

# EXPERIMENTAL PARAMETERS

## TWO DIFFERENT REGIME

	Hamburg Group	ETH Group
Cold atoms species	$^{87}\text{Rb}$	$^{40}\text{K}$
Laser wavelength $\lambda_L$	830nm	1064nm
Recoil energy $E_r = \frac{\hbar^2 k_L^2}{2M} = \frac{\hbar^2}{2M\lambda_L^2}$	$h \times 3.33\text{kHz}$	$h \times 4.41\text{kHz}$
Lattice depth $V_0$	$V_0 = (0 \sim 15)E_r = h \times (0 \sim 50)\text{kHz}$	$V_{\text{bw}} = h \times 3.9(1)\text{kHz}$
Band width and gap	a typical depth $V_0 = 9.5E_r = h \times 31.6\text{kHz}$	$V_{\text{gap}} = h \times 5.4(2)\text{kHz}$
Shaking frequency $\Omega$	$(2 \sim 6)\text{kHz} = (0.6 \sim 1.8)E_r/h$	4.0kHz
$\hbar\Omega$ vs. $V_{\text{band}}$	$n \times \hbar\Omega = \varepsilon_1 - \varepsilon_0$ $n = 1, 2, \dots, 10$	$\hbar\Omega \sim V_{\text{bw}}$