

## Local blob diffusion analysis from GPI data on NSTX

Blob diffusion has been quantified using the  $D_\alpha$  light intensity signal from GPI diagnostic on NSTX. In the moving reference frame of a blob, and assuming a general non-diffusive formulation, blob spreading can be best fitted to the diffusive model. From this, the spreading of an individual blob can then be quantified in terms of a spreading coefficient, which is analogous to a diffusion coefficient. Blobs in H-mode and Ohmic plasmas in NSTX show distinguishing spreading coefficients. Spreading coefficients also depend on the proximity to the separatrix. This segregation can be used to characterize blobs in different regimes. The spreading coefficient might be used as a quantitative measure of the local dynamics for blobs across machines and between experiments and simulations.