Abstract Submitted
for the APR10 Meeting of
The American Physical Society

Searching for Superconducting Cosmic Strings CALVIN WOO, The College of New Jersey — The cusp (or kink) of a superconducting cosmic string is expected to produce gravitational waves (GW) and electromagnetic radiation. Both the GW and the electromagnetic emissions are beamed along the direction of motion of the cusp, leading to an enhancement in the observed signal if the Earth lies within the beam. The electromagnetic luminosity may be substantially larger than the gravitational luminosity. It has been argued that searches in the radio spectrum would be optimal for the detection of these bursts. Such cosmic strings would be part of networks created during phase transitions in the early universe. These networks could even be composed of cosmic superstrings. We will present details of an ongoing search for such events by the Eight-meter-wavelength Transient Array (ETA).

Calvin Woo
The College of New Jersey

Date submitted: 25 Oct 2009 Electronic form version 1.4