The Inductive Plasma Accelerator (IPA) is a plasma accelerator coils 20 mTorr accelerator/interaction experiment currently under construction at MSNW. The accelerator will be capable of launching a plasma/plasmoid into a Fusion Reactor Core (FRC) providing the first experimental test of the plasma liner fusion concept. MOQUI simulations show expected densities of > 10^22 m^-3 with average Te > 800 eV for the merging FRCs. The status of design and construction of the experiment and additional simulation results will be presented.

\[ L_0 = \frac{1}{2} \frac{\mu_0 L}{D} \]

Where \( L_0 \) is the initial inductance of the coil in the absence of the plasma liner. The coil current thus rises rapidly until the liner starts to move. As the liner moves inward the area that must be filled with field increases as rapidly as the flux changes keeping the field (and roughly constant is a good one.

\[ \frac{1}{2} m_L \frac{v^2}{v_0} = \frac{1}{2} L_0 \frac{d^2 m_L}{dt^2} \]

This is because with the liner in place near the vacuum wall the initial inductance of the coil can be quite low as previously discussed. The coil current thus rises rapidly until the liner starts to move. As the liner moves inward the area that must be filled with field increases as rapidly as the flux changes keeping the field (and roughly constant is a good one.

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