Abstract Submitted
for the APR15 Meeting of
The American Physical Society

Observations of VHE from the Crab Pulsar with VERITAS AVERY ARCHER, Washington University in St. Louis, VERITAS COLLABORATION — The Crab pulsar has been closely studied across the electromagnetic spectrum from radio to TeV energies. Observations in recent years have challenged the favored models for the highest-energy emission. With 107 hours of observation, VERITAS first observed the Crab pulsar above 120 GeV, well above the expected cut-off of a few GeV. Pulsar modeling demonstrates that magnetosphere of the Crab is opaque to VHE photons, narrowing the possible emission regions within the magnetosphere given recent observations. As of fall 2014, the exposure has been increased to over 200 hours. These new VERITAS results help to further constrain the models, providing improved information about the origin of very high energy emission within the pulsar magnetosphere. Presented here are results of ongoing observations and analysis of the Crab pulsar from 100 GeV up to TeV energies with the VERITAS telescopes in the context of modeling viable emission region models.

Avery Archer
Washington University in St. Louis

Date submitted: 09 Jan 2015 Electronic form version 1.4