



# Development of ECWC at $\omega=2\omega_{ce}$ on TCV for the operation of JT-60SA



EX/P8-31

ECWC envisioned in JT-60SA for wall conditioning with  $B_T$  on

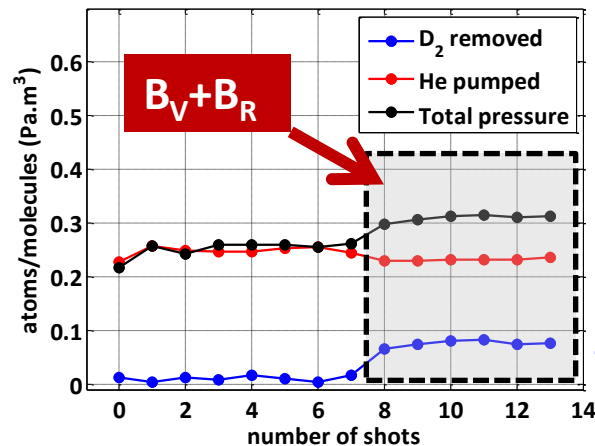
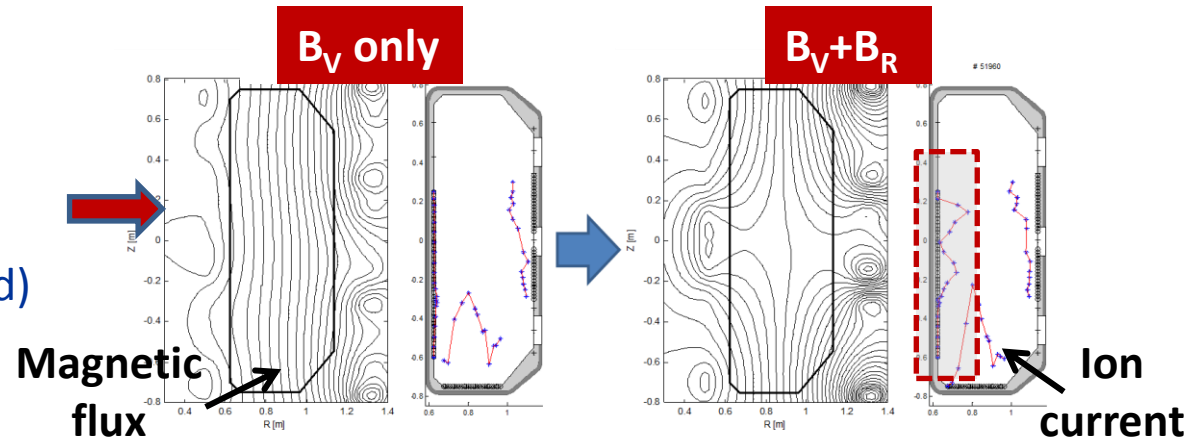
→ Experiments performed in TCV in support of JT-60SA operation

Low absorption of EC wave and low uniformity of ECWC at  $\omega=2\omega_{ce}$

→ Need to improve uniformity & wetted area, thus conditioning efficiency

→ Need to demonstrate ability of ECWC to control wall surface state in ensuing plasma

$B_R$  and  $B_V$  combination found that maximize wall coverage inboard (where ohmic plasmas are initiated)



... and maximize conditioning efficiency

ohmic plasma successfully sustained in TCV after ECWC at  $\omega=2\omega_{ce}$ , whereas it would not have been possible without