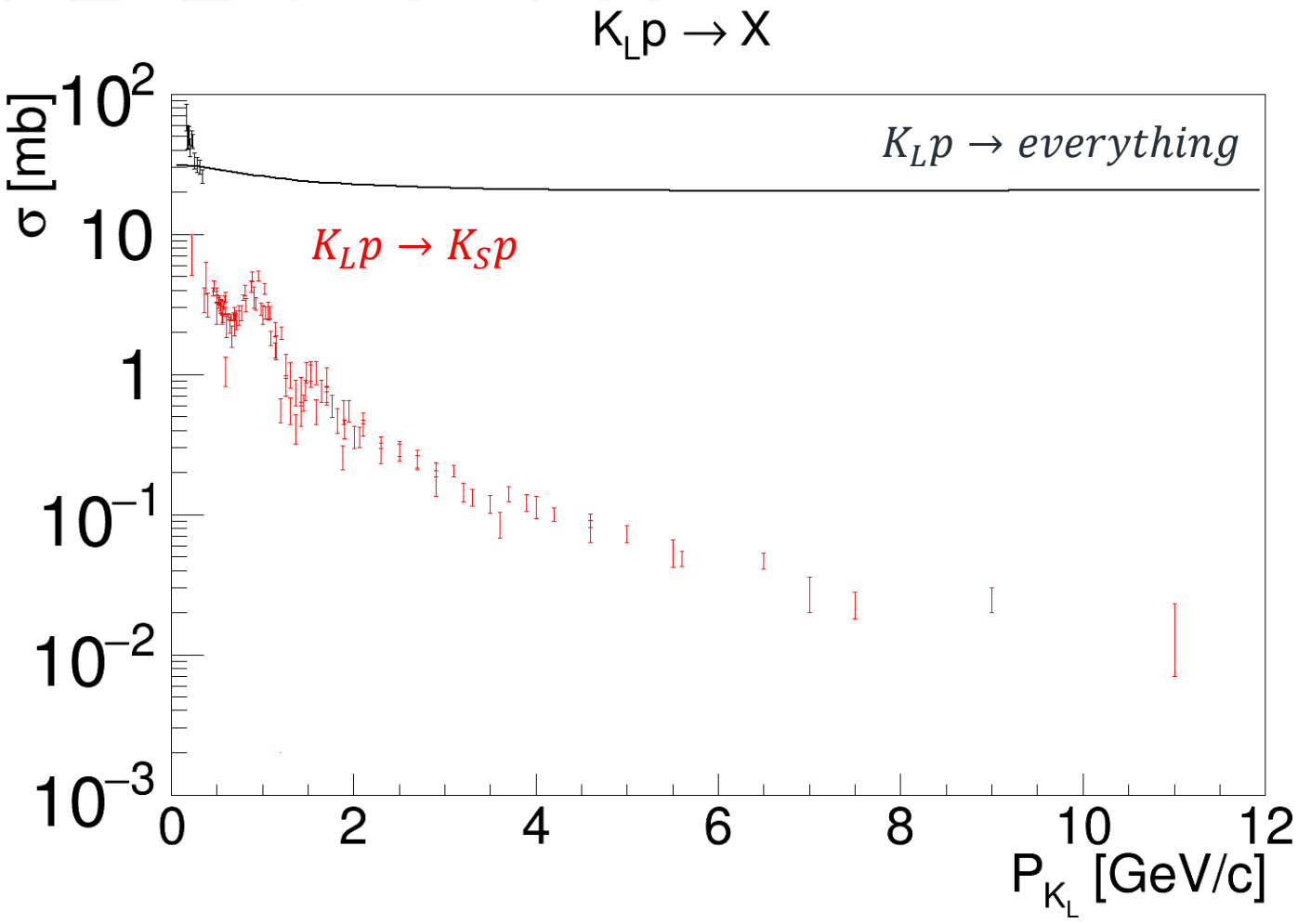
Figure 1

KL total cross-section

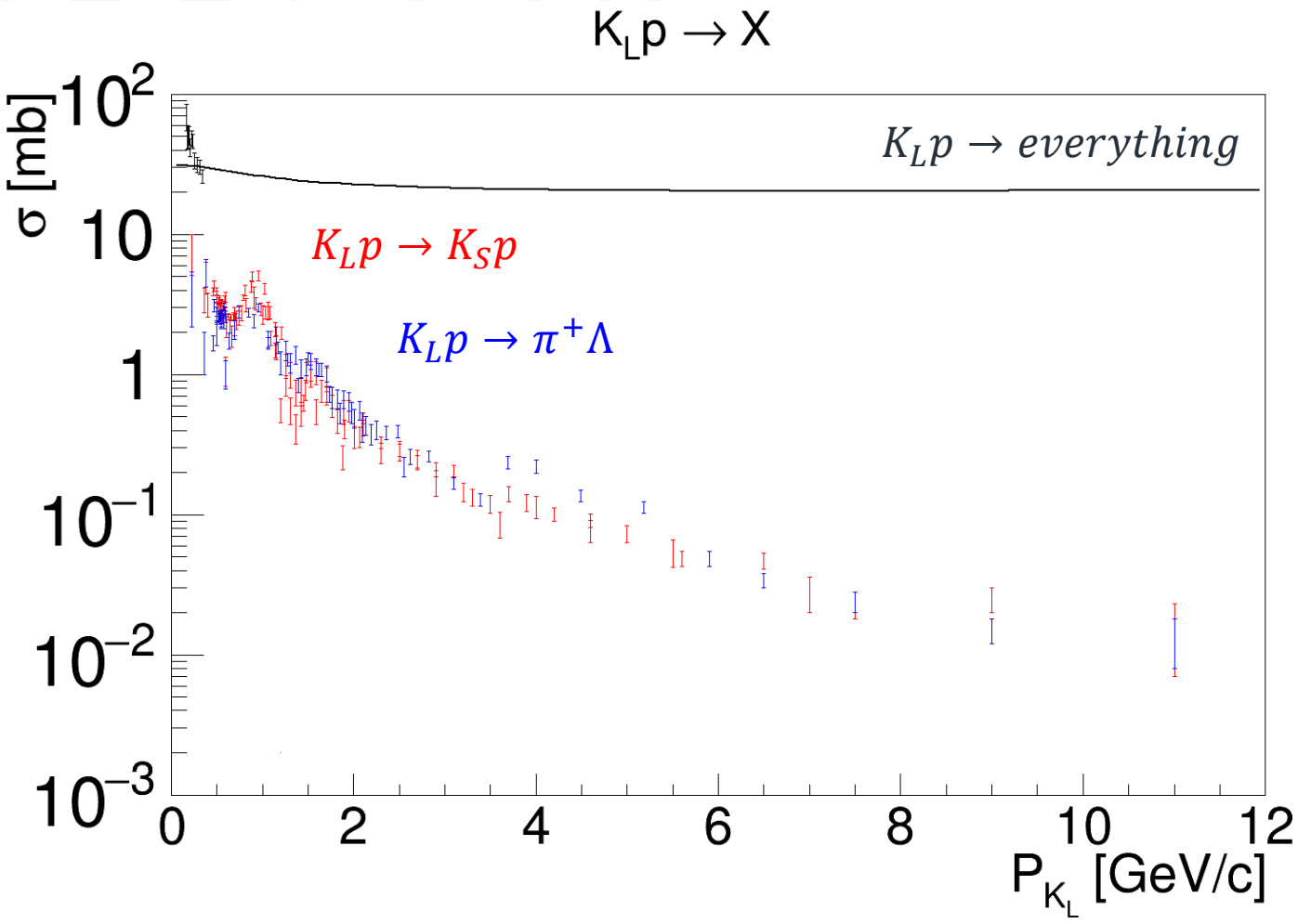


Data from “Compilation of KL p