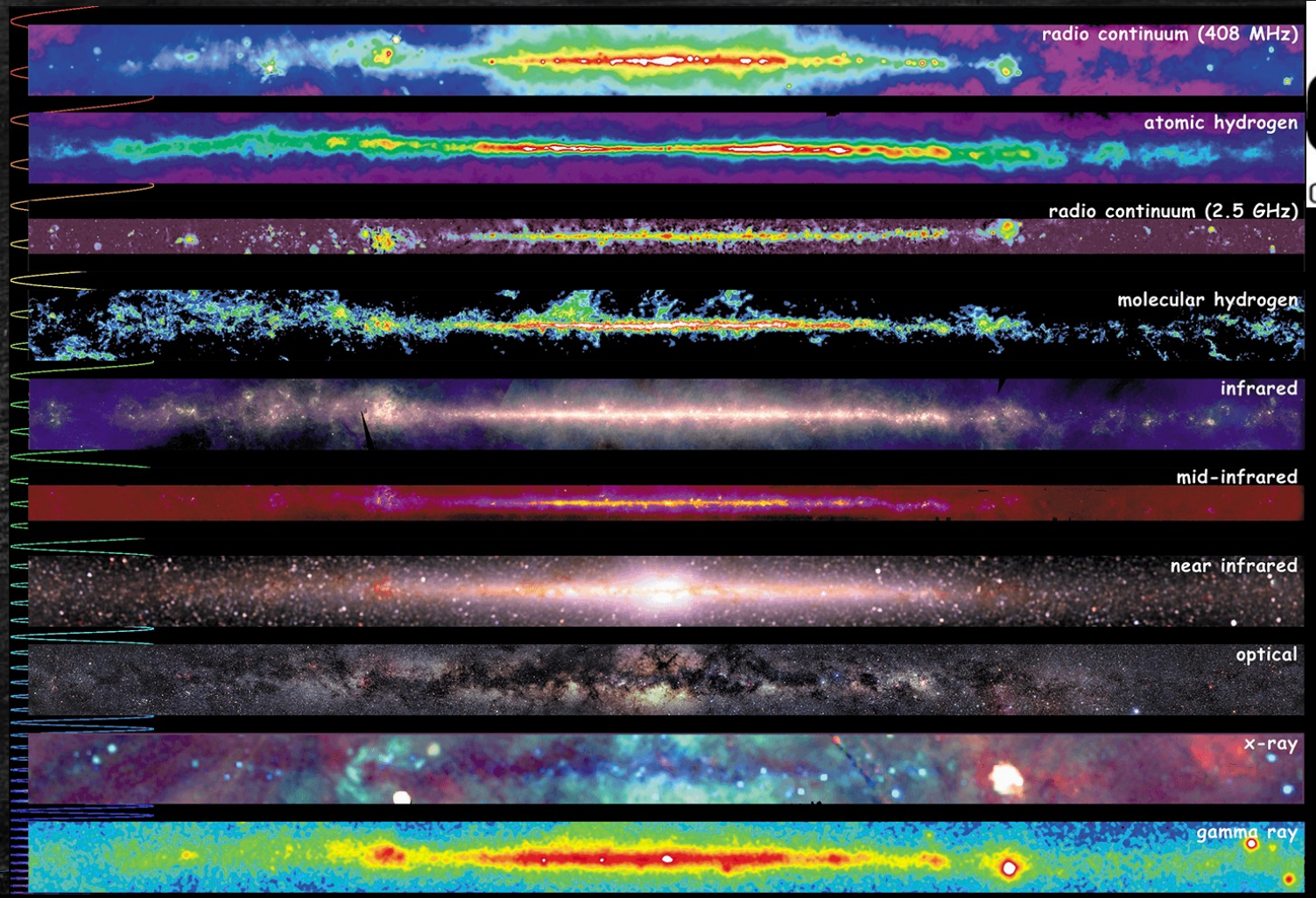


GRAPPA

GRavitation AstroParticle Physics Amsterdam

GRAPPA MasterClass

