



- ✓ Repeatability plasma discharges of maximum plasma current ~ 160 kA and discharge duration of ~ 250 ms has been obtained for the first time in the ADITYA.
- ✓ The peak electron density $n_e(0) \sim 6 \times 10^{19} \text{ m}^{-3}$ and the max. electron temperature (T_e) ~ 700 eV have been achieved in these discharges.
- ✓ Energy confinement times (τ_e) experimental compared with Neo-Alcator scaling showed, exp. confinement time almost ≈ 1.5 times higher than that predicted by neo-ALCATOR scaling.
- ✓ The Hugill plot for ADITYA operating parameters space showed that densities quite close to the Greenwald limit has been achieved.
- ✓ Neon gas puff assisted radiative improved confinement mode has been observed in ADITYA. The energy confinement time improved by a factor of ~ 2 in discharges with Neon gas puff.
- ✓ The current quench time is found to be inversely proportional to q_{edge} , which is due to higher growth of MHD islands in high q_{edge} discharges.
- ✓ Recently, ADITYA tokamak operated with limiter configuration has been upgraded into a state-of-art machine with divertor operation. First plasma operation in ADITYA-Upgrade will be initiated in near future.