

Plasma Parameters

- **M=0 cases:**

Pressure: 0.5mTorr

Total Power Deposition: 1200 Watts

StaticMagnetic Field: 0,600,900 Gauss

Gas: Argon

Reactor Height: 35 cm

Reactor Radius: 10 cm

- **Nagoya Type III cases:**

Pressure: 0.5mTorr

Total Power Deposition: 600 Watts

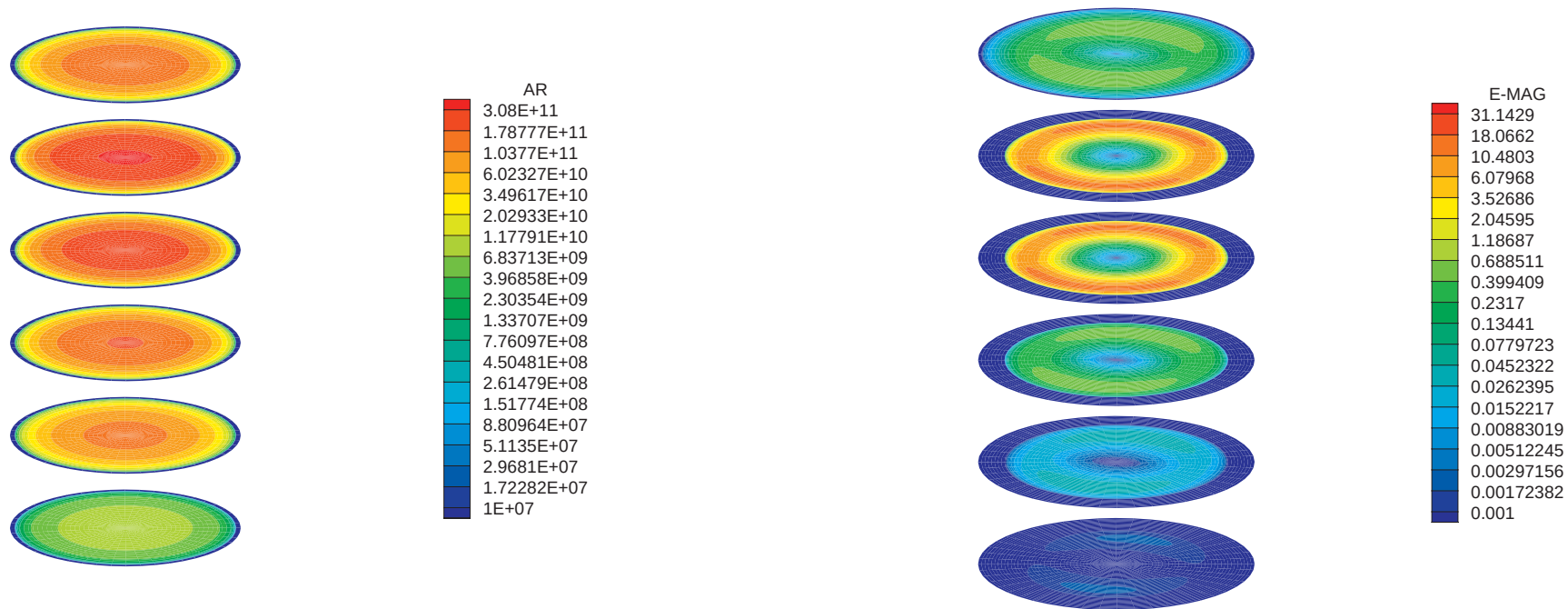
StaticMagnetic Field: 0,300,600 Gauss

Gas: Argon

Reactor Height: 35 cm

Reactor Radius: 10 cm

No Static Magnetic Field ($B=0$), Nagoya Type III Coil