cherenkov telescope array

The Electromagnetic Spectrum

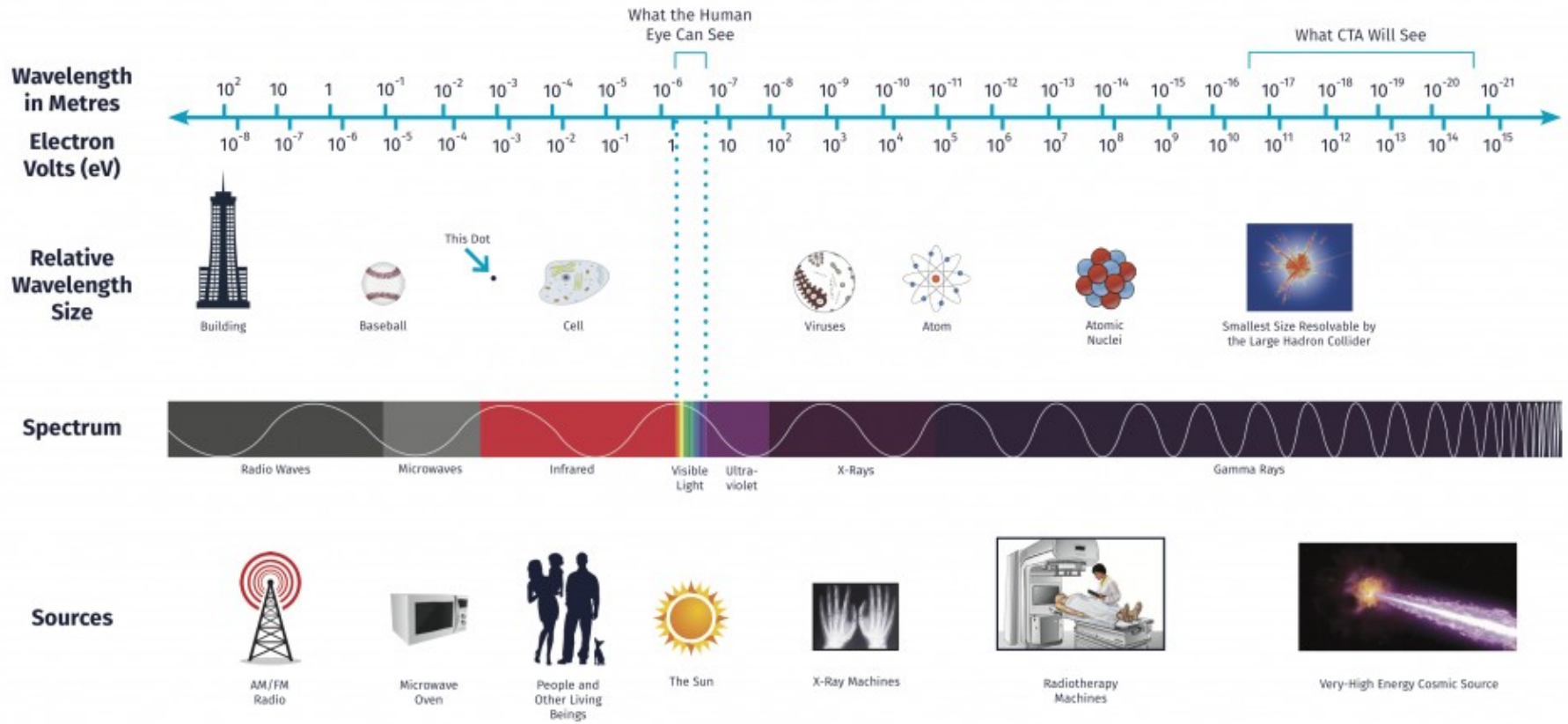
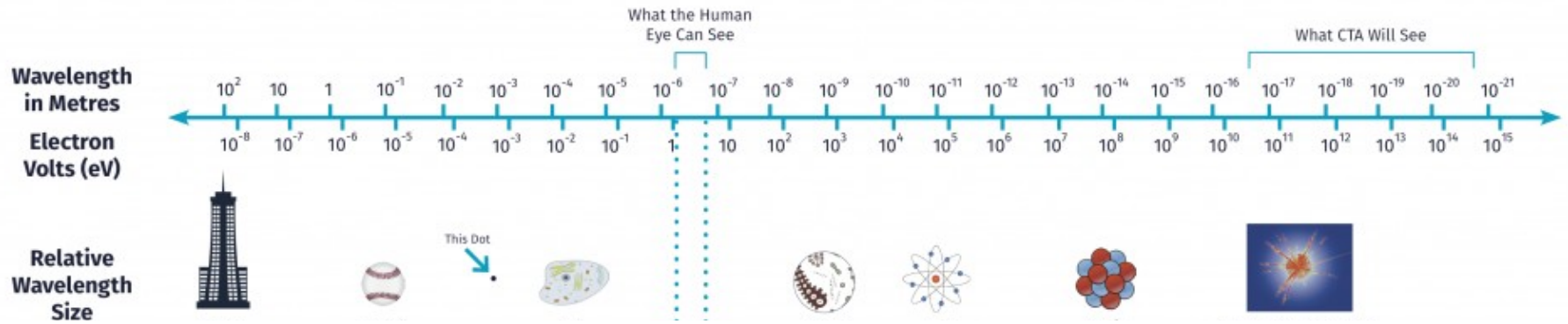


