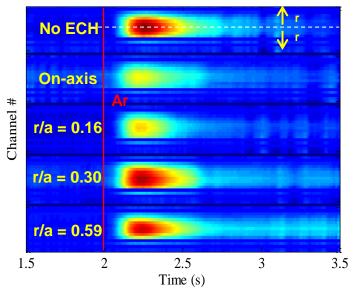
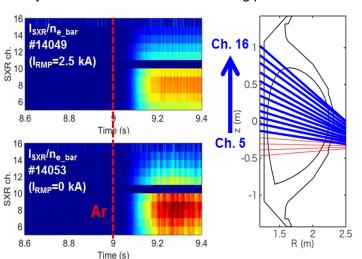


Effects of ECH and RMP on K57 Argon Impurity Transport in KSTAR Plasmas

Impurity transport study using 2 actuators ECH and RMP on KSTAR plasmas



Soft X-ray emission of various ECH heating positions in L-mode



on-axis ECH (a) Total Ar Density (1016 r/a r/a (b) No ECH **600 kW ECH 800 kW ECH** Density (m⁻³) Total Ar17+ Ar18+ **Total** r/a r/a r/a

Radial Ar density profiles at peak time for the (a) L-mode and (b) H-mode

(1) ECH effects on Ar transport

- L-mode: Hollow Ar density profile in the core by on-axis ECH
- H-mode: Flatten core Ar density profile by ECH

(2) RMP effects on Ar transport

- Core Ar emission was reduced by RMP
- → Both ECH and RMP can affect and reduce core Ar accumulation in KSTAR L and H-mode plasmas.

Time evolutions of soft X-ray emission for $I_{RMP} = 2.5 \text{ kA}$ and 0 kA