X-Ray Diffraction:
A technique to study crystal structure

θ

θ

d

$d \sin \theta$

Crystal solid such as sodium
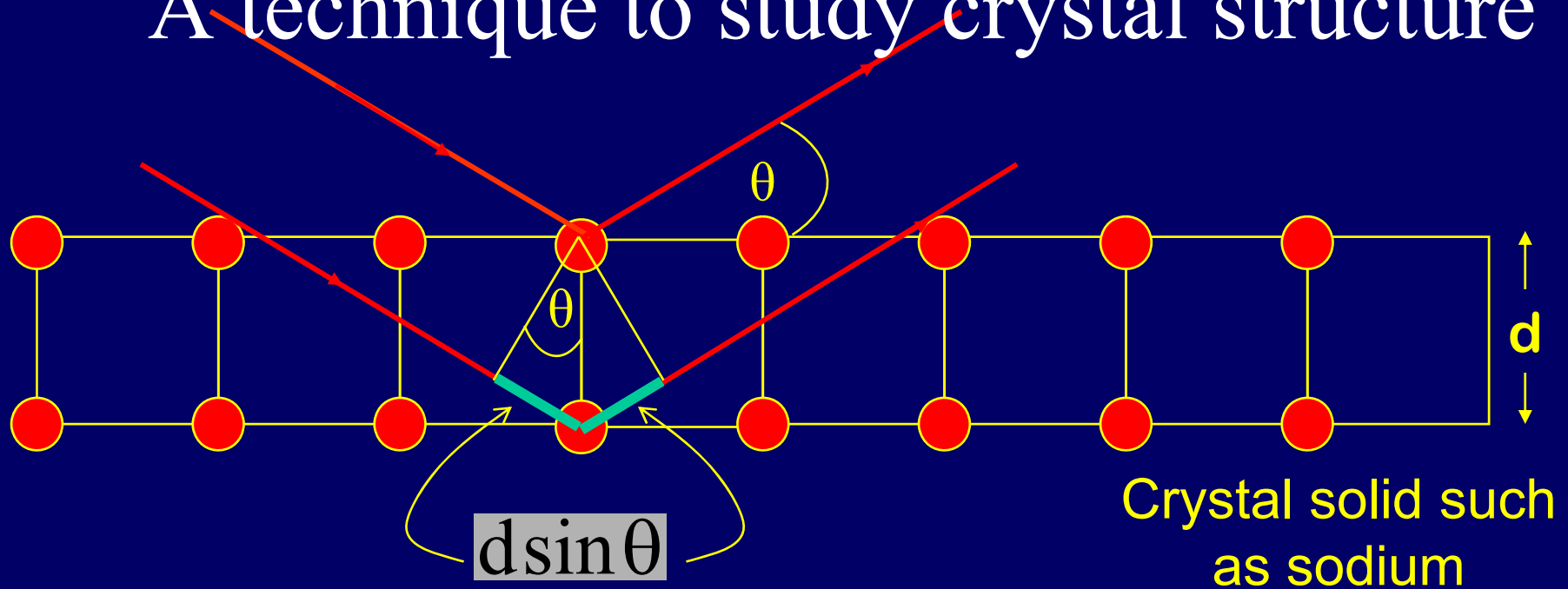
Constructive interference:

$$2 d \sin \theta = m \lambda$$

$$d \approx 0.5 \, nm$$ **in NaCl**

For $\lambda = 0.017nm$

X-ray

1ˢᵗ maximum will be at 10⁰

Measure θ, determine d