## Abstract Submitted for the DNP08 Meeting of The American Physical Society

The Transverse Electron Scattering Response Function of <sup>3</sup>He EDWARD TOMUSIAK, University of Victoria, SARA DELLA MONACA, Universita di Trento, VICTOR EFROS, Kurchatov Institute, AVAS KHUGAEV, Uzbekistan Academy of Sciences, WINFRIED LEIDEMANN, GIUSEPPINA ORLAN-DINI, LUPING YUAN, Universita di Trento — The <sup>3</sup>He transverse response function  $R_T(q,\omega)$  is calculated using the Bonn-RA nucleon-nucleon (NN) potential, the TM' three-body force and the Coulomb potential. Complete final state interactions are taken into account via the Lorentz integral transform technique. The electromagnetic interactions include meson exchange currents plus the usual one-body terms. Since the transverse response is driven by nuclear currents it is important to verify that charge conservation is maintained. A measure of this is obtained from a comparison of the response calculated using i) a Siegert form of the transition operator and additional contributions beyond it and ii) an operator expressed totally in terms of currents. Charge conservation requires i) and ii) give identical results. We show that with a simple OBEP NN-interaction with  $\pi$ - and  $\rho$ - exchange and its corresponding meson exchange currents the results are indeed the same. The main goal is in fact to study the contributions of meson exchange currents beyond the Siegert operator for various kinematical regions. Theoretical results will be compared to experimental data in quasi-elastic kinematics at q=250,400,500 MeV/c and in the threshold region at q=174 MeV/c.

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