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The ^{3}He-^{3}H Charge Radius Difference LUKE MYERS, DOUG HIGINBOTHAM, Jefferson Lab, JOHN ARRINGTON, Argonne National Lab — The upcoming E12-14-009 experiment at Jefferson Lab will determine the charge radius difference between ^{3}He and ^{3}H from elastic electron scattering. This measurement will utilize a low-activity tritium target that is available for a limited time at Jefferson Lab. We will measure the ratio of the ^{3}He and ^{3}H electric form factors at 0.05–0.09 GeV^2 using a high-resolution spectrometer in Hall A. The relative charge radii will be extracted from the data with a statistical(systematic) uncertainty $<$0.5(2.5)%. These data will reduce the uncertainty in the charge radius difference from $\sim$0.1 fm to $\sim$0.03 fm. The results will provide a direct comparison to recent calculations of the charge radii. Additionally, the individual proton and neutron radii can be determined and compared to ab initio calculations of the three-body nuclei.

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