EX/P4-2 : Investigation of MHD Stability in KSTAR High Normalized Beta Plasmas

A. KSTAR H-mode exceeded the n = 1 ideal MHD no-wall stability limit
   - High values of $\beta_N$ up to 4.3 with $\beta_N/l_i = 6.3$
   - 60% higher than the n = 1 ideal no-wall limit
   - High $\beta_N = 3.3$ sustained for 3 s, longest duration to date

B. Kinetic RWM and tearing stability examined at high $\beta_N$
   - Kinetic RWM is stabilized by thermal ion precession resonance (MISK code) which agrees with experiment (B1)
   - 2/1 tearing mode stability (M3D-C1 code) is computed to be classically stable which suggests the mode destabilization by pressure effects