

Abstract Submitted
for the DPP07 Meeting of
The American Physical Society

Diamagnetic loop for KSTAR.¹ JUN-GYO BAK, SANG-GON LEE, EUN-MIE KA, National Fusion Research Center — Three sets of diamagnetic loop (DL), at different locations, are designed to measure diamagnetic flux during a plasma discharge in the KSTAR machine. Each set consists of two concentric poloidal loops, and it is used for the diamagnetic flux measurement with the compensation of a ripple from the power supply producing a toroidal field and a pick-up signal from the poloidal field due to the misalignment in the installation. One set is installed on inner wall of the vacuum vessel for the flux measurement at the first plasma in the KSTAR machine. It is located at a toroidal angle in the vacuum vessel, and the gap distance between inner and outer loops is 2 cm. An accurate position measurement of the two loops is done by using a laser tracker system after the installation. The *in-situ* calibration of the loops is done from the toroidal flux measurement. In the measurement, the electric current of less than 100A is applied to the toroidal field coils. In this work, present status of the DL for the initial measurement in the KSTAR machine will be presented.

¹Work supported by the Korea Ministry of Science and Technology under the KSTAR project contract.

Jun-Gyo Bak
National Fusion Research Center

Date submitted: 20 Jul 2007

Electronic form version 1.4