To: Prof. Andy Olson

From: Sam Harkness

Regarding: Class Project

Name of Antenna: Archimedes Spiral

ABSTRACT

Aim: To design and fabricate an Archimedes Spiral Antenna using Advanced Design System from Agilent.

Overview: Ultra-Wideband (UWB) RADAR is an area of research that aligns with my professional career. An Archimedes Spiral has the potential characteristics that allow for an UWB frequency response as well as circular polarization, which could potentially reduce multi-path noise and interference when collecting emitted RF electromagnetic waves. As this is a class project with a limited timetable, the antenna will be designed for ease of fabrication, simulation, and measurement, rather than attempting to achieve any specific bandwidth, gain, impedance match, or axial ratio.