

# What is X-ray Astronomy? Script

## Clip from *Building the Coolest X-ray Satellite*

Video

TEXT: WHAT IS X-RAY ASTRONOMY?  
A GRAPHIC OF ELECTROMAGNETIC SCALE

Audio

KIM WEAVER: X-rays are light. It's electromagnetic radiation, just like optical light, but it's at a different wavelength. X-rays have a shorter wavelength and they carry much more energy. So, each x-ray photon has much, much more energy than an individual optical photon.

Video

CLIP OF DENTAL OFFICE, TAKING X-RAYS  
KIM OC  
ANIMATION OF ASTRO-E2 IN SPACE

Audio

KIM WEAVER: In x-ray astronomy, it's not like going to the dentist. The dentist takes an x-ray by shooting x-rays at you and on the other side they have a piece of film that collects the x-rays and that's how you see the x-ray shadow. In astronomy, we're not producing the x-rays ourselves, the objects out there, the stars, the supernovae, the galaxies; the black holes are producing the x-rays. And then we send up a telescope that just detects the x-rays.