

## TH/5-2

# Influence of neutral gas on Scrape-off layer tokamak plasma

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- Molecule density in Scrape-off Layer (SOL) of tokamak plasma is normally high that take part in many important reactions and can modify plasma turbulence.
- Two-dimensional model equations have been derived and solved linearly and numerically using two different simulations that are simulations using uniform (WNG\_UTE) and nonuniform electron temperature (WNG).
- It is observed that the growth rate (gamma) decreases with the increase of the molecular density.
- It is found that the neutral gas modifies plasma profiles, electric fields and also reduces the plasma fluctuation levels.
- Modification of high frequency side of the interchange wave has been observed by the neutral gas from both the simulations.

