

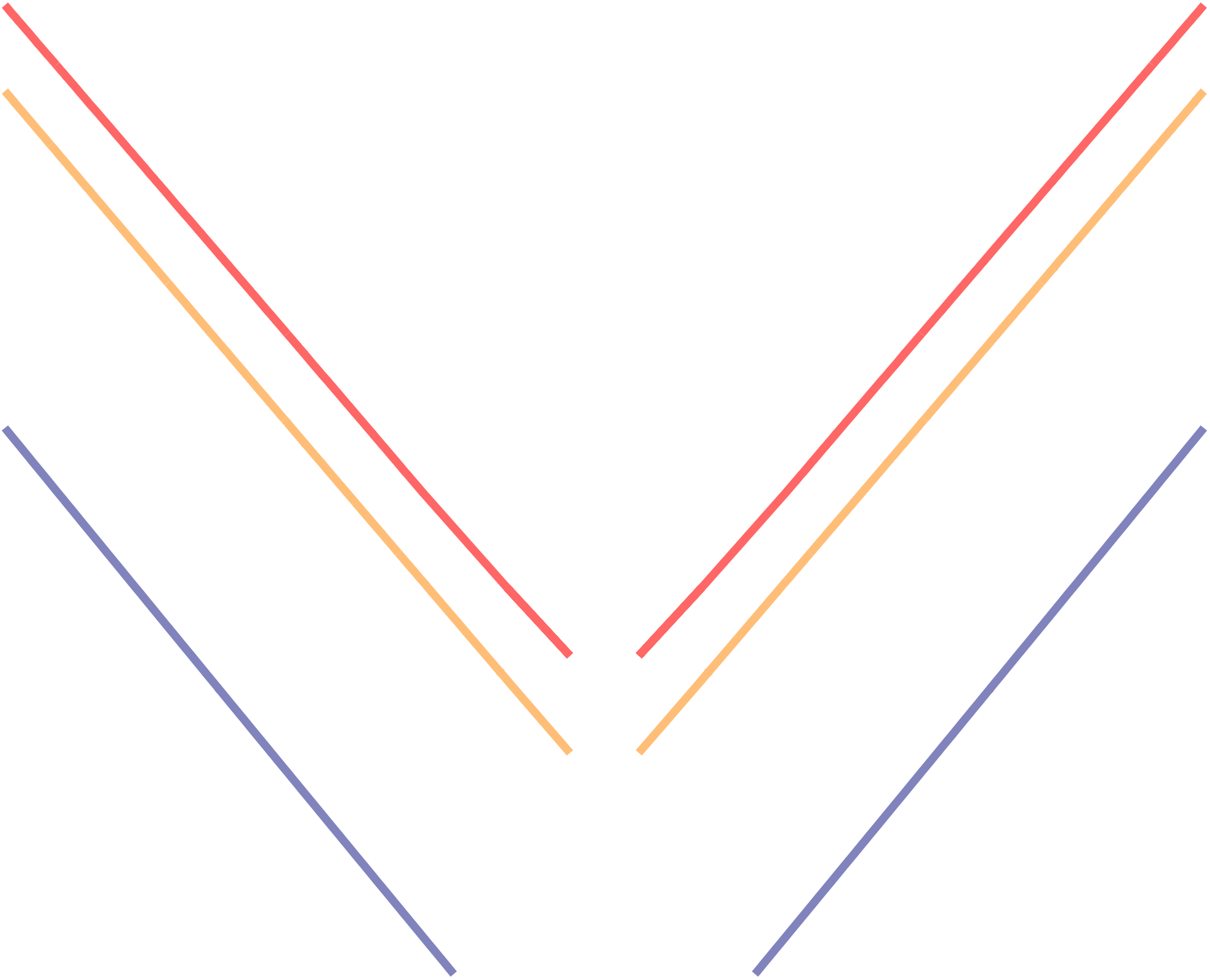
Phrase-matching: intra-modal BV

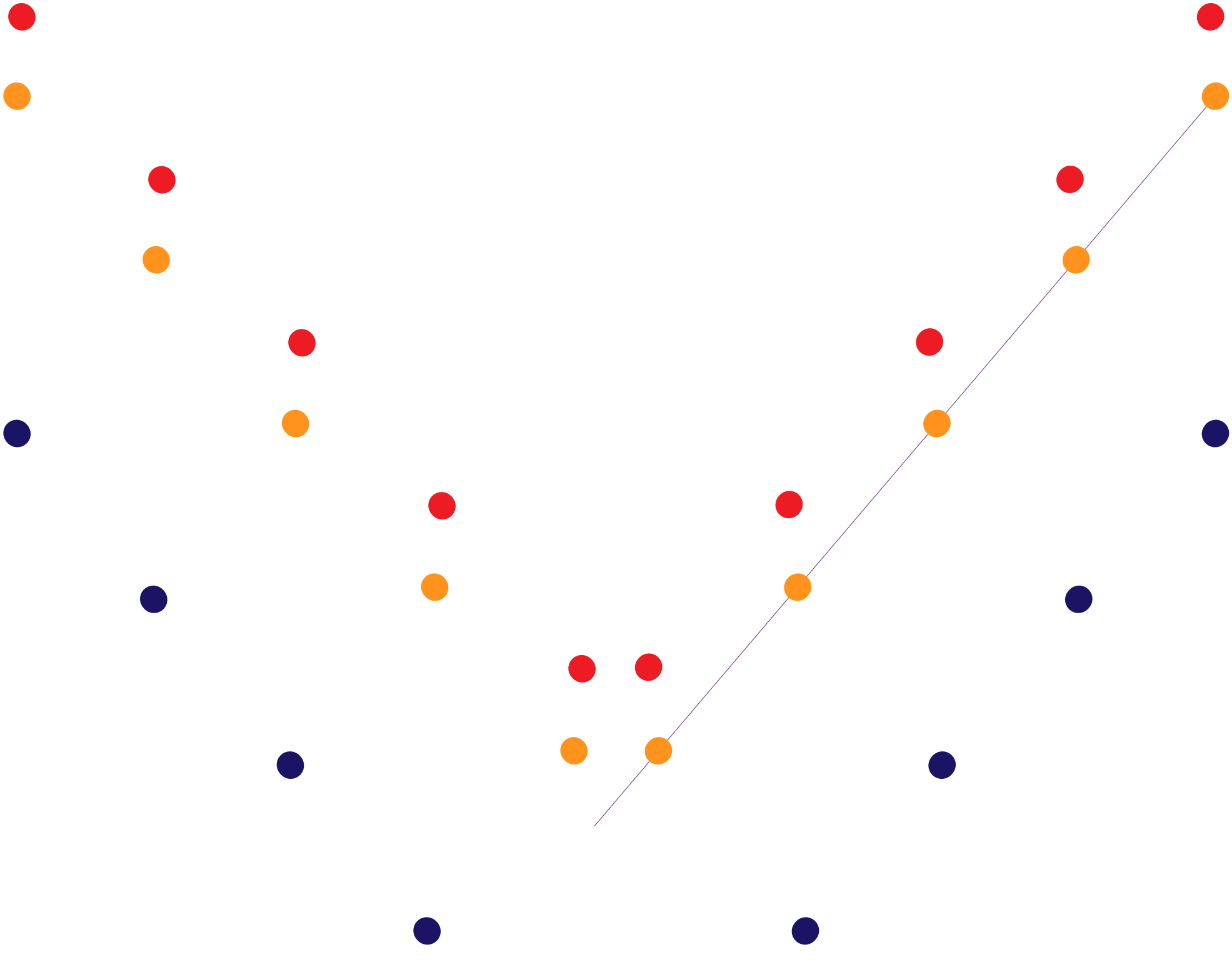