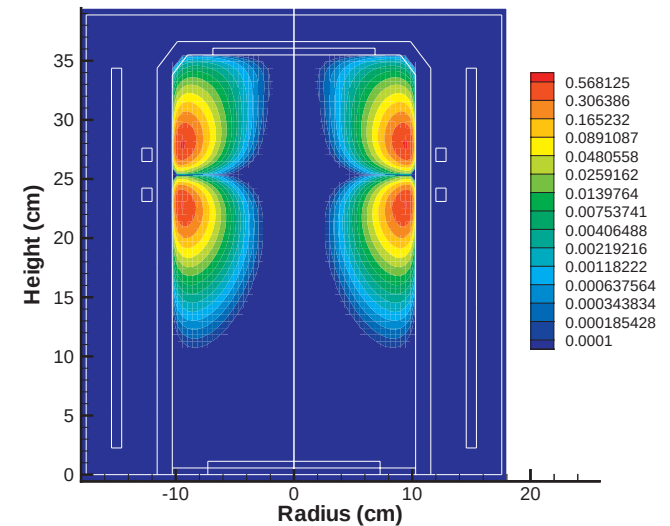
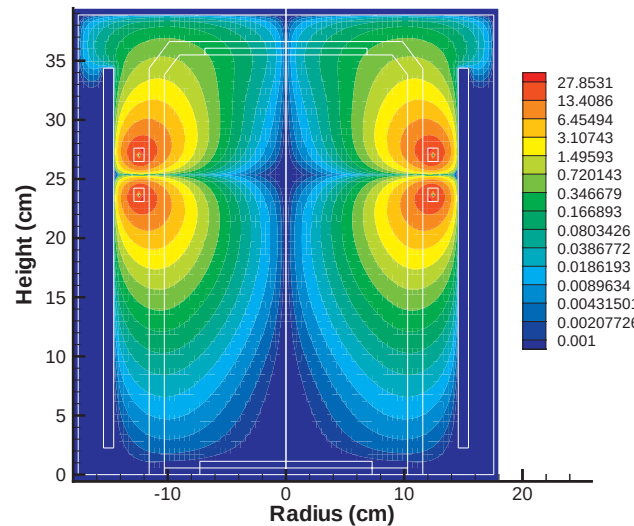
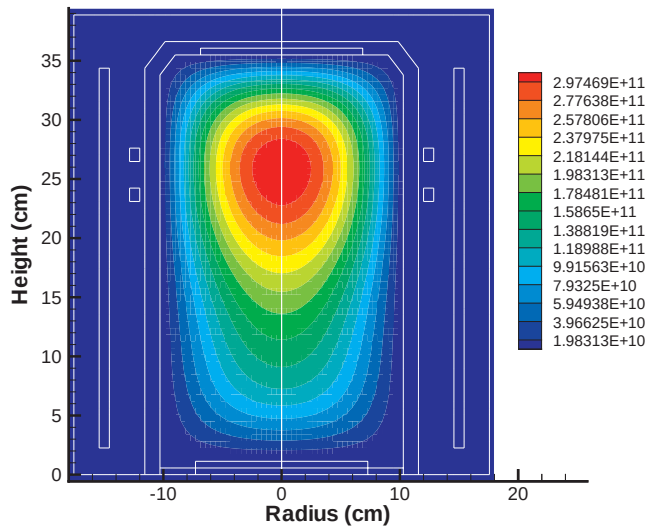


Argon Ion Density (cm⁻³)

**Electric Field Total Magnitude
(Log V/cm)**

- With no magnetostatic field, the plasma is in purely inductive mode.
- The power deposition is confined near the coil.

No Static Magnetic Field ($B=0$), Nagoya Type III Coil

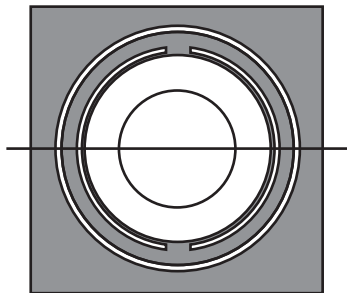


Argon Ion Density (cm^{-3})

Electric Field Total Magnitude
(Log V/cm)