cross-sections”, IFUB 81-25, P. Capiluppi et. al

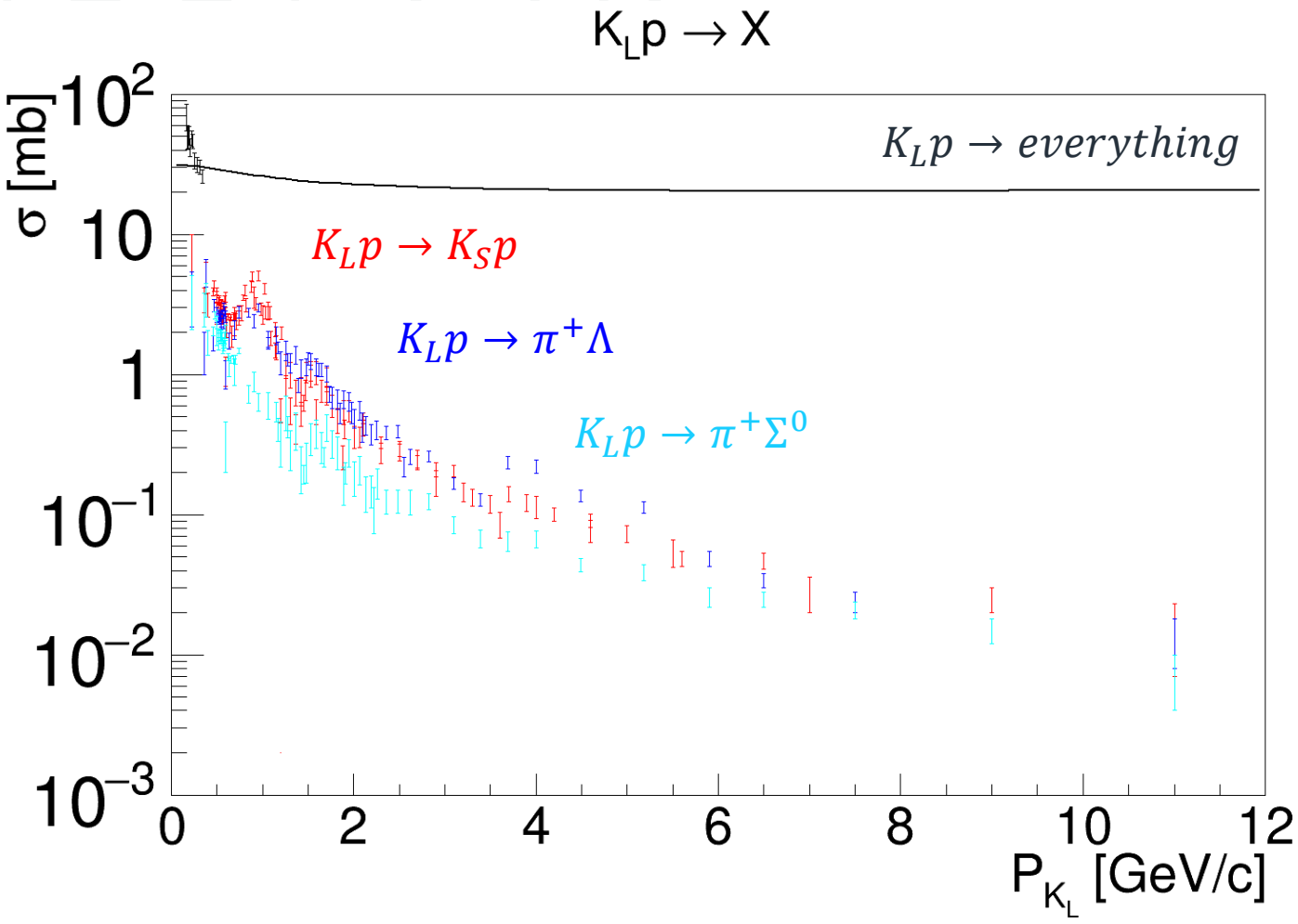
KL total cross-section



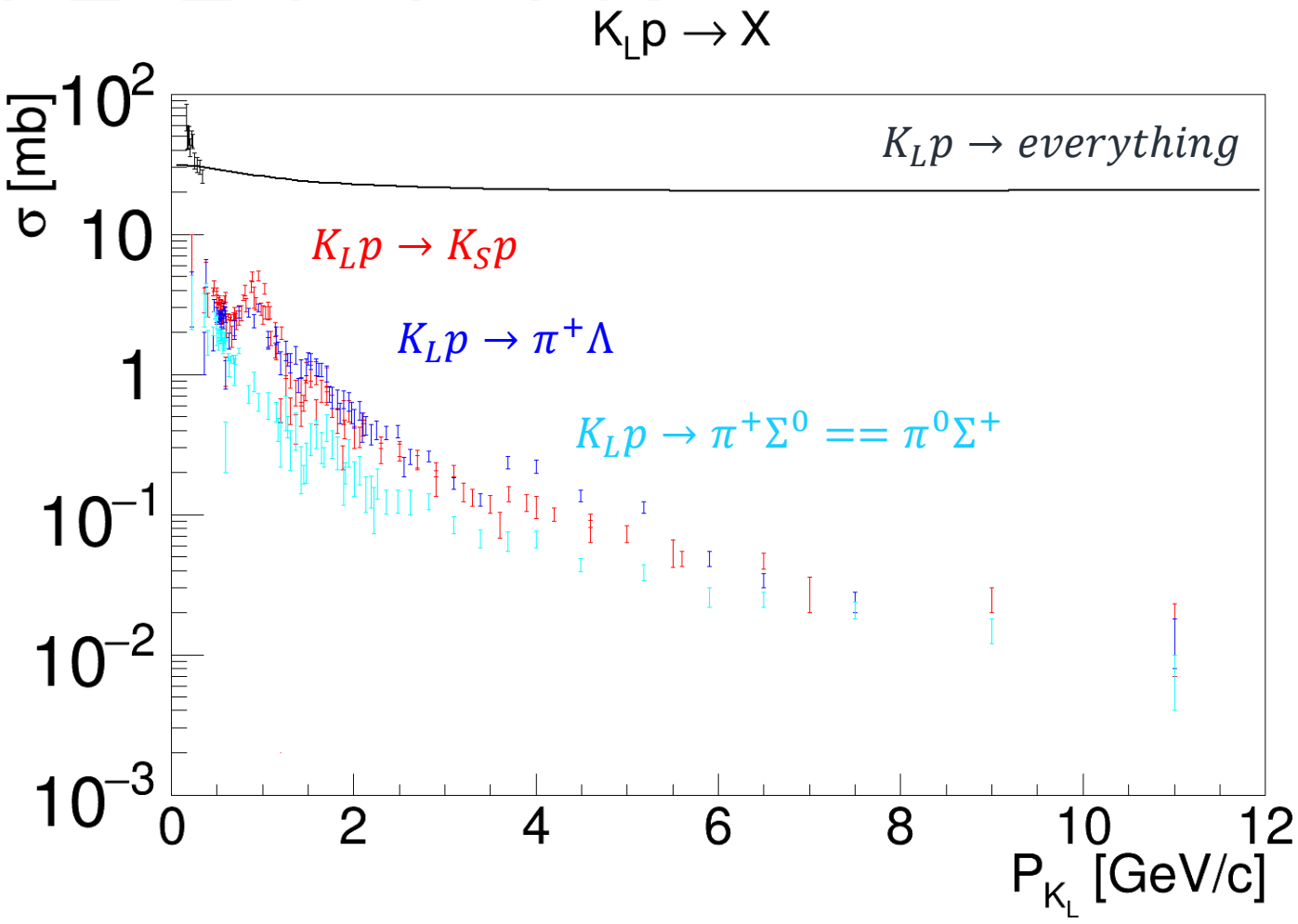
