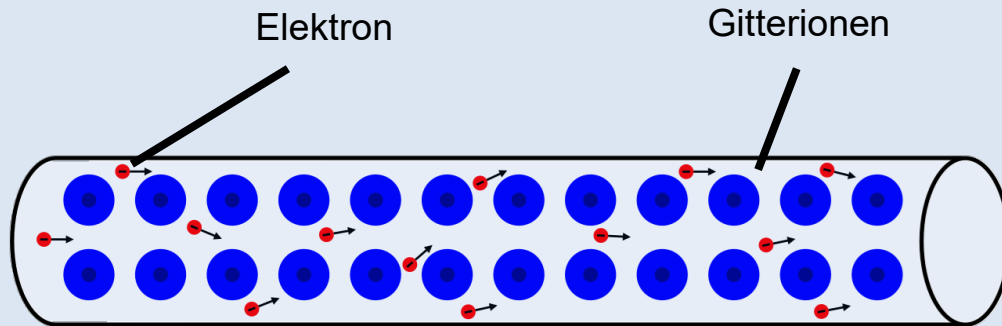


Ultrakalte Atome im Quantensimulator

Prof. Rudi Grimm



Quantensimulator

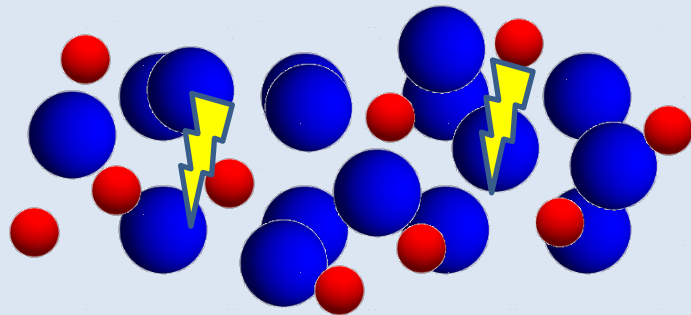
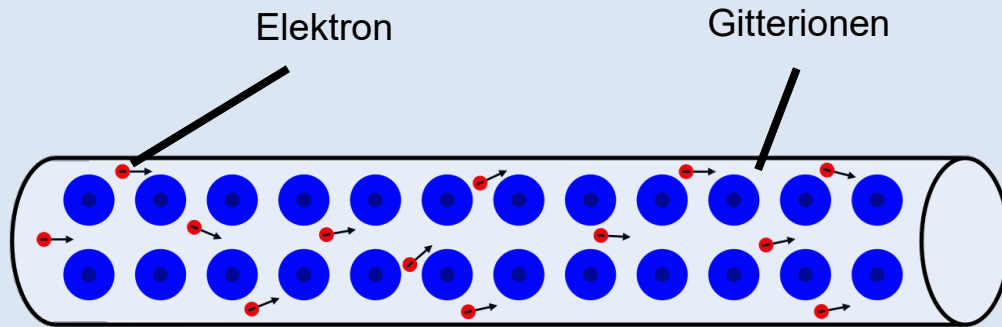


$$n \approx 10^{23} \frac{1}{\text{cm}^3}$$

$$T \approx 300 \text{ K}$$

$$t \approx 1 \text{ as} = 10^{-18} \text{ s}$$

Quantensimulator



$$n \approx 10^{23} \frac{1}{\text{cm}^3}$$

$$T \approx 300 \text{ K}$$

$$t \approx 1 \text{ as} = 10^{-18} \text{ s}$$

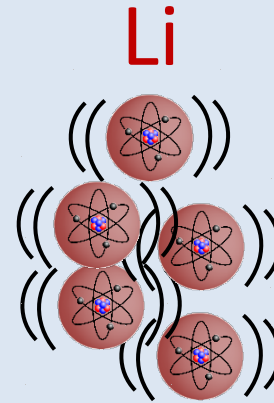
$$n \approx 10^{12} \frac{1}{\text{cm}^3}$$