20

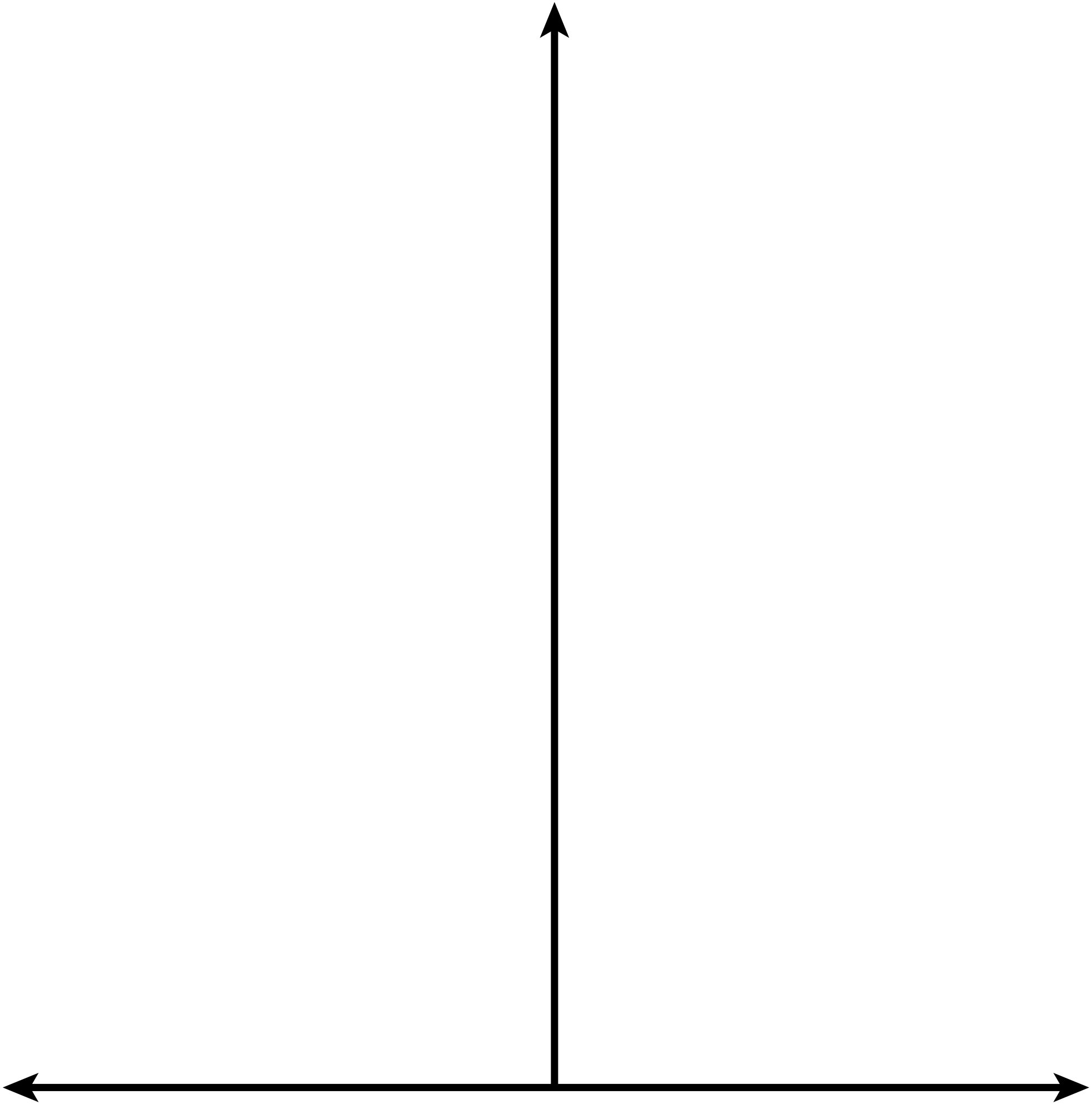


Wombat 2022, Erlangen, June 14th 2022. Gustav Wiederhake.









Optical wavevector,

2

Optical frequency,

o



(α_p, β_p)

