

Abstract Submitted  
for the DPP19 Meeting of  
The American Physical Society

**Study of toroidal and poloidal rotation on Aditya-U tokamak** GAURAV SHUKLA, KAJAL SHAH, Pandit Deendayal petroleum University, MALAY CHOWDHURI, RANJANA MANCHANDA, KUMARPALSINH JADEJA, KAUSHAL PATEL, RAKESH TANNA, Institute for plasma research, BALAMURALIKRISHNA MAYYA KOLAKE, JOYDEEP GHOSH, Pandit Deendayal petroleum University, ADITYA-U TEAM — Toroidal and poloidal rotation velocity profiles have been measured on Aditya-U tokamak using a high resolution spectroscopic diagnostic. Impurity ion temperature is also measured using the diagnostic. Rotation velocity and ion temperature have been measured using Doppler shift and Doppler broadening of the line emission respectively. Carbon impurity was chosen for the measurements because it remains the main intrinsic impurity in Aditya-U discharges due to the graphite limiters. For the toroidal rotation profile measurement, passive charge exchange (PCX) line of C VI at 529 nm was measured covering the complete plasma minor radius from core to edge towards low field side. Poloidal rotation velocity measurements are performed using C III line emission at 464.74 nm. Matrix inversion technique was applied to obtain localized measurements from the line integrated measurements.

Gaurav Shukla  
Pandit Deendayal petroleum University

Date submitted: 03 Jul 2019

Electronic form version 1.4