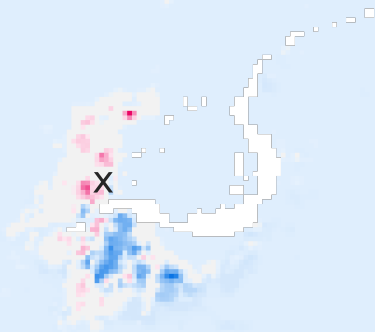


normalized difference $\hat{x}_{lum} - \hat{x}_{pop}$

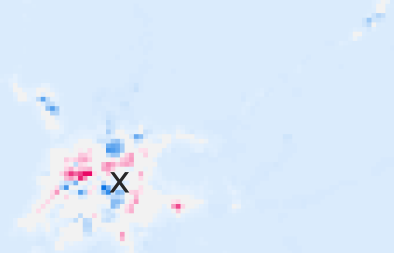
brazzaville (pop 1.3M)

$\delta = 0.005, \eta = 0.004$



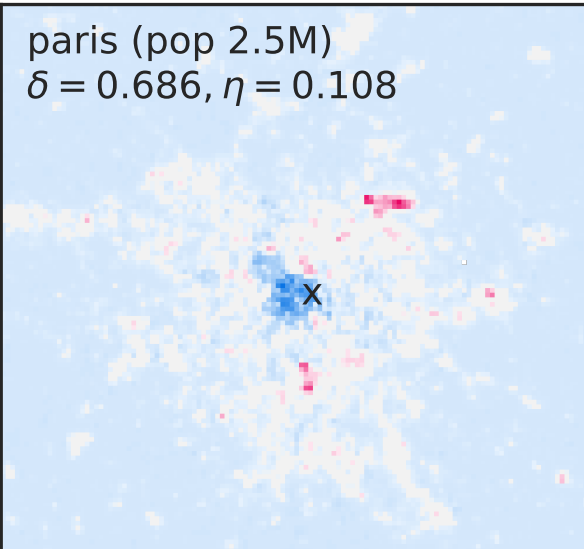
bamako (pop 2.0M)

$\delta = 0.615, \eta = 0.047$



paris (pop 2.5M)

$\delta = 0.686, \eta = 0.108$



shanghai (pop 22.5M)

$\delta = 0.167, \eta = 0.101$

