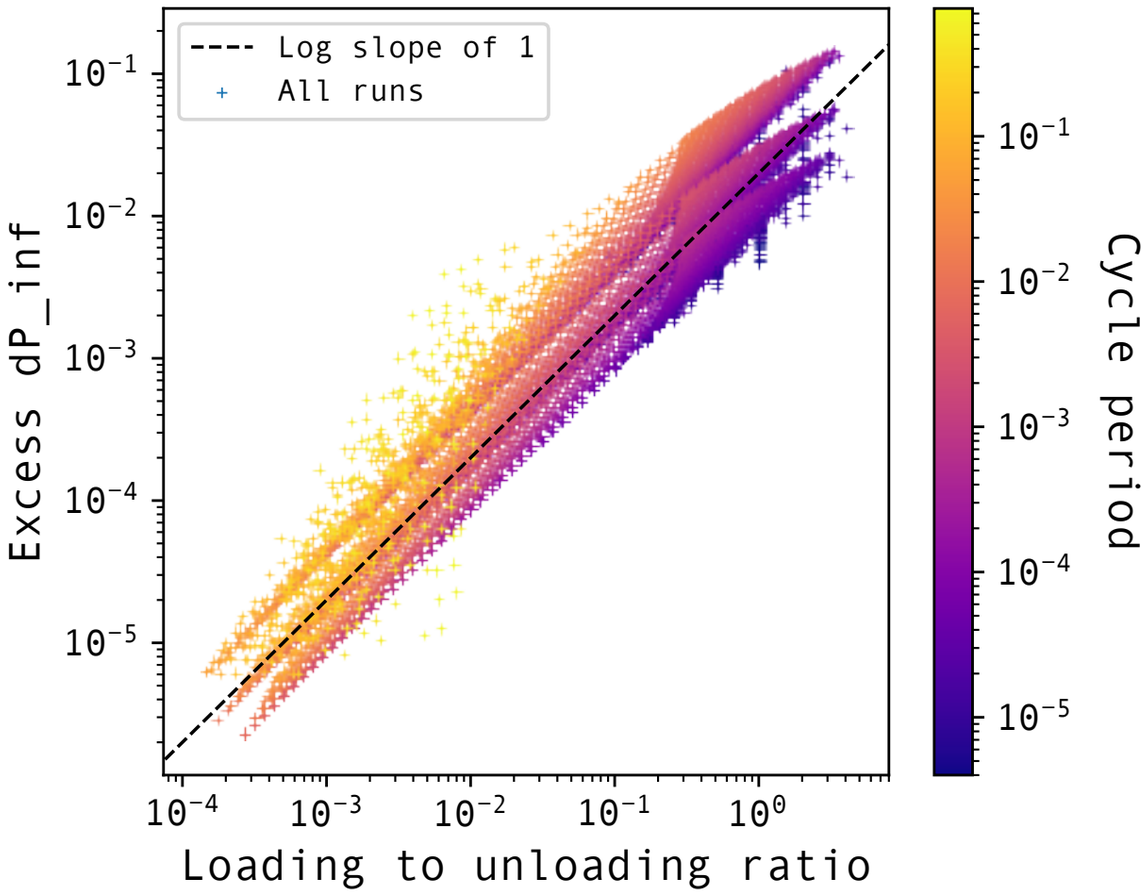
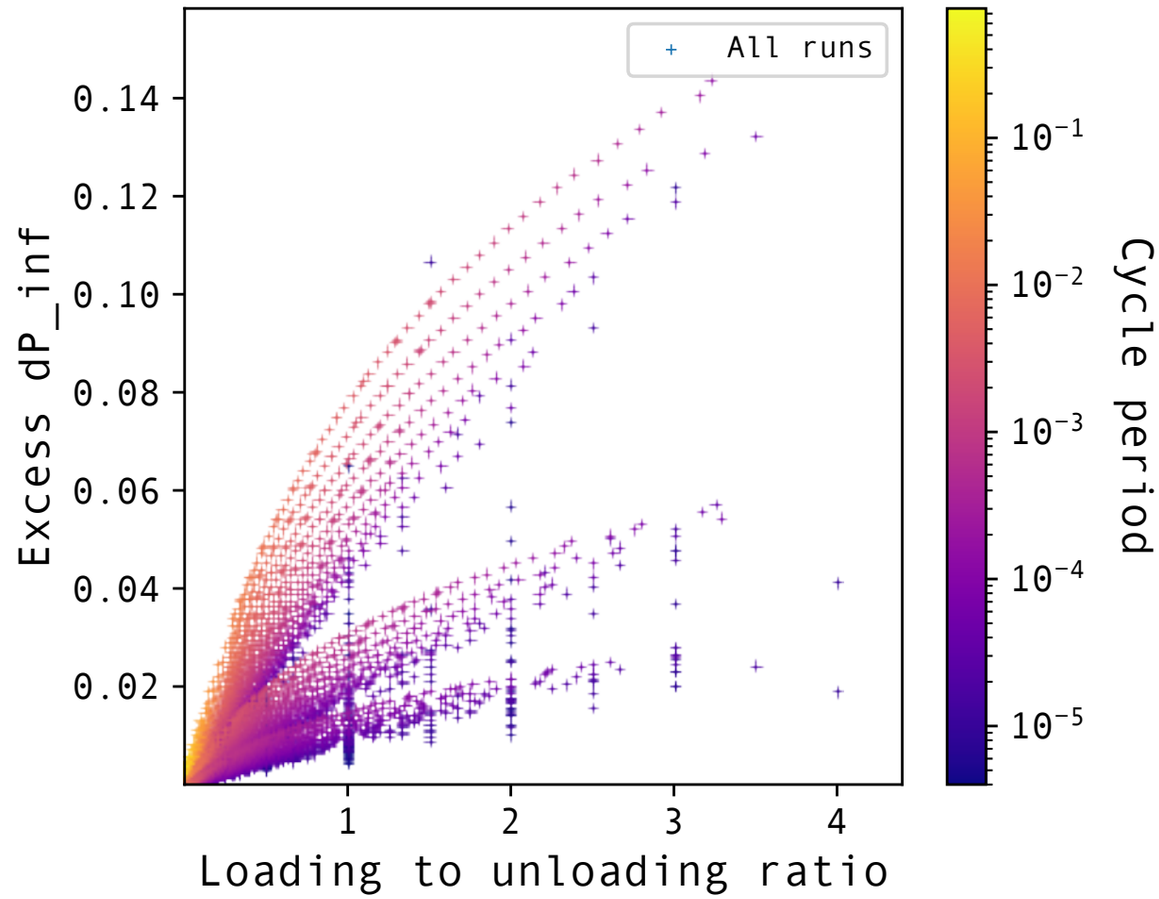
Dynamics of an isolated valve

Q_bound

(b) Results: pressure diff. across the domain (dP_inf)





Observations:

1/ When the valve is mostly open (l/ul ratio << 1), dP_inf is linearly related to the l/ul ratio.

2/ When the valve is mostly closed regime (l/ul ratio >> 1, not reached with our current set of parameters), dP_inf should asymptotically approach an equilibrium value, corresponding to a k_b_eff, closer and closer to k_b.

Dynamics of an isolated valve

(b) Results: Q_bound v. P_bound: ul_dt_inf