Image credits: Vecteezy.com, Dragonartz.net, NAOJ, NCI, CERN, NASA

cherenkov telescope array

The Electromagnetic Spectrum



optical

micro wave

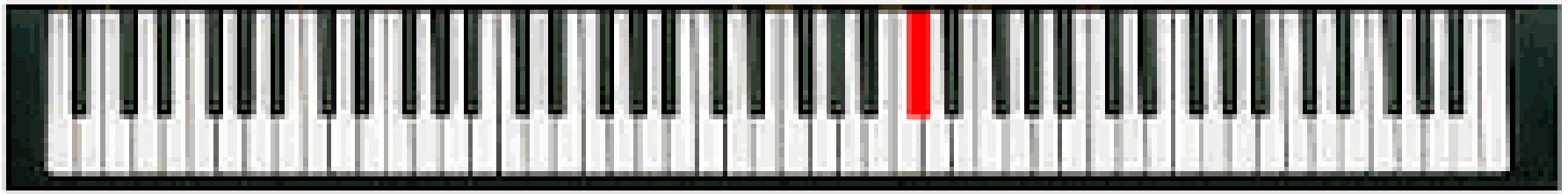
radio

infrared

ultra violet

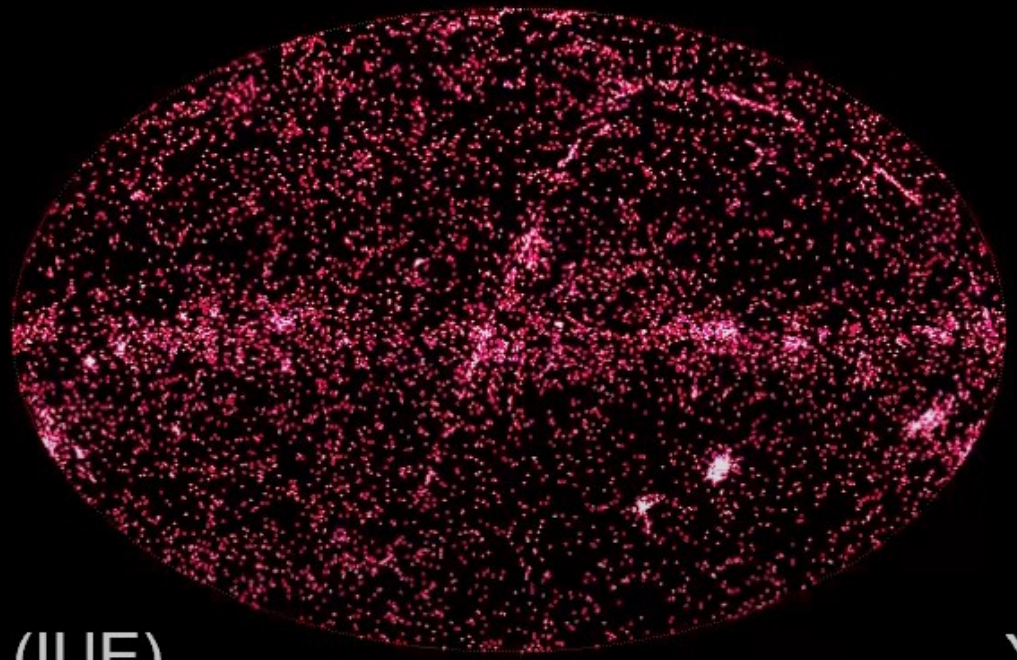
X-ray

gamma-ray

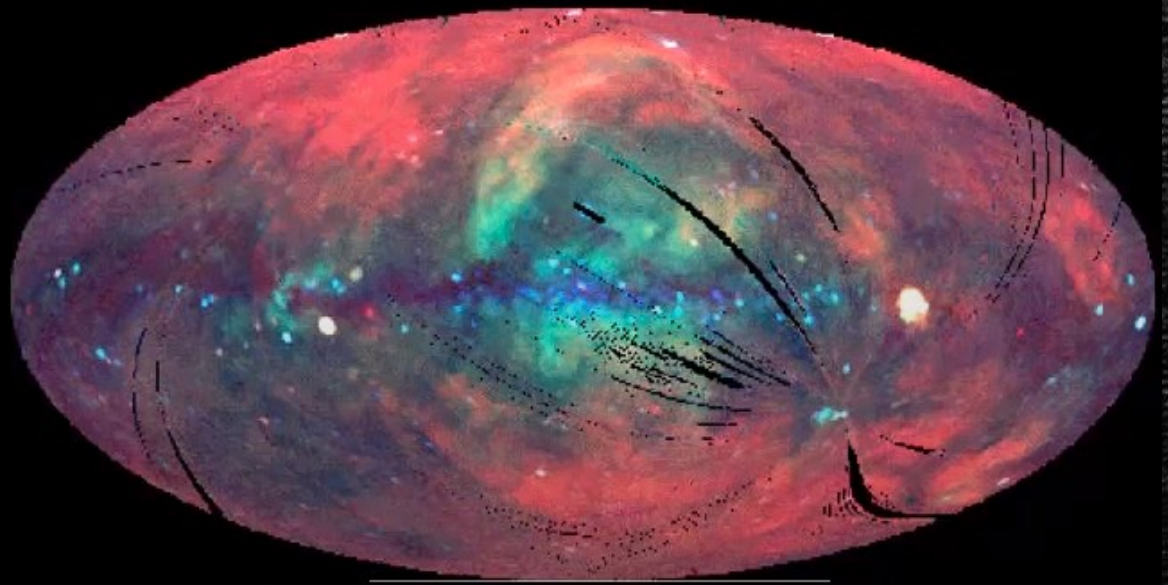


IR (COBE)

