1109-60-132 **Gary Webb*** (gmw0002@uah.edu), 301 Sparkman Drive, Huntsville, AL 35899, **Qiang Hu** (qh0001@uah.edu), 301 Sparkman Drive, Huntsville, AL 35899, and **Gang Li** (gang.li@uah.edu), 301 Sparkman Drive, Huntsville, AL 35899. *Alfvenic fluctuations and Alfven Simple Waves in the Solar Wind.*

We consider Hamiltonian equations for Alfven simple waves and their application to observations of large amplitude Alfven waves in the Solar Wind. One of the features of the data in the quiet solar wind, is that the magnetic field vector B to lowest order moves on a sphere in B space with constant magnitude B. After describing exact solutions of the equations in which the wave normal is a prescribed function of the wave phase, we consider the generalization of the ordinary differential equations to stochastic differential equations which take into account the fluctuations in B. Both dissipative and non-dissipative (Hamiltonian) stochastic differential equations describing the waves are developed. The ultimate aim is to provide a model to explain the spacecraft observations. (Received February 01, 2015)