

$\sigma = 1 \text{ km s}^{-1}$  prograde   
  $\sigma = 0.2 \text{ km s}^{-1}$  prograde   
  $\sigma = 1 \text{ km s}^{-1}$  retrograde   
  $\sigma = 0.2 \text{ km s}^{-1}$  retrograde   
 initial  $a_s$