KL total cross-section



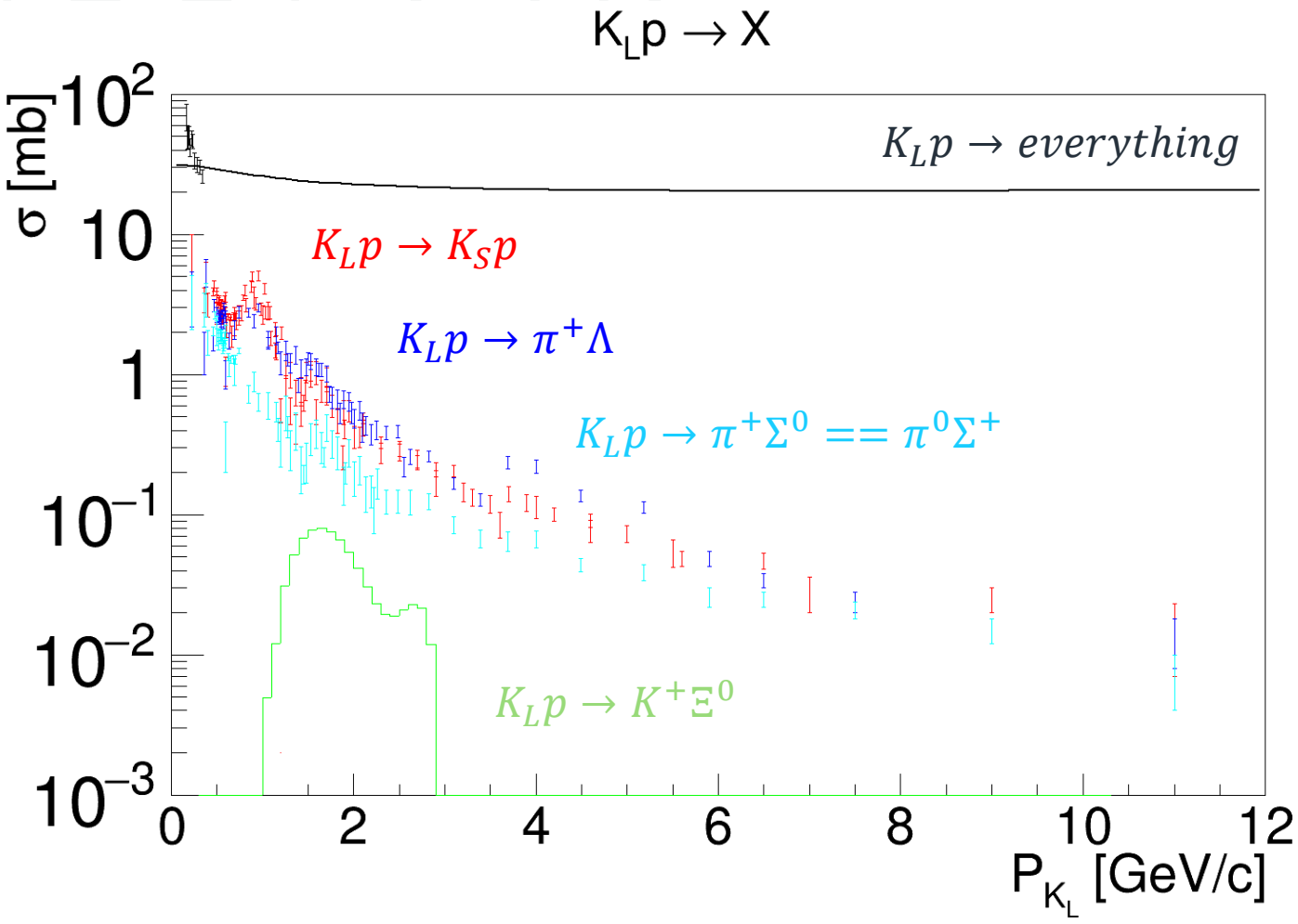
KL total cross-section



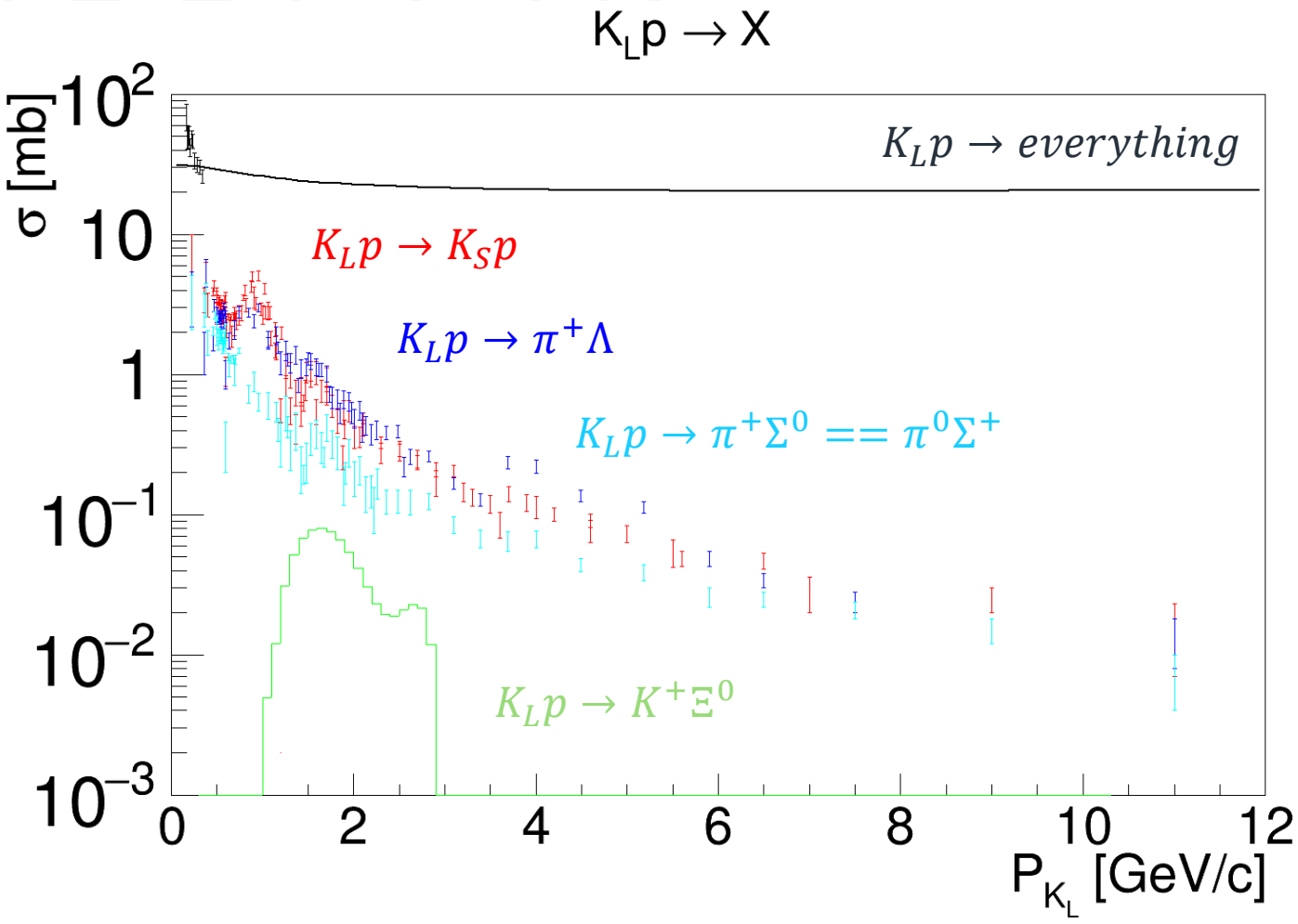
KL total cross-section



