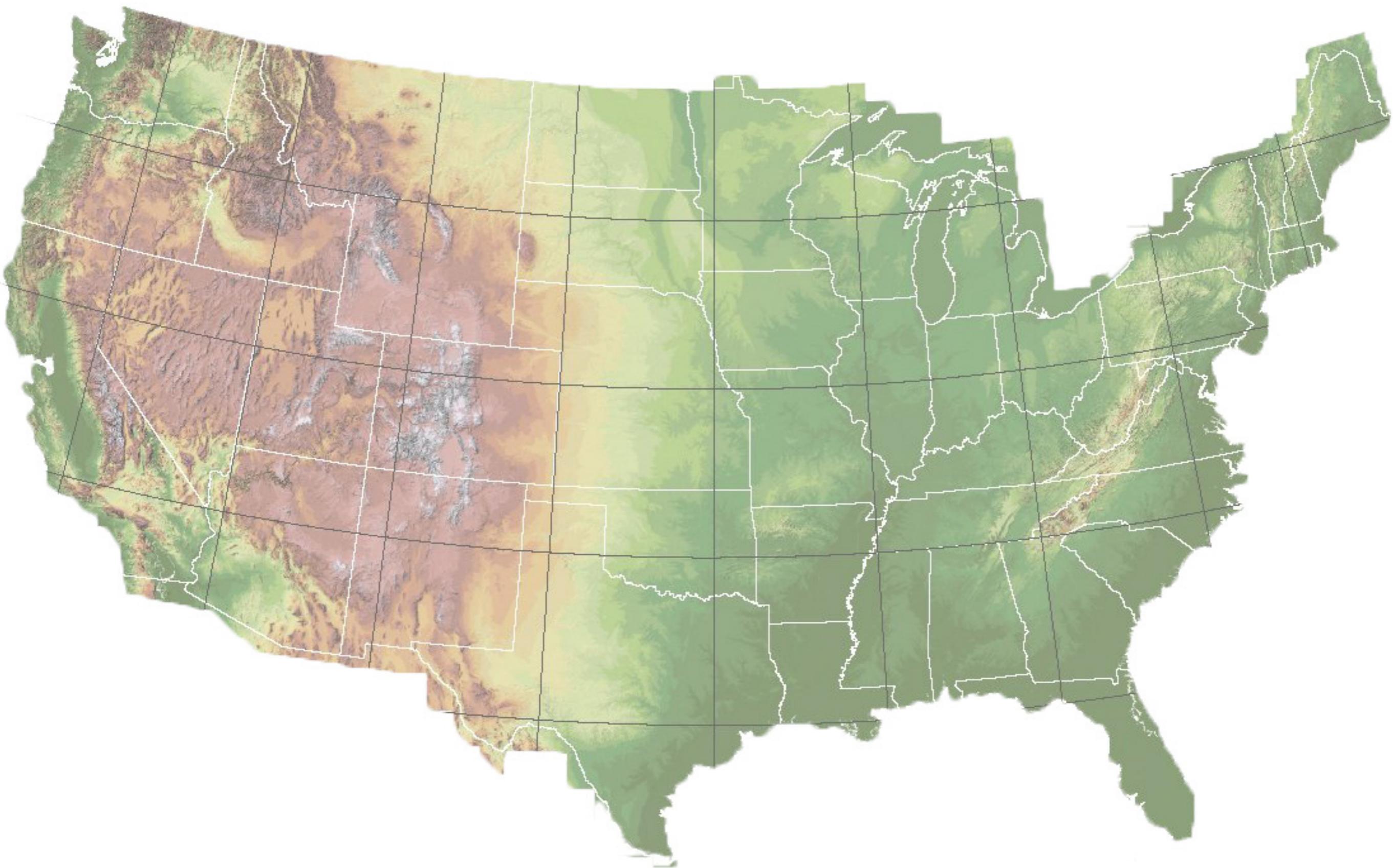


# La misión New Horizons a Plutón, el Cinturón de Kuiper, y más allá



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Sr. Research Scientist  
Southwest Research Institute  
Boulder, Colorado, USA

Biblioteca Benjamin Franklin  
México, D.F.  
diciembre 2, 2008





Denver, Colorado

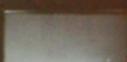
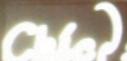






