Dielectron measurement in *NN* interactions at beam energy 1.25 GeV with HADES

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The main contributions from the early phase of the heavy ion reaction are the Dalitz decay of baryonic resonances (mainly $\Delta(1232)$) and *NN* Bremsstrahlung. For a better understanding of the contribution of those processes to dielectron production in heavy ion collisions HADES has studied *pp* and *dp* interactions at E_{beam}=1.25 GeV. In proton-proton reactions the most abundant source above the π^0 Dalitz region is expected to be Δ Dalitz. However, due to off-shell propagation of intermediate vector mesons, higher-lying baryonic resonances can as well contribute to the mass region below the vector-meson pole mass [1]. Furthermore, a strong bremsstrahlung contribution in *np* interactions has also been predicted [2]. In order to separate Δ Dalitz and *np* bremsstrahlung we compare the dielectron yield observed in *pp* with the *dp* reaction measured at the same beam energy.

[1] K. Shekhter, C. Fuchs, PHYS. REV C 68, 014904 (2003)
[2] L.P. Kaptari, C. Kämpfer, Nucler Physics A 764 (2006)

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