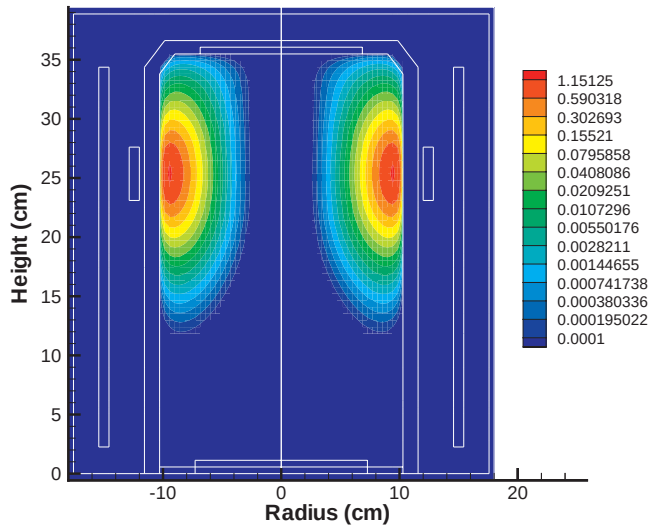
Total Power Deposition
(Log Watt/ cm^{-3})

Top view:

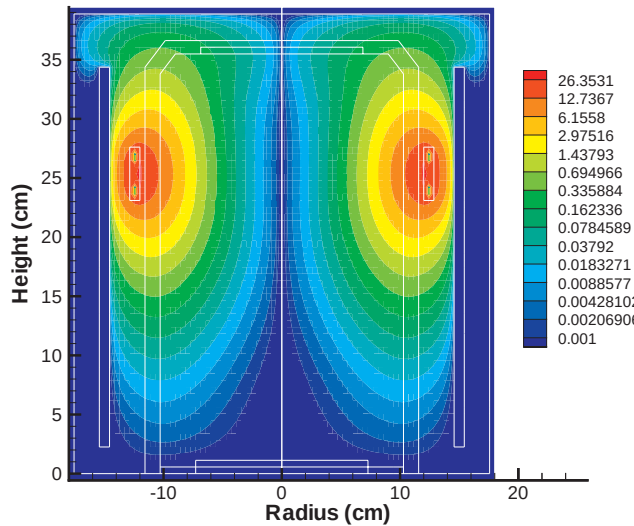


- With no magnetostatic field, the plasma is in purely inductive mode.

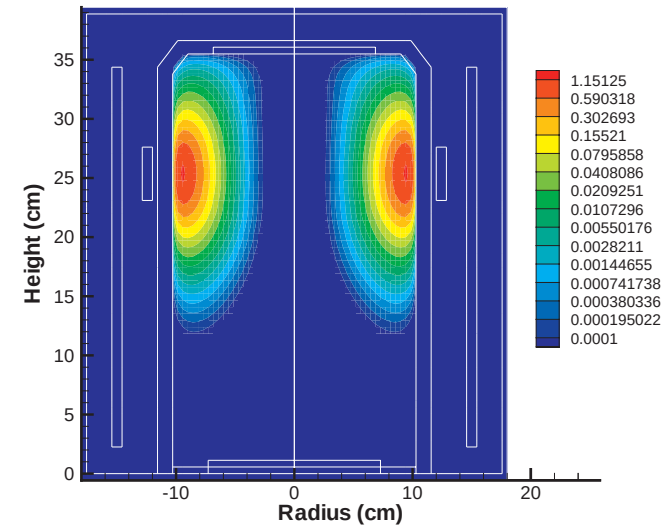
No Static Magnetic Field ($B=0$), Nagoya Type III Coil



Argon Ion Density (cm^{-3})

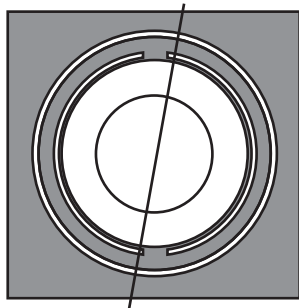


Electric Field Total Magnitude
(Log V/cm)



Total Power Deposition
(Log Watt/cm^{-3})

Top view:



- With no magnetostatic field, the plasma is in purely inductive mode.