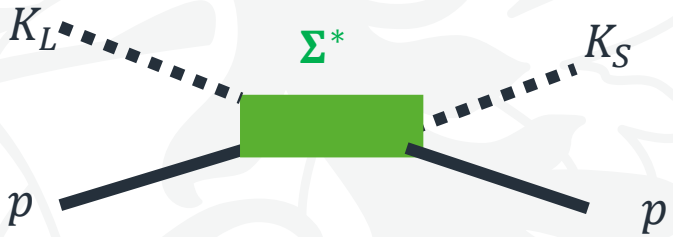
KL total cross-section

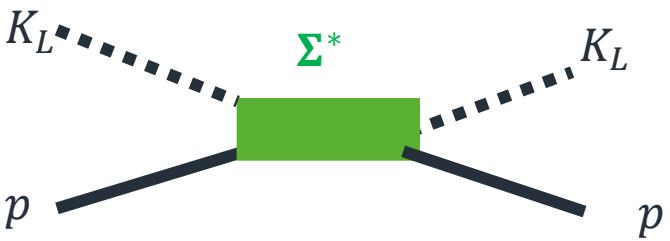


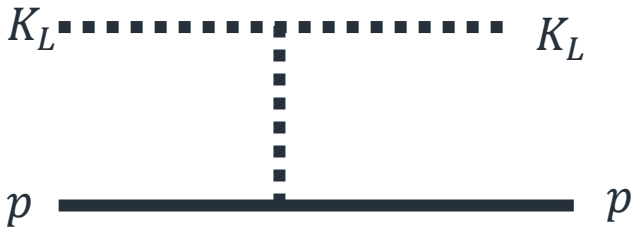
KL total cross-section



