Abstract Submitted for the APR18 Meeting of The American Physical Society

The Gamma Cygni SNR at the Highest Energies¹ HENRIKE FLEISCHHACK, PETRA HUENTEMEYER, Michigan Technological University, HAWC COLLABORATION — The gamma Cygni SNR is a middle-aged supernova remnant in the Cygnus region. It is known to emit gamma rays at least up to 1 TeV, and it may be connected to the Cygnus cocoon, a volume of freshly accelerated cosmic rays in the Cygnus region. Gamma Cygni displays an extended, shell-like morphology with multiple hotspots inside the remnant, observed in radio, X-rays, and gamma rays. The High Altitude Water Cherenkov (HAWC) Observatory has also detected a gamma-ray source (2HWC J2020+403) which is spatially coincident with the remnant. Currently, it is not known whether the non-thermal emission is caused by leptonic or hadronic processes. We will use data taken by the HAWC Observatory and other gamma-ray instruments to investigate particle acceleration in the remnant.

¹Supported by NSF, DoE, and CONACyT.

Henrike Fleischhack Michigan Technological Univ

Date submitted: 12 Jan 2018

Electronic form version 1.4