

From edge non-stiffness to improved IN-mode:

A new perspective on global tokamak radial transport

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- ▶ Transport in the edge region is not stiff
 - ▶ TCV has demonstrated that the edge region, inside the last closed flux surface, is key to understanding global confinement properties.
 - ▶ The edge gradients increase with increasing I_p , increasing P_{ECH} , increasing \bar{n} and by changing from positive to negative triangularity.
- ▶ A new improved L-mode has been obtained on TCV with global confinement time scaling near H-mode values, $H_{98y2} \simeq 0.9 - 1$.
 - ▶ The edge T_e does not show a steep gradient, but the edge density is maintained high, hence the name *IN-mode*.
 - ▶ The IN-mode has been obtained over a wide range of q_{95} and density values, thanks to either a short transition into H-mode or a high gas puffing rate applied directly after break-down and sustained during the I_p ramp-up.
 - ▶ Indications are that low l_i are sustained in this way.