

# Single bunch tuning

High chromaticities are required to increase the threshold current

## ESRF figures

Multibunch:             $\varepsilon_x = 3.6$        $\varepsilon_z = 5.8$

Single bunch 15 mA     $\varepsilon_x = 7.6$        $\varepsilon_z = 12.9$

Numerous resonances on the path of  
Touschek scattered particles

Reduction of dynamic aperture

Reduction of lifetime

