Measurement of the electric neutron form factor G_{en} in the reaction $^3\vec{He}(\vec{e},e'n)$ at momentum transfer $Q^2 = 0.67(GeV/c)^2$

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The experiment to measure G_{en} in quasielastic scattering of polarized electrons from polarized ^3He at large momentum transfer has been continued in June 2000. The asymmetry in respect to reversal of the electron polarization has been measured for vertical as well as for parallel orientation of the ^3He spin with respect to $\vec{q}$, using $^3\vec{He}$. A relative statistical accuracy of 14 % has been achieved. In addition the asymmetry A_y^0 with the target spin vertical to the scattering plane, which is the direct observable of FSI and MEC effects has been measured in the reaction $^3\vec{He}(e,e'p(n))$. It enables to check predictions by theory. Thereby one gains redundancies in the attempt to derive single particle properties of the free neutrons from measurement on bound neutrons, and one can verify whether ^3He can indeed be used as an effective polarized neutron target. Results will be presented in the talk.

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