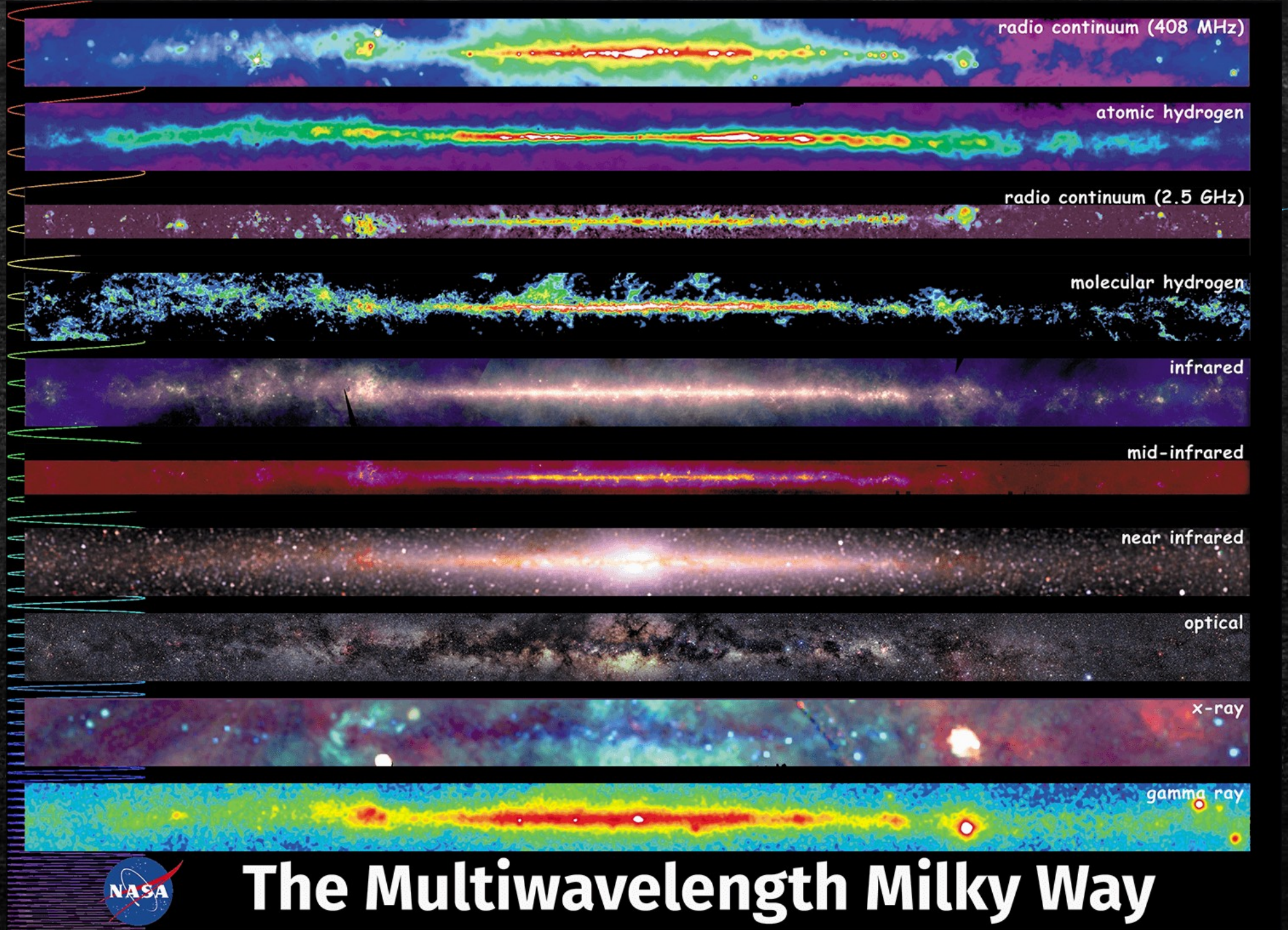
Optical



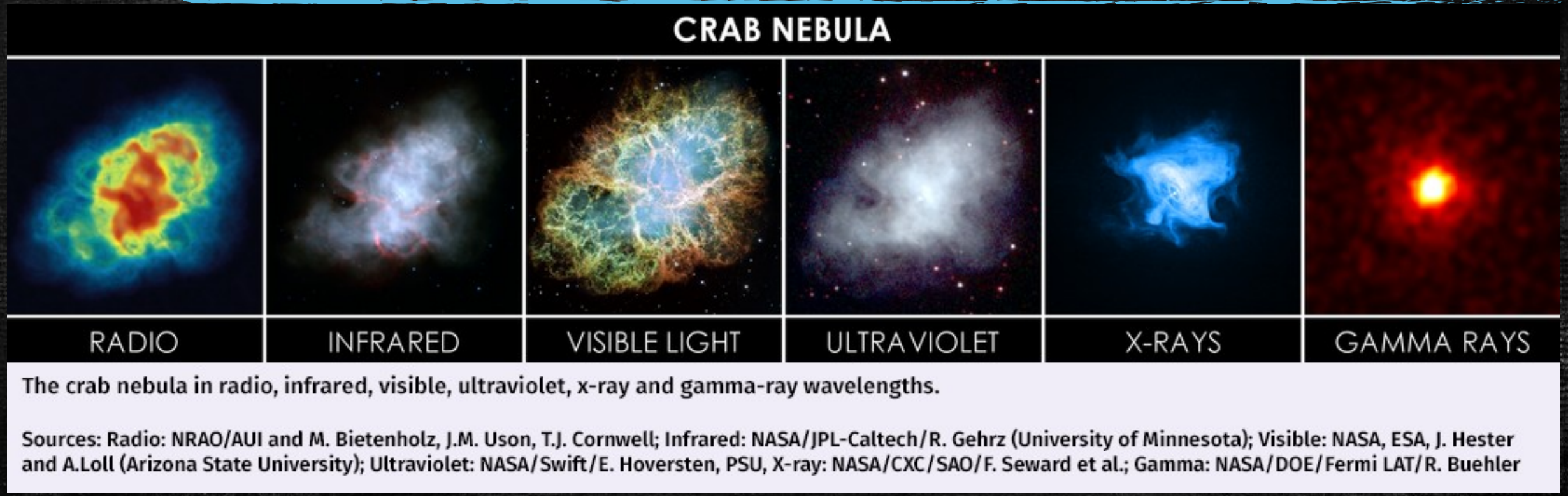
UV (IUE)



X-ray (ROSAT)


radio continuum (408 MHz)
atomic hydrogen
radio continuum (2.5 GHz)
molecular hydrogen
infrared
mid-infrared
near infrared
optical
x-ray
gamma ray
NASA
The Multiwavelength Milky Way

El pulsar del Cangrejo



The crab nebula in radio, infrared, visible, ultraviolet, x-ray and gamma-ray wavelengths.