$$T \approx \text{nK} = 10^{-9} \text{ K}$$

$$t \approx 1 \mu\text{s} = 10^{-6} \text{ s}$$

Ultrakalte Atome

$$T = 300 \text{ K}$$
$$\approx$$
$$v = 300 \text{ m/s}$$

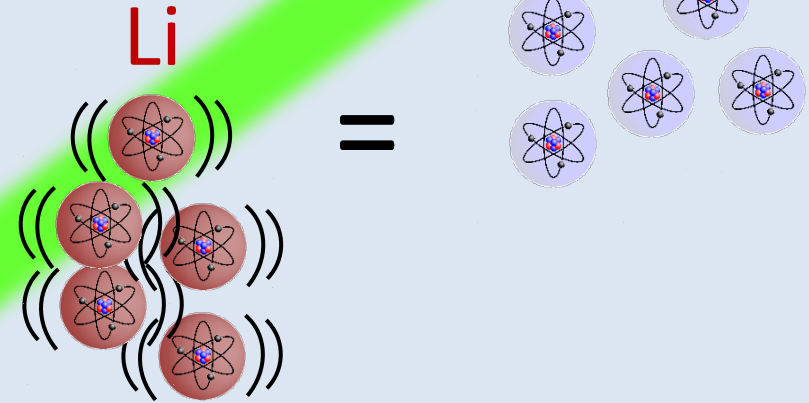


Ultrakalte Atome

$$T = 300 \text{ K}$$
$$\approx$$
$$v = 300 \text{ m/s}$$

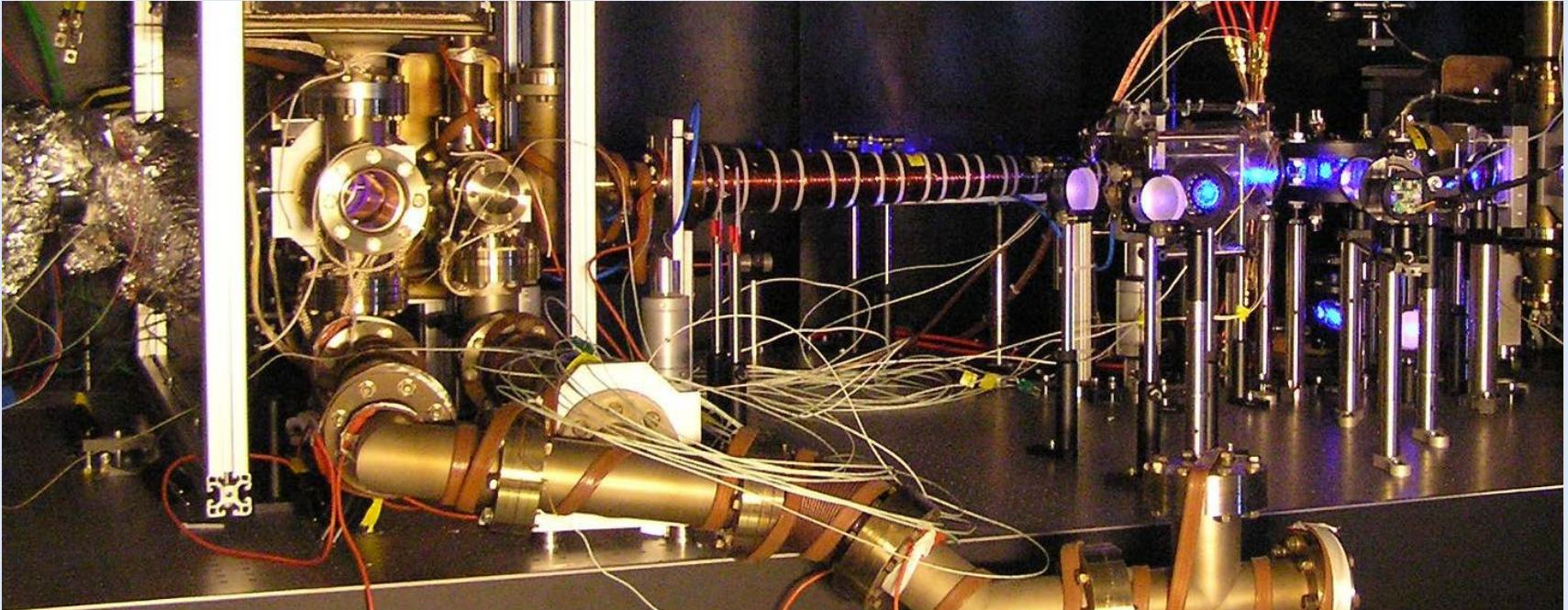


