

## Development of KSTAR Heating and Current Drive Systems for Long Pulse Operation

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### Abstract

The heating and current drive systems are being developed to support long pulse, high  $b$ , advanced tokamak fusion physics experiments in the KSTAR tokamak. The heating and current drive systems consisting of neutral beam injection (NBI), ion cyclotron waves (ICRF), lower hybrid waves (LHCD) and electron cyclotron waves (ECH/ECCD) have been designed to operate for pulse lengths up to 300 sec and to provide a range of control functions including current drive and profile control. Development of key technologies for high power, long pulse operation has been on going. Substantial progress has been made on areas such as RF launchers, ion source, and high power supplies