Negative triangularity plasmas are known to feature enhanced confinement as compared to D-shaped plasmas [1][2]. More recently, correlation electron cyclotron emission [3] and phase contrast imaging measurements [4] on the TCV tokamak revealed that the confinement improvement is accompanied by reduced levels of temperature and density fluctuations across most of the confined plasma. In this contribution, we extend these studies towards the edge/SOL region using Gas Puff Imaging (GPI), a diagnostic technique that measures the 2D (radial and poloidal) spatially-resolved edge/SOL fluctuations by imaging filtered neutral emission from a local gas puff [5]. A GPI diagnostic was installed on TCV and has been operational since December 2018. During the summer 2019 TCV campaign, edge/SOL fluctuations in limited ohmic L-mode plasmas with triangularities ranging from -0.5 to +0.5 were measured using GPI. GPI shows clear and significant changes in the edge/SOL fluctuations depending on triangularity. For positive and slightly negative triangularity, the blobs typical of tokamak SOL are observed. However, the GPI measurements show, for the first time, that fluctuations in the edge/SOL are suppressed for strongly negative triangularity. In fact, by systematically scanning the triangularity, we observe a transition, around $\delta \sim -0.25$, where SOL fluctuations are strongly suppressed for $\delta < -0.25$ plasmas. A reciprocating probe and wall probes corroborate the trend measured from the GPI.


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