Global standing Alfvén wave modes (also known as Field Line Resonances) are important to energy transport from the magnetosphere to the ionosphere both in the form of precipitating electrons and field aligned Poynting flux. In the upward current regions of these waves, mirror force trapping of electrons leads to enhanced parallel electric fields since the un-trapped electron population must be accelerated to a greater extent in order to carry the field aligned current. The electrons carrying the current at the ionospheric boundary are additionally sourced from all along the field line and recent simulations using a hybrid MHD-kinetic electron model of a Field Line Resonance have illustrated an interesting coherence in the time history of the velocity space distribution of these electrons. In this presentation, we will highlight the characteristics of the dynamics of this current carrying distribution for different temperatures of the equilibrium distribution function and will also analyze how the electron bounce dynamics affect the evolution of the wave. We will additionally comment on how the dynamics of this current carrying distribution and the wave evolution might be altered by the assumption of non-Maxwellian equilibrium distribution functions for the electrons.