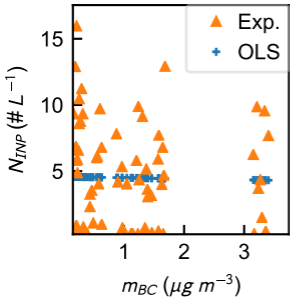


(a) Clean,  $r = 0$



(b) Pollution,  $r = 0$

