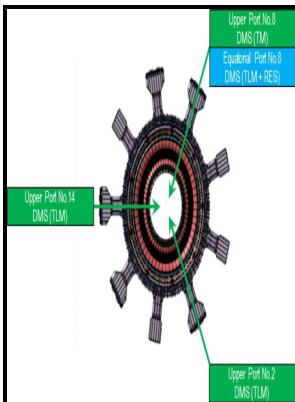


# Plasma density scaling at the current reversal in the STOR-1M tokamak with AC operation

University of Saskatchewan, Plasma Physics Laboratory - Plasma equilibrium in a Tokamak



Description: -

- Tokamak devices

Plasma density

Alternating current Plasma density scaling at the current reversal in the STOR-1M tokamak with AC operation

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Notes: Includes bibliographical references: p. 12-13.

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## Engineering aspects of the ISTTOK operation in a multicycle alternating flat

Haemocompatibility tests of PTFE with and without DLS coating have been conducted with human blood. The plasma potential is lowered and an edge transport barrier develops. Nanocones of diamond and related materials SEM images of nanocone thin films grown under different deposition conditions a daimond, b graphite, c diamond and graphite composite.

## Plasma density at the current reversal in the STOR

Fusion, 43, 1855-1862 December 2003. The Plasma Physics Laboratory is becoming a centre of carbon based materials research and its research scope is expanding rapidly with the newest addition of ion implantation program.

## Plasma density at the current reversal in the STOR

To simulate the current reversal phase in an ac tokamak reactor, a sinusoidal plasma current has been sustained for one cycle. Similar improved confinement after CT injection has been observed on TdeV as well. Material properties are highly dependent on the composition and distribution of impurities within the material; because it allows precisely controlled insertion of impurities at controlled depths, plasma ion implantation is one of the most versatile techniques available for the modification of material properties.

## THE STOR

It is also planned to develop novel diagnostics based on far infrared lasers for the ITER through international collaboration. Carbon nanostructures diamond films, carbon nanotubes CNT , carbon nanocones have been successfully synthesized with a newly developed ion sputtering technology which allows diamond synthesis at unusually low temperatures as low as 250 C. The optimization of AC operation has also implied the installation of a new set of symmetric and more external windings for the vertical B-field and of an adequate gas puffing system.

## Plasma density at the current reversal in the STOR

It considers the methods of maintaining a plasma in equilibrium with the help of a conducting casing, an external maintaining field and the iron core of a transformer.

### **Plasma Physics**

SEM images showing CNTs at different locations on a negatively biased substrate: a top-left corner, b top edge, c top-right corner, d left edge, e center, f right edge, g bottom-left corner, h bottom edge, i bottom-right corner. PPL-194 March 2000 Abstract A.

### **Plasma equilibrium in a Tokamak**

This observation of Ohmic H-mode was made first on STOR-1M and later on STOR-M and other tokamaks with various means including fast gas puffing and electrode biasing. Alternating Current ac Tokamak Operation Stable alternating current operation of a tokamak was first demonstrated in STOR-1M 1987 and subsequently reproduced in STOR-M and the Joint European Torus JET at 2 MA currents. Preliminary results are encouraging: DLC coating reduces platelet activation and adhesion.

### **Books: 'STOR**

PPL-198 April 2000 Abstract C.

## Related Books

- [Diagnostic radiology of the dog and cat](#)
- [Guide to the Whitewater Rivers of Washington - a comprehensive handbook to over 150 runs in the Cascades](#)
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