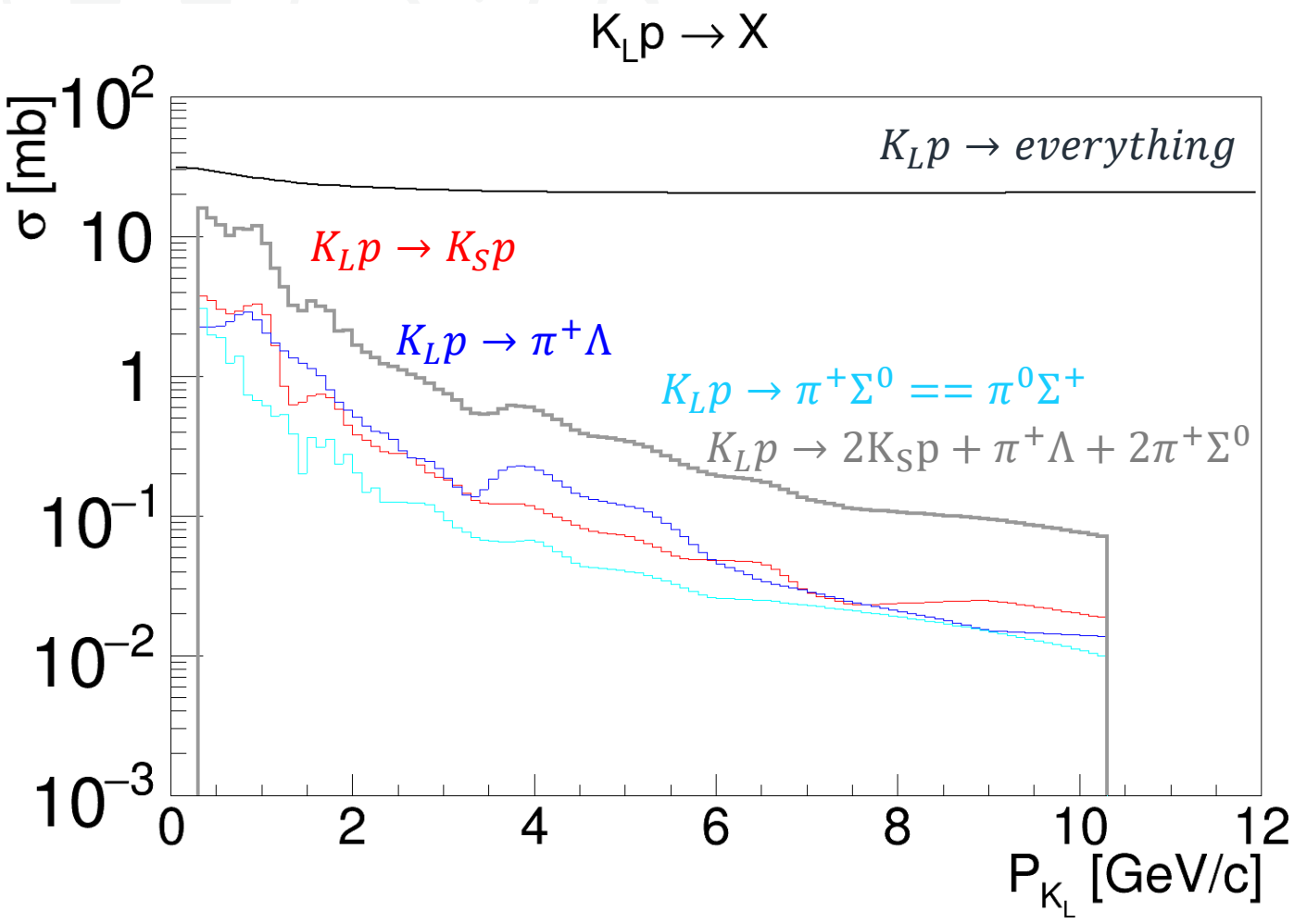
KL cross sections



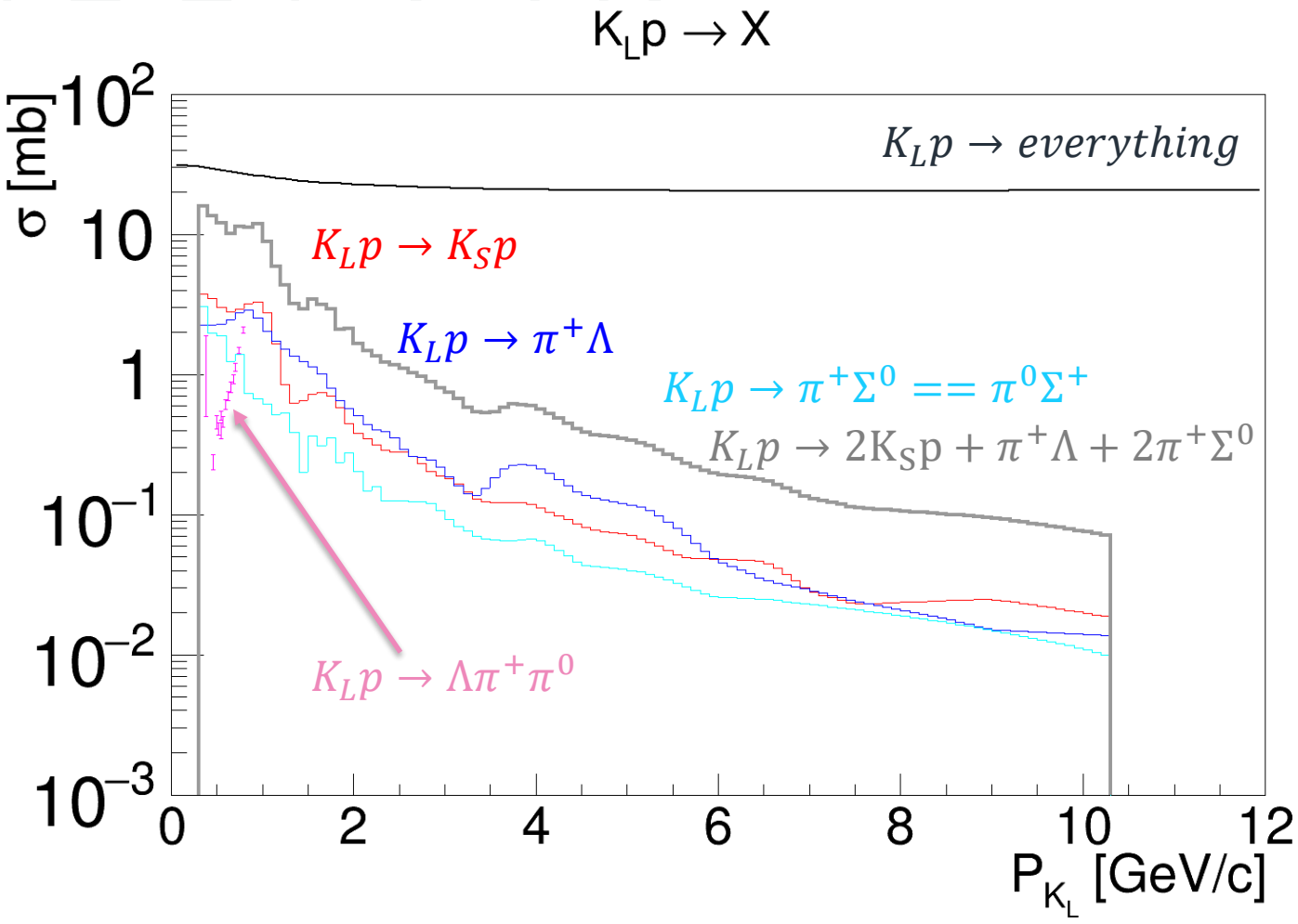




KL total cross-section



KL total cross-section



Many body reactions

- Already at $P_K \sim 1GeV/c$ $\boldsymbol{\sigma\left(\Lambda\pi^+\pi^0\right) \sim \sigma(\Lambda\pi^+)}$
  - $\boldsymbol{W \sim 1.8GeV}$
- $\boldsymbol{\Sigma^0\pi^+\pi^0, \Sigma^+\pi^0\pi^0, \Sigma^-\pi^+\pi^+}$
- **Many-body reactions as a background**

Conclusion

- $K_L p \rightarrow K_L p$ is probably the strongest reaction at low energy.
- Above $P_K \sim 1\ GeV/c$ many-body reactions dominate
- 3 body vs 2 body planarity? Missing Mass?