

Near-threshold charged kaon pair production in two protons collisions

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Collaboration

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Abstract content

The value of the total cross section of the $pp \rightarrow ppK^+K^-$ reaction close to threshold is important for understanding the K^+K^- as well as Kp interactions. There is a discrepancy between the excitation function obtained from existing measurements and theoretical expectations, especially in the near-threshold region, where kaon interactions are most important. Measurement at 4.5 MeV excess energy for that reaction was performed with the COSY-11 detection system at the Cooler Synchrotron COSY. In the talk I will present the current status of research for this process together with the newly obtained upper limit for the total cross section at $Q = 4.5$ MeV.

Primary author(s) : GIL, Damian (Jagiellonian University)

Co-author(s) : SMYRSKI, Jerzy (Jagiellonian University)

Presenter(s) : GIL, Damian (Jagiellonian University)

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