

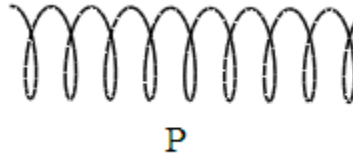
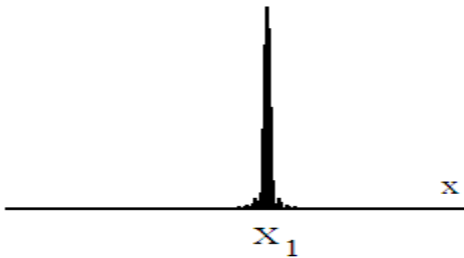
# Relationship Between the Coordinate and Momentum Representations

Frank Rioux

A quon has position  $x_1$ :  $|x_1\rangle$

Coordinate space  $\Leftrightarrow$  Momentum space

$$\langle x|x_1\rangle = \delta(x - x_1) \qquad \langle p|x_1\rangle = \exp\left(-\frac{ipx_1}{\hbar}\right)$$



A quon has momentum  $p_1$ :  $|p_1\rangle$

Coordinate space  $\Leftrightarrow$  Momentum space

$$\langle x|p_1\rangle = \exp\left(\frac{ip_1x}{\hbar}\right) \qquad \langle p|p_1\rangle = \delta(p - p_1)$$

