

Photo-elastic (pe) vs. moving boundary (mb)

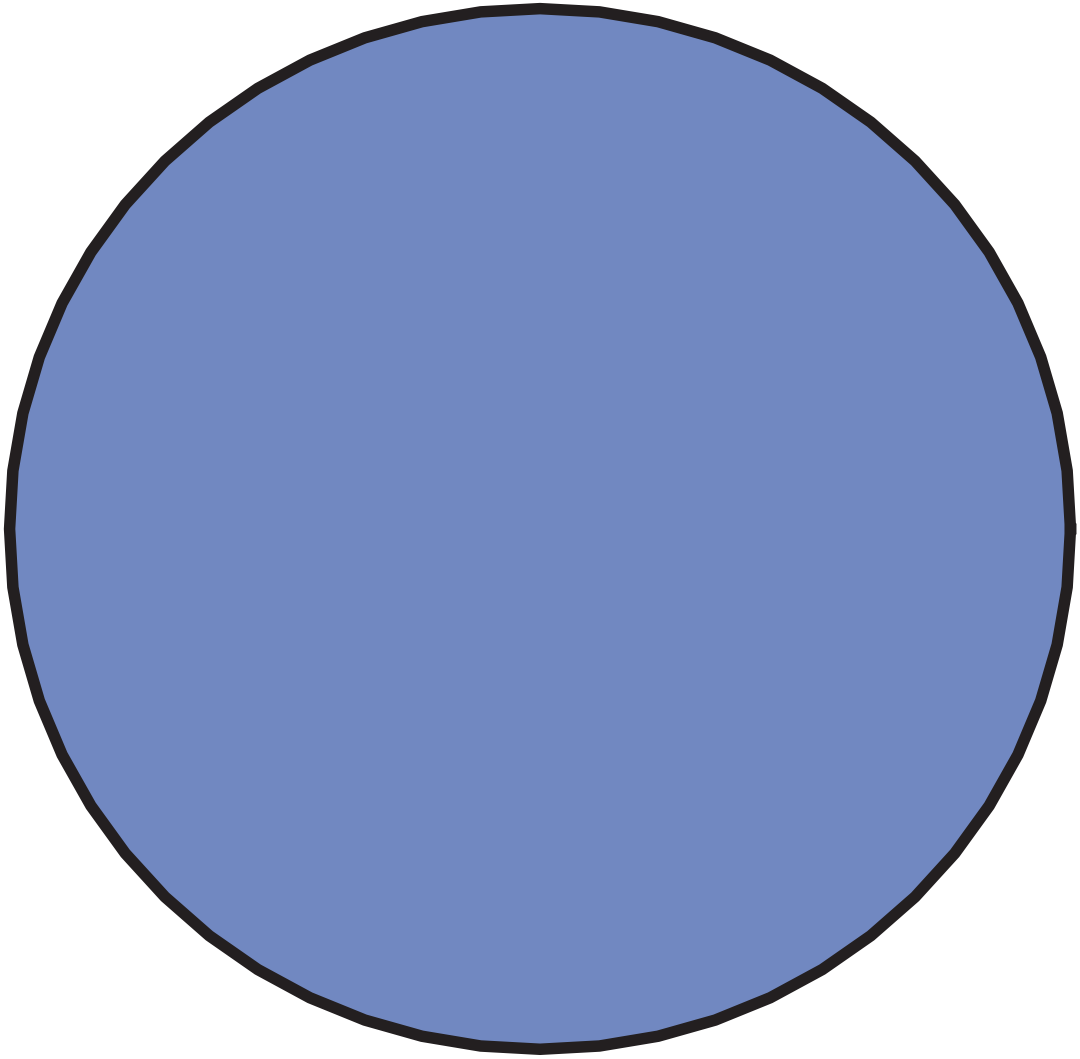
6

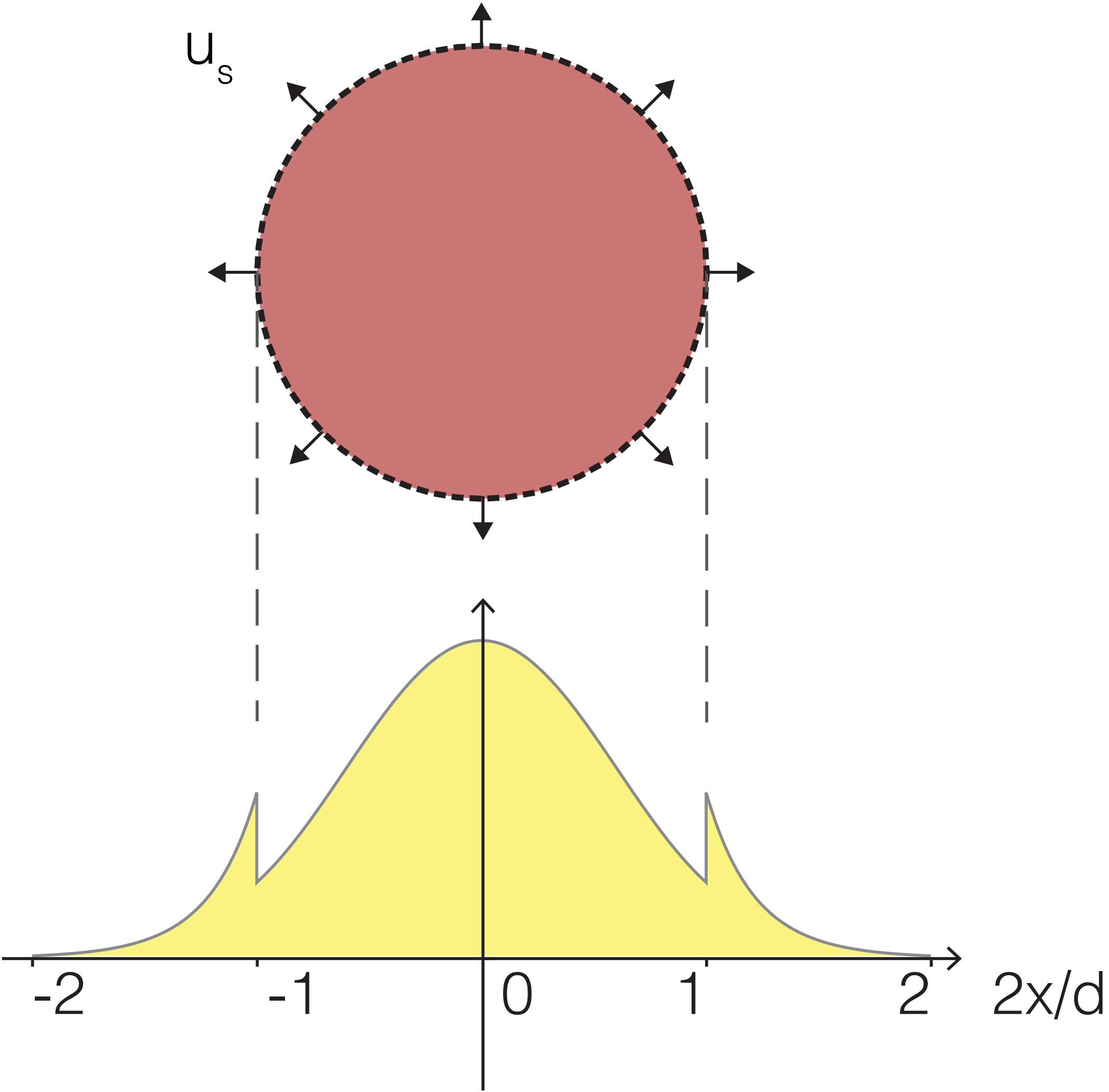
6



Wiederher



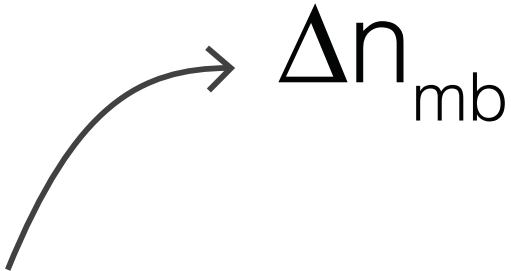


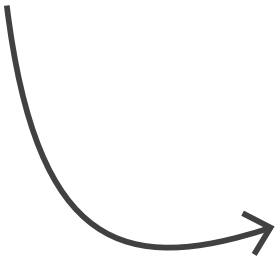






O. Frez et al. 'Brillouin scattering self-correlation,' Nat Comm, vol. 7, p. 11759, (2016).





$\Delta n_{pe}$

$$u_r = (2r/d)u_s$$

$$S_{rr} = \partial_r u_r = 2u_s/d$$

$$\Delta \epsilon_{\text{pe}} \equiv 2n\Delta n_{\text{pe}} \equiv -n^4 p_{11} S_r$$

$$\Rightarrow \Delta n_{\text{pe}} = -n^3 p_{11} \frac{u_s}{d}$$





$$A_{nb} = \pi u_s d$$

$$A_{pe} = \pi d^2/4$$





$\Delta n_{\text{pe}} A_{\text{pe}}$

---

$\Delta n_{\text{mb}} A_{\text{mb}}$



6

7