Sources: Radio: NRAO/AUI and M. Bietenholz, J.M. Uson, T.J. Cornwell; Infrared: NASA/JPL-Caltech/R. Gehrz (University of Minnesota); Visible: NASA, ESA, J. Hester and A.Loll (Arizona State University); Ultraviolet: NASA/Swift/E. Hoversten, PSU, X-ray: NASA/CXC/SAO/F. Seward et al.; Gamma: NASA/DOE/Fermi LAT/R. Buehler

Video 0

Video 1

Estos necesitan estar en lugares Secos puesto que la humedad dificulta las observaciones

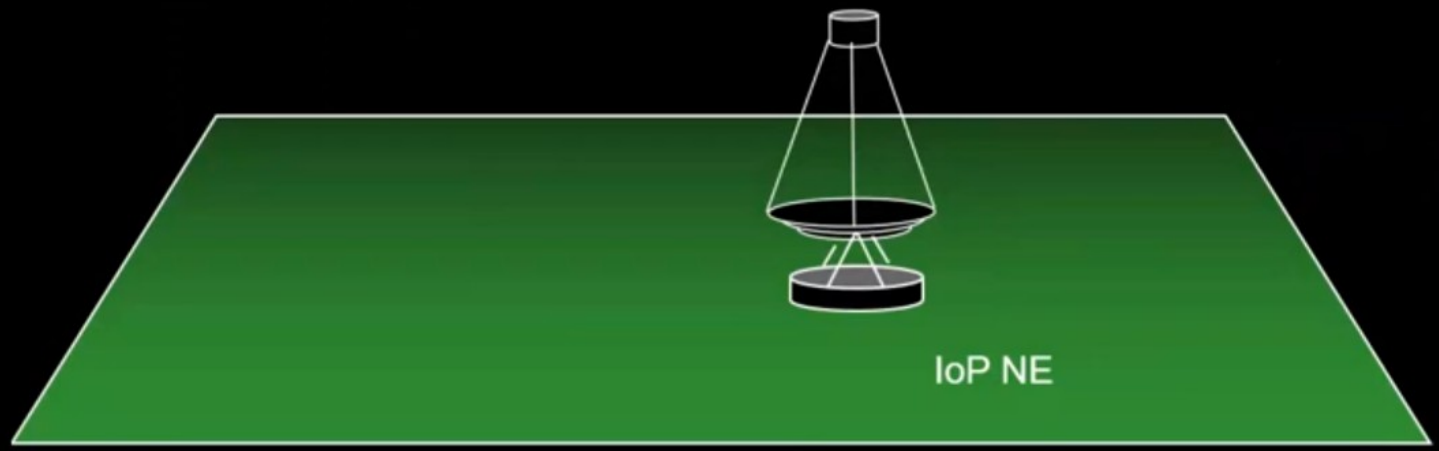
Video 2, 3, 4, 5, 6

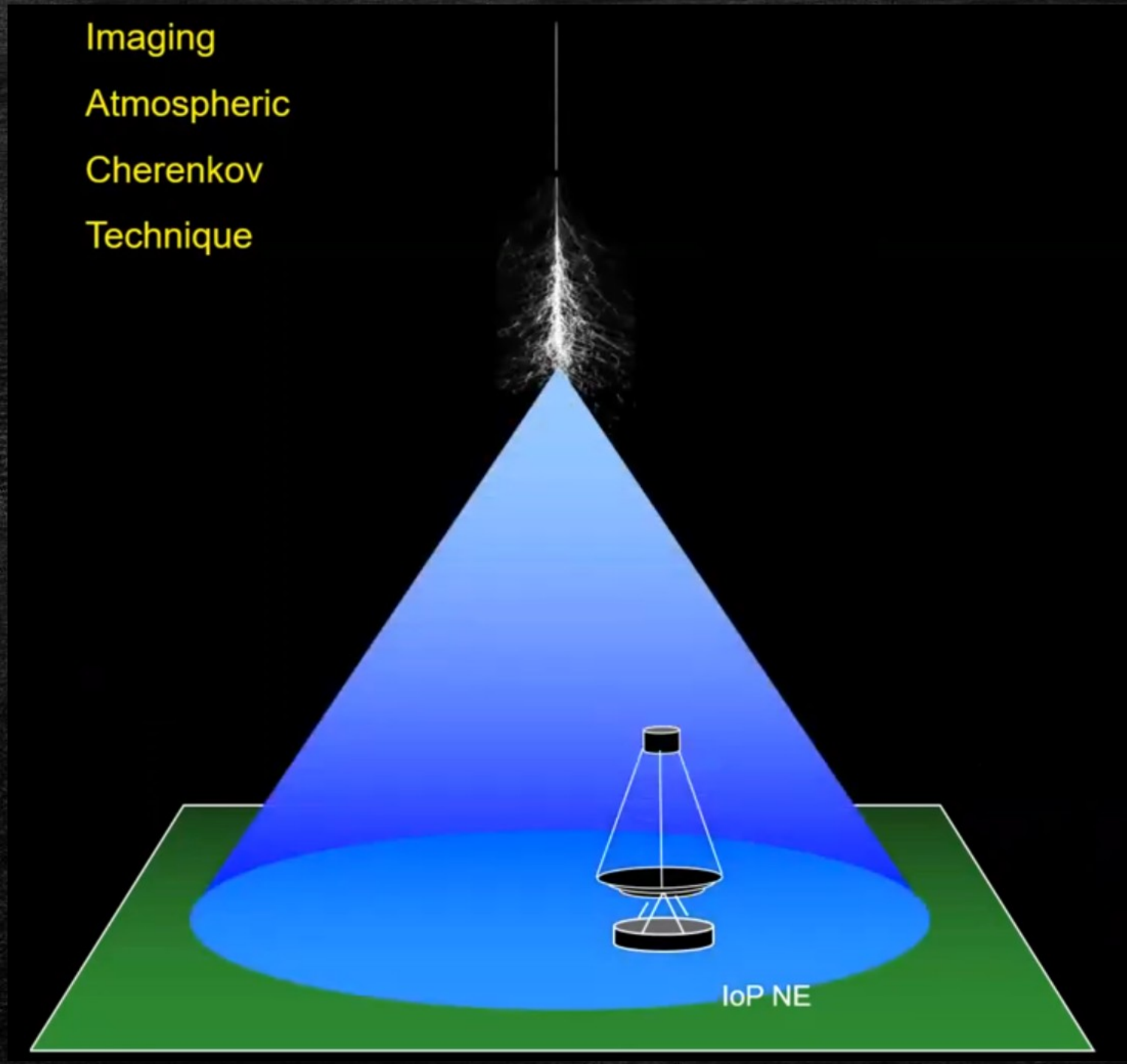
Imaging

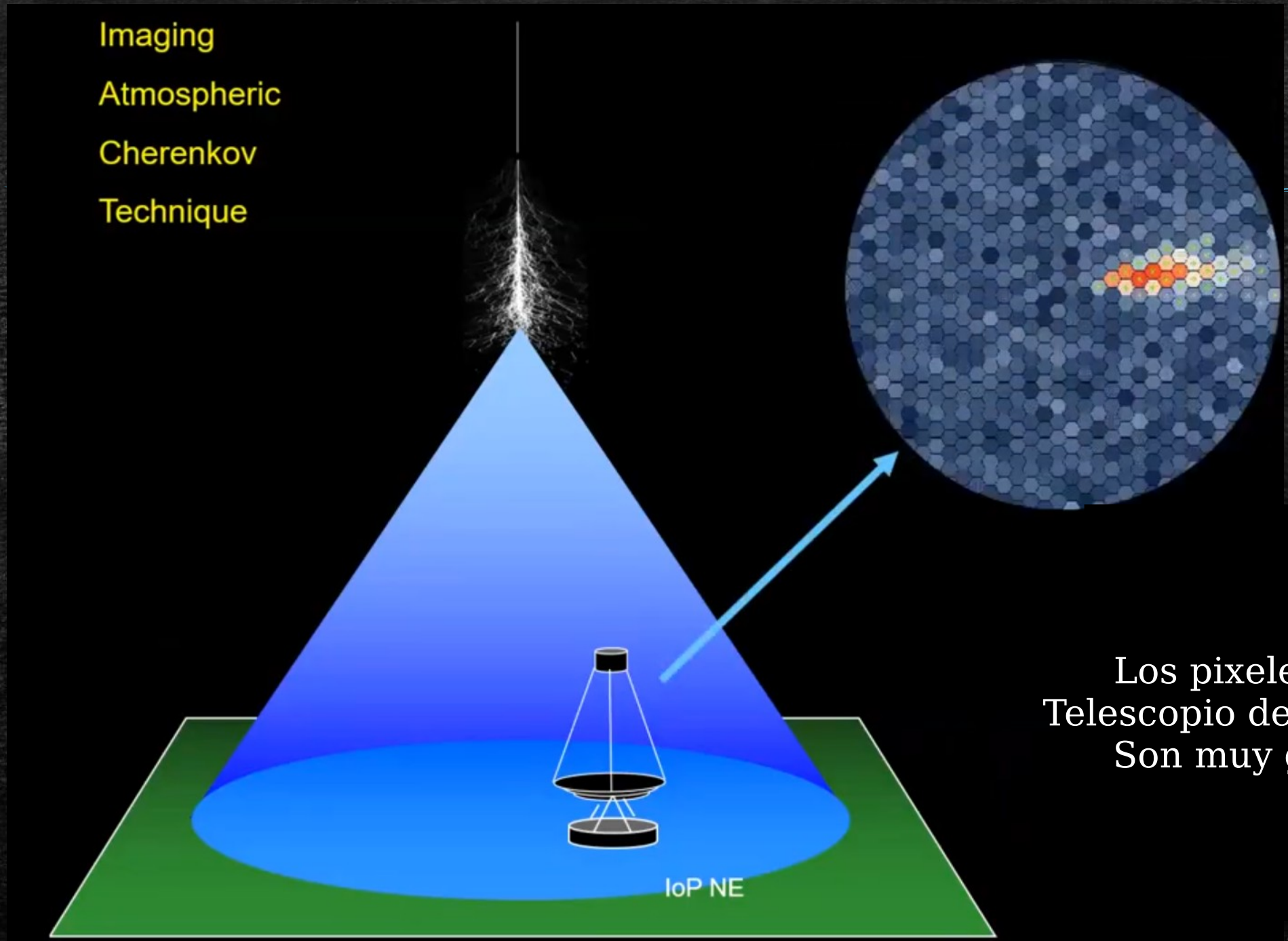
Atmospheric

Cherenkov

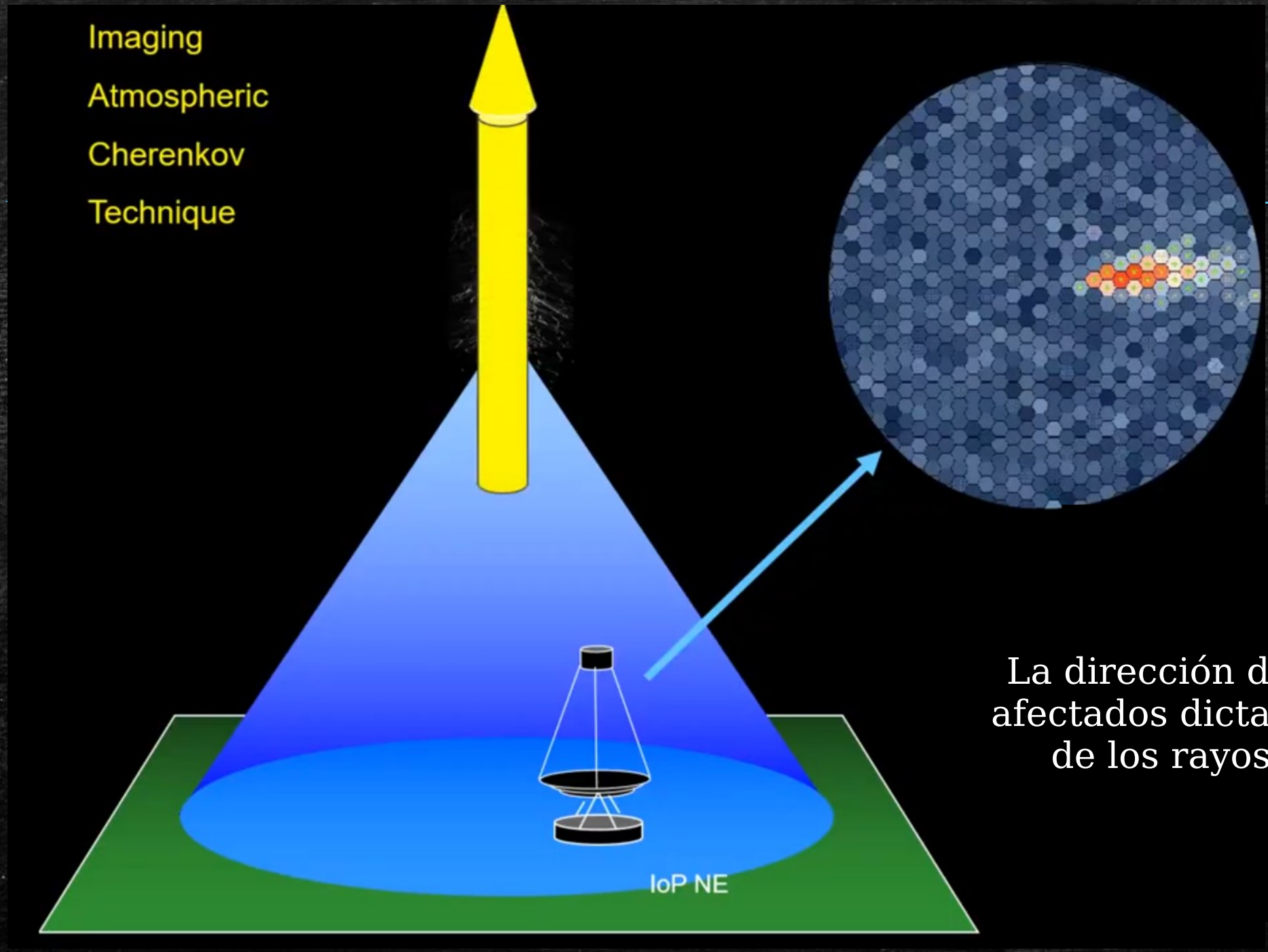
