

## Magnetic probe measurements in INTI plasma focus to determine dependence of axial speed with pressure in neon

### Abstract :

Current sheath dynamics generated in INTI plasma focus device operated with neon gas has been studied. A 3-Turn Rogowski coil design has been used to measure derivative current. A new magnetic probe was designed and used to study of current sheath arrival time, current profile and velocity variation in the axial phase at different experimental conditions. The current sheath's average velocity was found to vary with pressure<sup>-0.51</sup> with a R<sup>2</sup> value of 0.9 which agrees well with the theoretically expected variation of pressure<sup>-0.5</sup>.