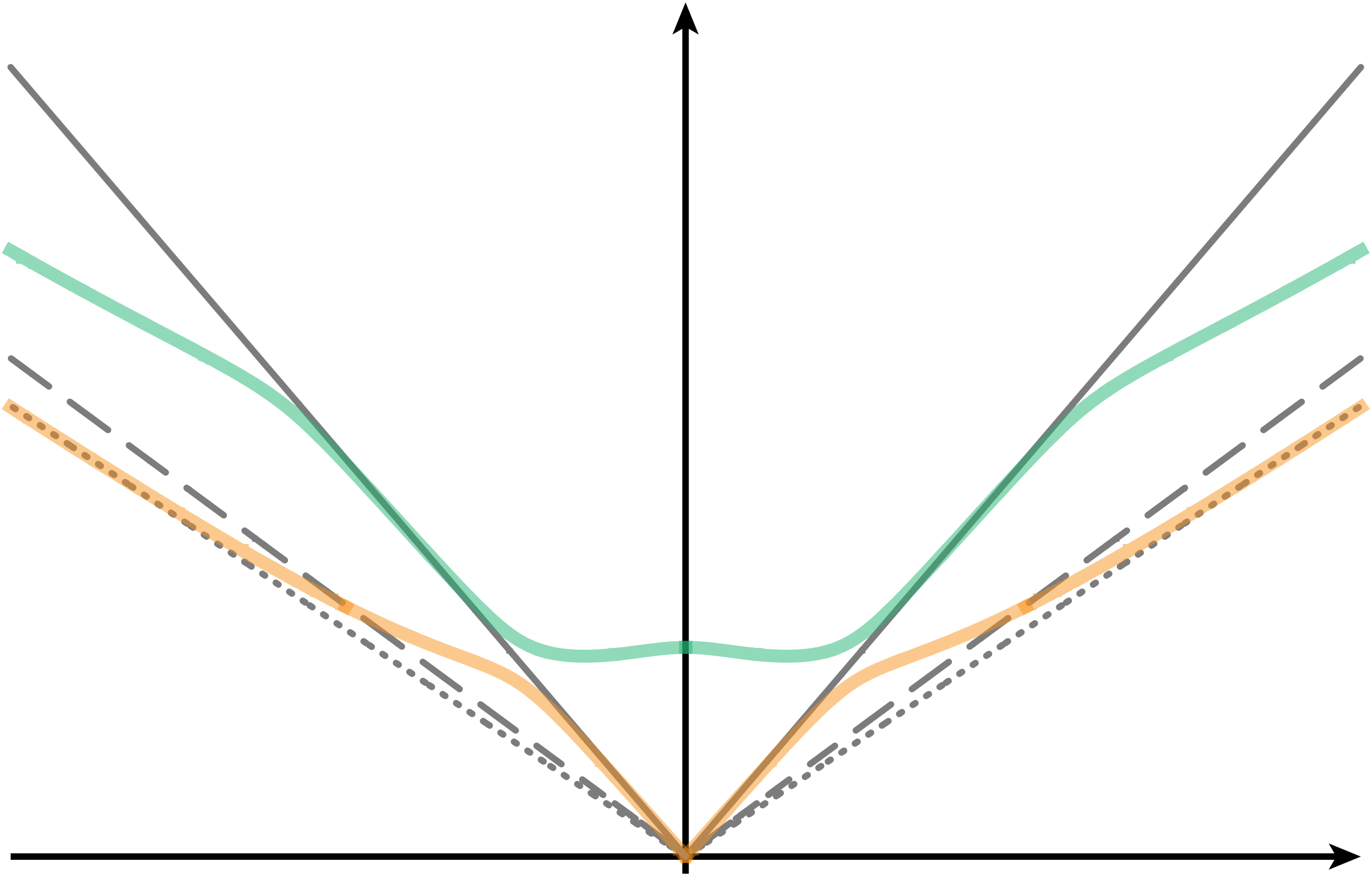


Mechanical wavevector,



Mech. frequency,





as

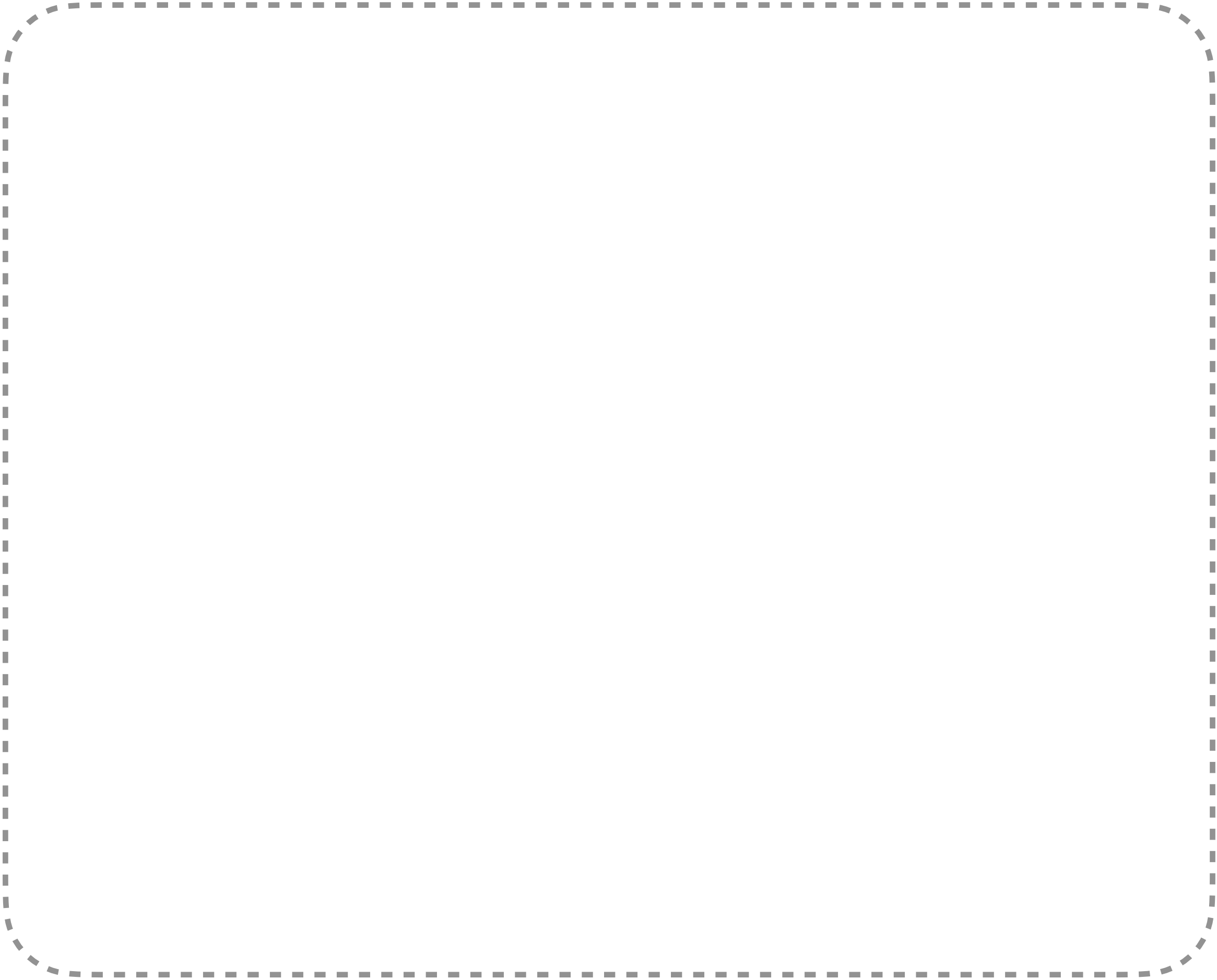








Ωs



$$q_s = + (|k_s| + |k_p|) \approx 2 |k_p|$$

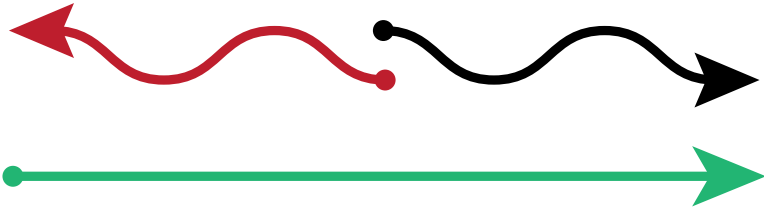
$$q_s(\Omega_s) \approx 2 \frac{\omega_p}{c} n_{eff}$$

$$q_s(\Omega_s) \approx 2 \frac{\omega_p}{c} n_{eff} \approx \frac{\Omega}{v_{ac}}$$

$$\Omega_s \approx 2 \frac{v_{ac}}{c} \omega_p n_{eff}$$



(α_s, β_s)



2

1