

Abstract Submitted
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Boost Effects in the (e,e') Transverse Response of ^3He EDWARD TOMUSIAK, University of Victoria, VICTOR EFROS, Kurchatov Institute, WINFRIED LEIDEMANN, GIUSEPPINA ORLANDINI, LUPING YUAN, University of Trento — In an earlier paper Efros *et al* [1] investigated frame dependence in calculations of the transverse (e,e') response function of ^3He . These calculations were non-relativistic but did incorporate relativistic corrections in the electromagnetic operators. Those corrections, taken from the work of Ritz et al [2] are of order M^{-3} and represent kinematical effects. It was found that in the region of the quasi-elastic peak, with one proviso, frame dependence held to a good approximation up to $q=700$ MeV/c. The one proviso was that we not include one of the corrections - the so-called ω -dependent term. Although this term vanishes in one of the frames (the ANB frame) the question arises as to whether or not another correction exists which might nearly restore frame independence. This work investigates the possibility that Boost effects may provide an explanation. We report on our progress in this regard.

[1] Victor. D. Efros, Winfried Leidemann, Giuseppina Orlandini, Edward Tomusiak, *Phys.Rev.C* **83**, 057001 (2011).

[2] F. Ritz, H. Göller, T. Wilbois, and H. Arenhövel, *Phys.Rev.C* **55**, 2214 (1997).

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