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**$A_y$  Measurement from  ${}^3\text{He}^\uparrow(e, e'n)$  Scattering at Jefferson Lab**  
ELENA LONG, Kent State University, JEFFERSON LAB HALL A COLLABORATION — Recently  $A_y$  asymmetry measurements have been conducted in Jefferson Lab's Hall A through electron scattering from a vertically polarized  ${}^3\text{He}$  target. Experiment E08-005 measured the target single-spin asymmetry  $A_y$  in the quasi-elastic  ${}^3\text{He}^\uparrow(e, e'n)$  reaction. Plane wave impulse approximation (PWIA) predicts that  $A_y$  should be exactly zero. A previous experiment at  $Q^2$  of  $0.2 \text{ (GeV/c)}^2$ , where full calculations of Laget and Nagorny indicated  $A_y$  to be small, showed a large asymmetry as calculated by the Bochum group using Faddeev calculations to solve the three-body problem exactly. The recent experiment measured this asymmetry at  $Q^2$  of  $0.1 \text{ (GeV/c)}^2$ ,  $0.5 \text{ (GeV/c)}^2$  and  $1.0 \text{ (GeV/c)}^2$ . This is the first measurement of  $A_y$  at large  $Q^2$ , which is another region where  $A_y$  is expected to be small. Any non-zero result is an indication of effects beyond simple impulse approximation. This measurement will test the models used to extract neutron form factor from polarized  ${}^3\text{He}$ . Details of the measurement will be presented.

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