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## **EX/P8-14: The Effect of Toroidal Plasma Rotation on Sawtooth Activity in KSTAR**

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It has been found that toroidally rotating plasmas exhibit beneficial effects such as suppression or reformation of magnetohydrodynamic (MHD) instabilities. In KSTAR plasmas, it is found that sawtooth period lengthens significantly as the toroidal rotation speed increases. Stability analysis reveals the critical rotation speed to reach the marginal stability, suppressing the growth of the ideal internal kink instability. This means sufficiently fast toroidal rotation gives a complete stabilization of  $n=1$  internal kink mode as well as suppression of the sawtooth with the condition of  $q_0$  below than unity.

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