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The Neutron Charge Distribution[1] EMILY KRAUS, KATHERINE MYERS, ARUN TADEPALLI, APRIL WHITE, RONALD GILMAN, Rutgers University — Based on current knowledge of the neutron electromagnetic form factors and on reasonable extrapolations, we now know that the neutron Breit-frame charge distribution is positive at the origin, whereas the transverse charge distribution is negative at the origin. The long standing bias is that the rest-frame charge distribution should be positive at the origin based on simple pion cloud models; this idea has been used to explain the Breit-frame distribution. A more intuitive result would be if the distributions were similar in shape in the Breit and transverse frames, similar to the case for the proton. Here we explore how the high Q^2 behavior of the form factors could make the shapes of the neutron charge distributions more similar in the Breit and transverse frames.

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