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e+e- emission in pp collisions @4.5GeV

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The High Acceptance Di-Electron Spectrometer (HADES) at GSI, Darmstadt,Germany is an experimental setup dedicated to study the hadronic matter in the region of large net baryon densities and moderate temperatures, using fixed-target heavy-ion collisions in the incident energy range of few GeV/nucleon. Dilepton emission is a favored probe for such studies as it gives undistorted information of hadronic matter at all stages of the collision. The detection of e+e- pairs in proton-proton reactions provides an useful reference for the analysis in heavy ion collisions and allows to study specific dilepton production channels, as vector meson decays ($\rho/\omega/\phi \rightarrow e^+e^-$) or baryon resonance Dalitz decays ($\Delta/N^* \rightarrow e^+e^-$).
Recently, the HADES collaboration measured the proton-proton reaction at 4.5 GeV. I will show the status of the analysis of the e+e- channels, which combines information from various detectors (tracking system, RICH and electromagnetic calorimeter) and consists of several steps: tracking, lepton identification, gamma conversion rejection, pairing, background subtraction, efficiency and acceptance corrections. I will also present results from simulations including all experimental effects which are prepared to help for the interpretation of data.

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