

$$H(z) = \sum_k h(k) z^{-k}$$

$$z = r e^{i\omega}$$

$$= \sum_k h(k) (r e^{i\omega})^{-k}$$

$$= \sum_k h(k) r^{-k} e^{-i\omega k}$$

if $r=1 \Rightarrow$ unit circle

$$\Rightarrow \sum_k h(k) e^{-i\omega k}$$