<https://wallpapersprinted.com/>

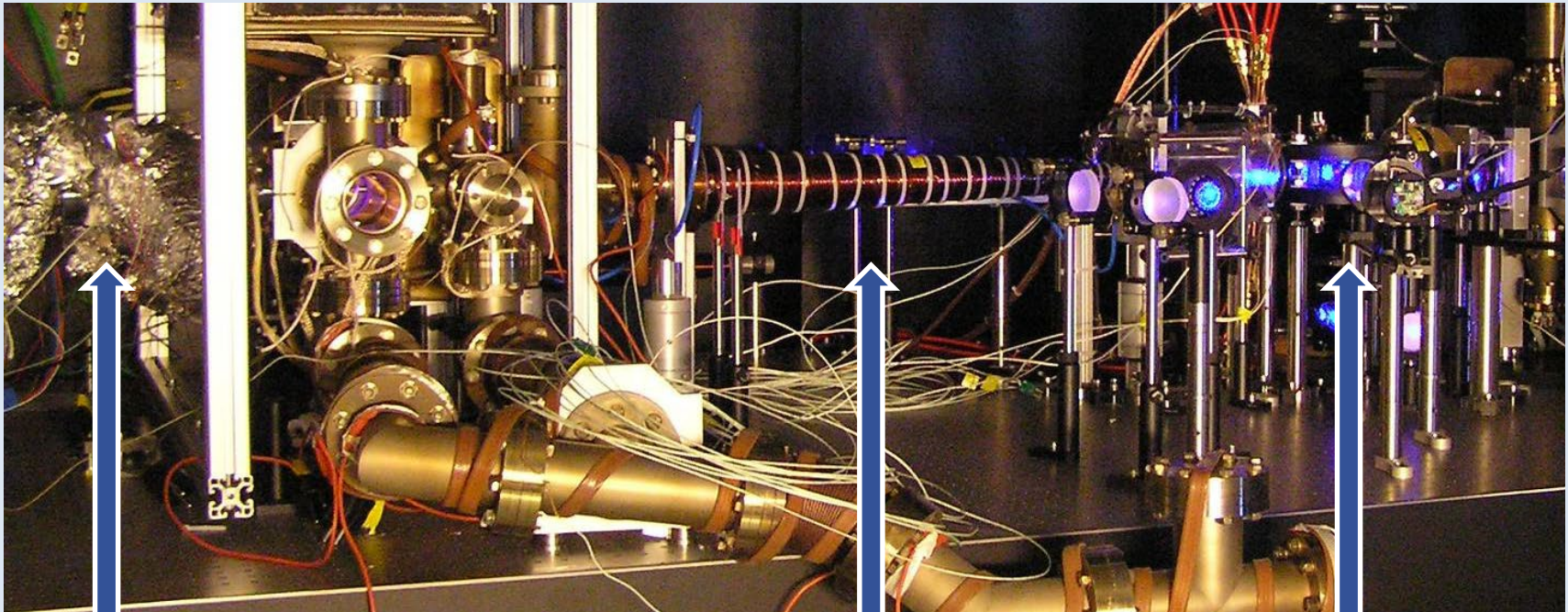


$$T = 1 \text{ nK} = 0.000000001 \text{ K}$$
$$\approx$$
$$v = 5 \text{ mm/s}$$

Ultrakalte Atome



Ultrakalte Atome



Heizen

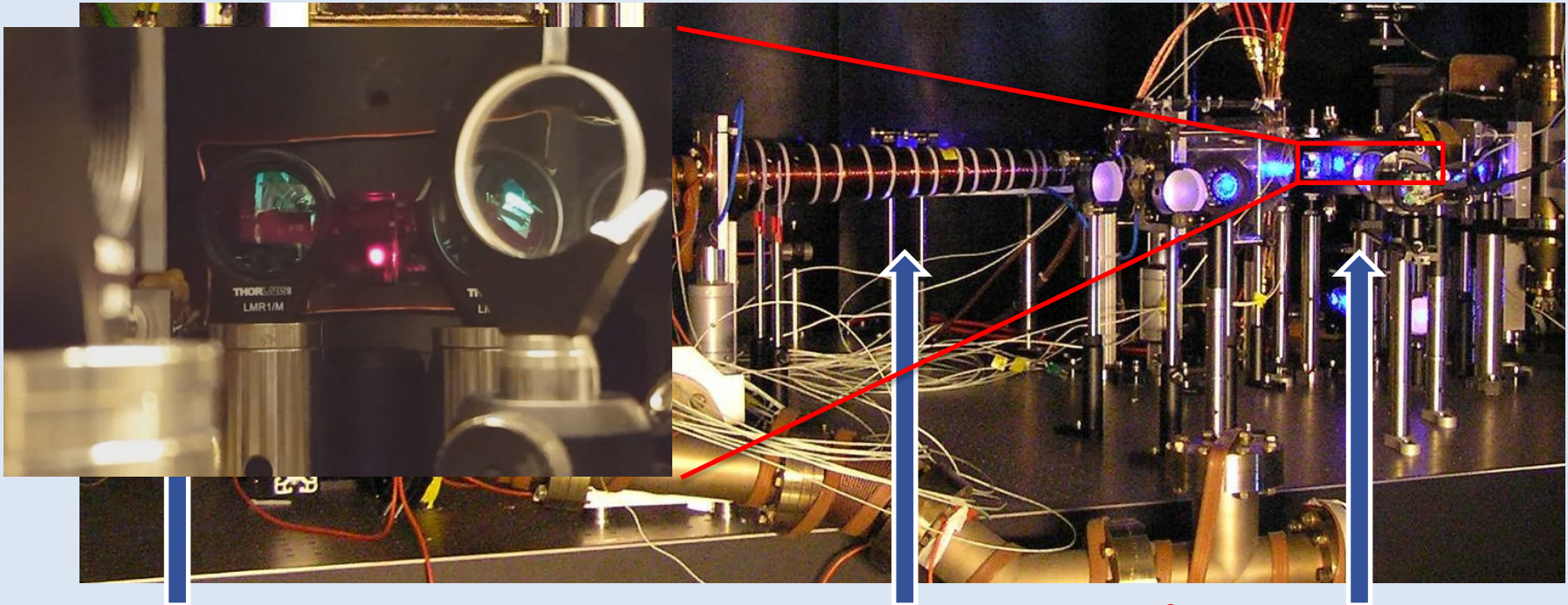
Entschleunigen

Fangen



Ultrakalte Atome

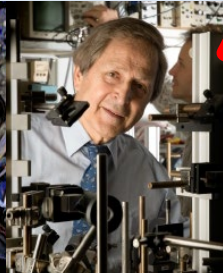
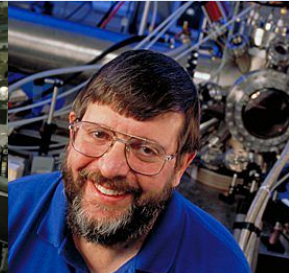
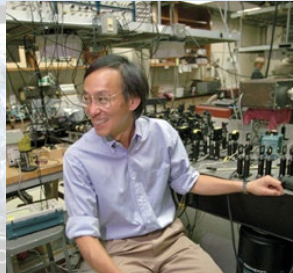
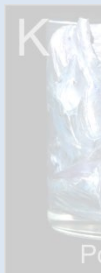
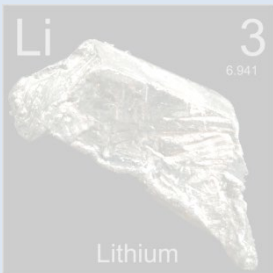
1/20



Heizen

Entschleunigen

Fangen



$T \sim \text{nK}$

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