Technique



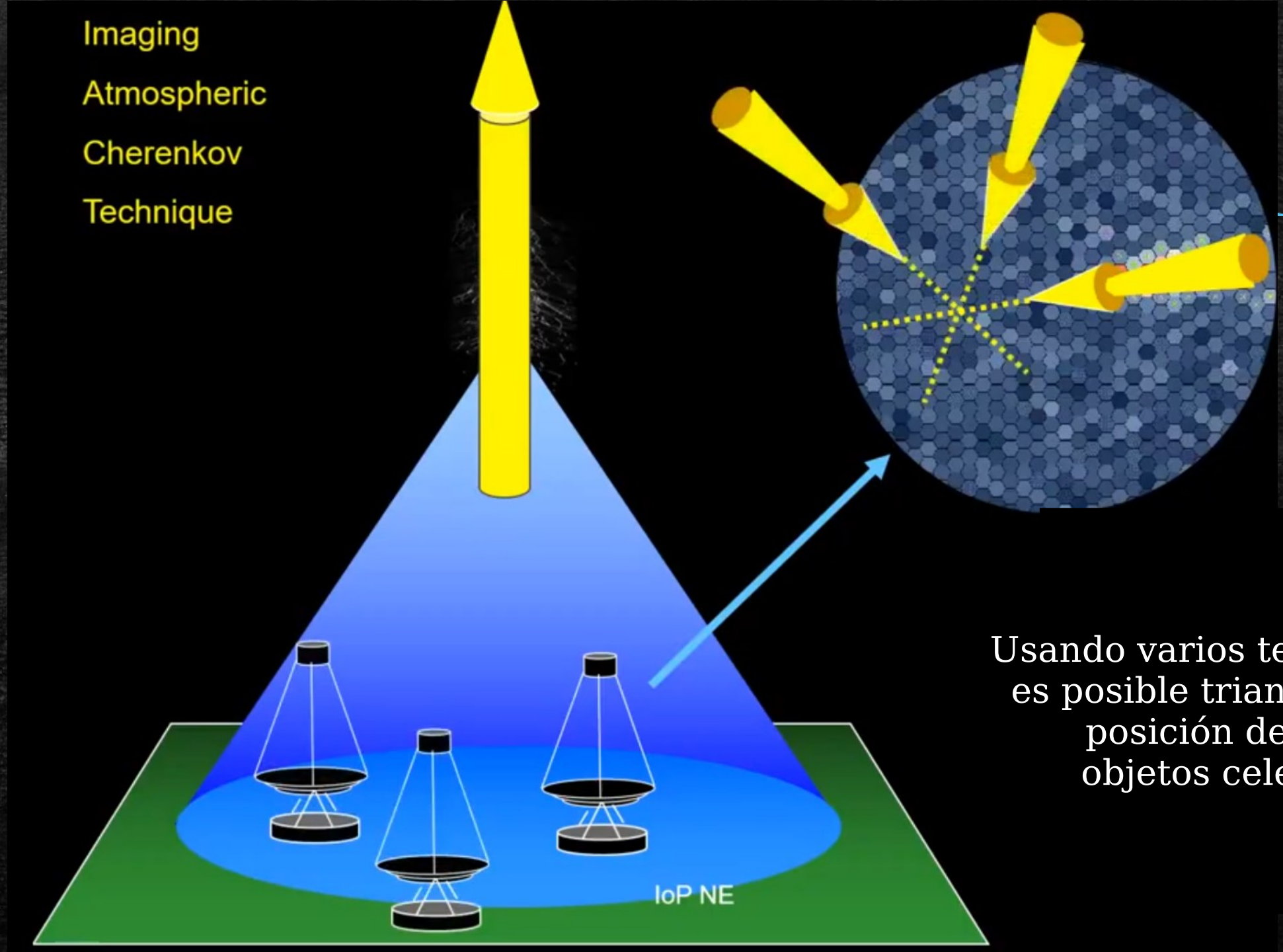

Imaging
Atmospheric
Cherenkov
Technique
IoP NE



Los pixeles de un
Telescopio de Cherenkov
Son muy grandes



La dirección de los pixeles afectados dicta la dirección de los rayos cósmicos



Usando varios telescopios es posible triangular la posición de los objetos celestes

