

Abstract Submitted  
for the DPP19 Meeting of  
The American Physical Society

**Study on optimized structure of the divertor suitable for KSTAR tokamak** OOKJOO RA, KYU BEEN KWON, WON JUN TAE, MIN SUP HUR<sup>1</sup>, Ulsan National Institute of Science and Technology — An innovative divertor concept is required to construct a future fusion reactor of high duty cycle. In the environment of the fusion reactor with long drive time (high duty cycle), the power load on the target surface of the divertor should be limited when the steady state is assumed. In addition, erosion must also be suppressed to near zero. Constructing a dissipative divertor that satisfies these constraints, while at the same time not corrupting core quality, is a challenging task. To accomplish this goal, various attempts have been made in many tokamak devices. We proceeded to study the optimization of divertor structure suitable for KSTAR by applying the high dissipative SAS (Small Angle Slot) structure used in DIII-D. Simulation modeling was performed through the SOLPS-ITER package.

<sup>1</sup>Corresponding Author

Ookjoo Ra  
Ulsan National Institute of Science and Technology

Date submitted: 03 Jul 2019

Electronic form version 1.4