

# **Ion Beam Emission within a Low Energy Focus Plasma (0.1 kJ) Operating with Hydrogen**

Gamal M. El-Aragi

Plasma Physics and Nuclear Fusion Dept., Nuclear Research Center, AEA, P. O. Box, 13759 Cairo, Egypt

Reprint requests to G. M. E.; E-mail: elaragi@gmail.com

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An investigation of energetic ion beam emission from a low energy plasma focus (0.1 kJ Mather type) device operating with hydrogen gas is studied. The ion beam emission is investigated using time-integrated and time-resolved detectors. The present plasma focus device is powered by a capacitor bank of 1  $\mu\text{F}$  at 18 kV maximum charging voltage. The correlation of ion beam intensity with filling gas pressure indicates that the beam emission is maximized at the optimum pressure for the focus formation at peak current. Energy of ions is determined with a time-of-flight (TOF) method, taking into account distance from the center electrode to the detection plane.

*Key words:* Energetic Ions; Plasma Focus Time of Flight; Charging Voltage.