Prototipo de telescopio pequeño de Cherenkov. Setenta de estos van a ser instalados en Chile!

Video 7

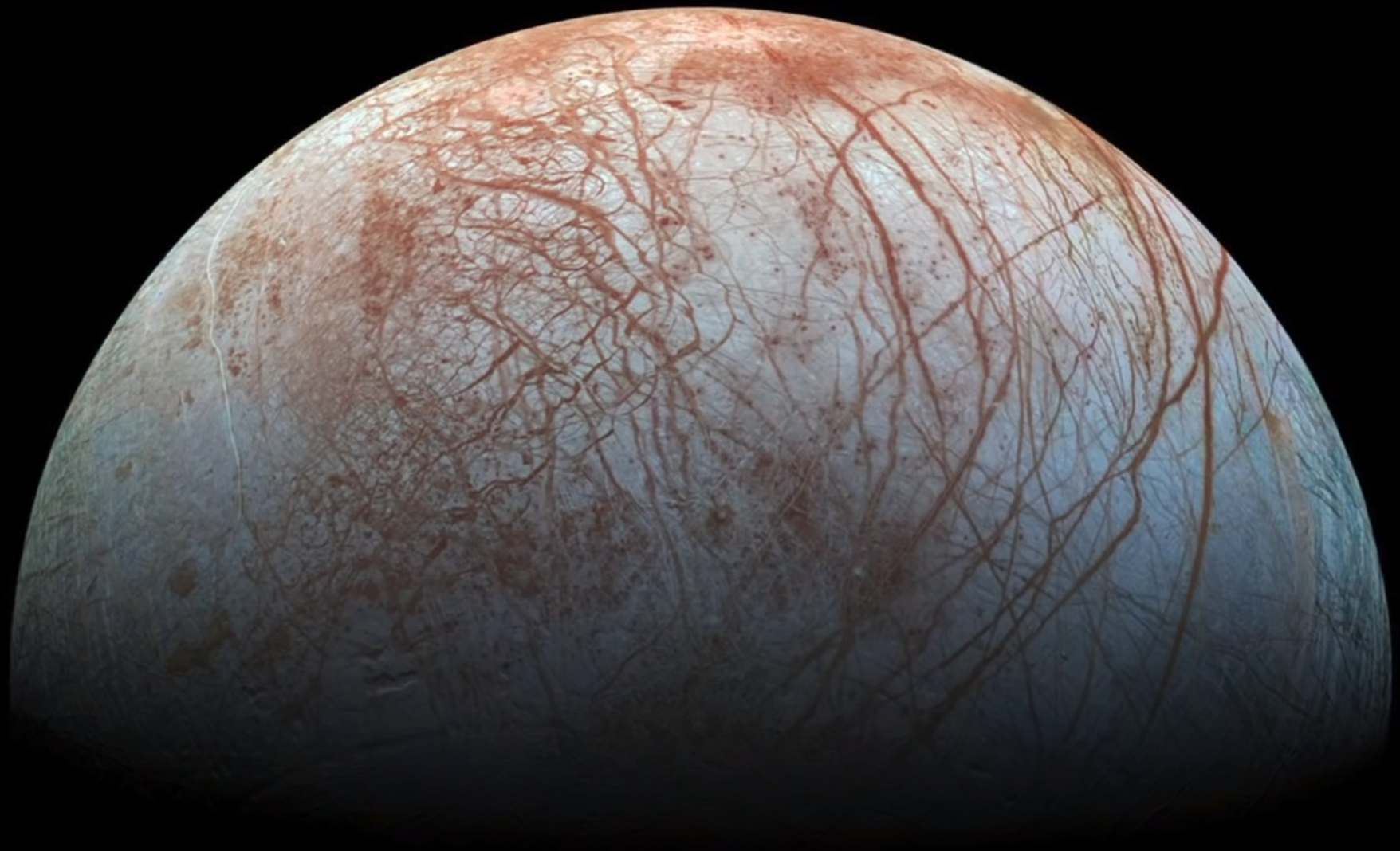
Video 9 (modelo de papel de CTA)

James Webb Telescope

Video 8B, 9, 10, 11

La nebulosa del Aguila

La luna Europa de Jupiter



Video 12 (modelo de papel de James Webb)