VIPS

PLAZA  
DIAMANTE



ANOUS  
BUTCHER HOUSE  
Don Julio





Facile para ver:

Sol

La luna

Mercurio

Venus

La tierra

Marte

Júpiter

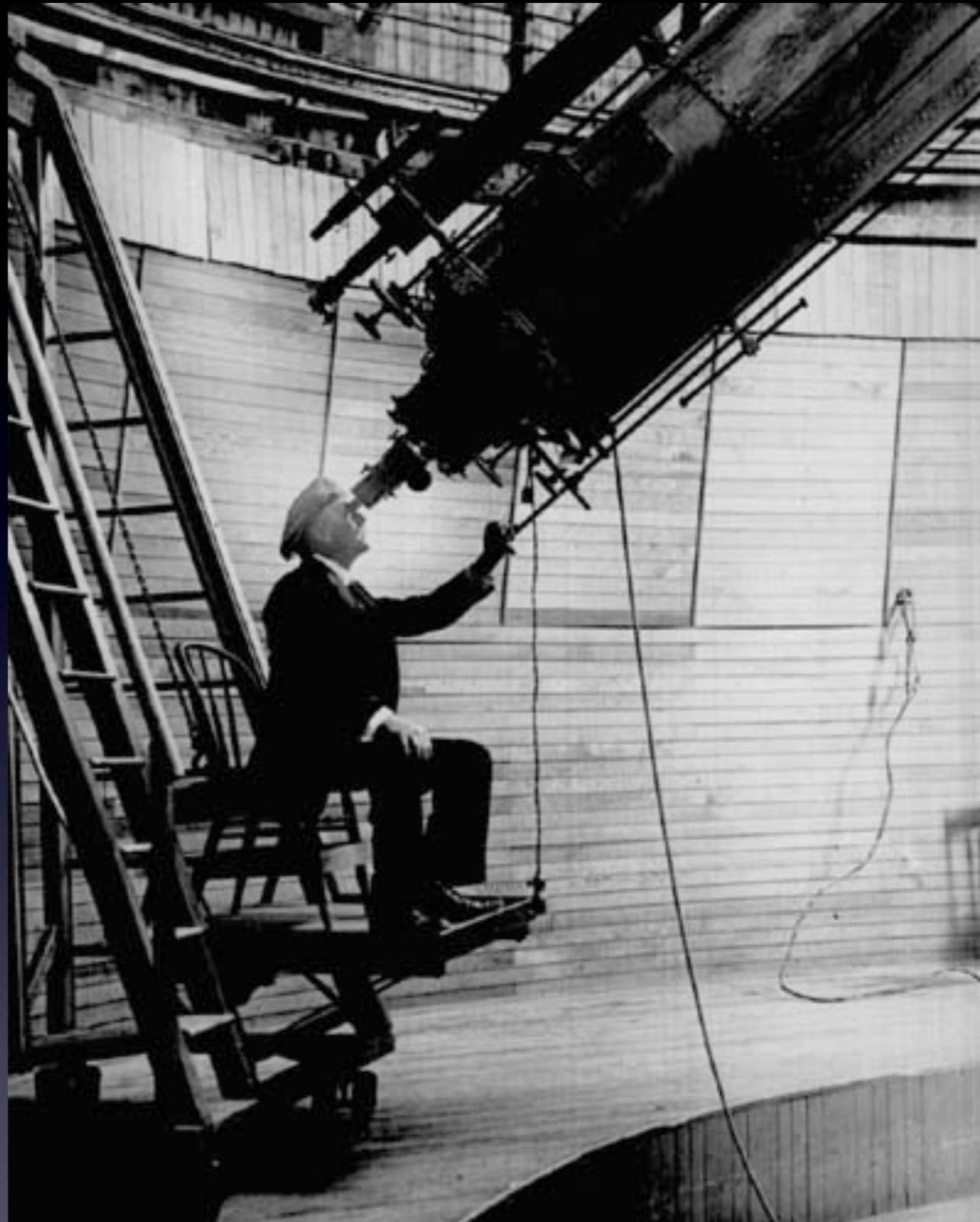
Saturn

Dificile para ver:

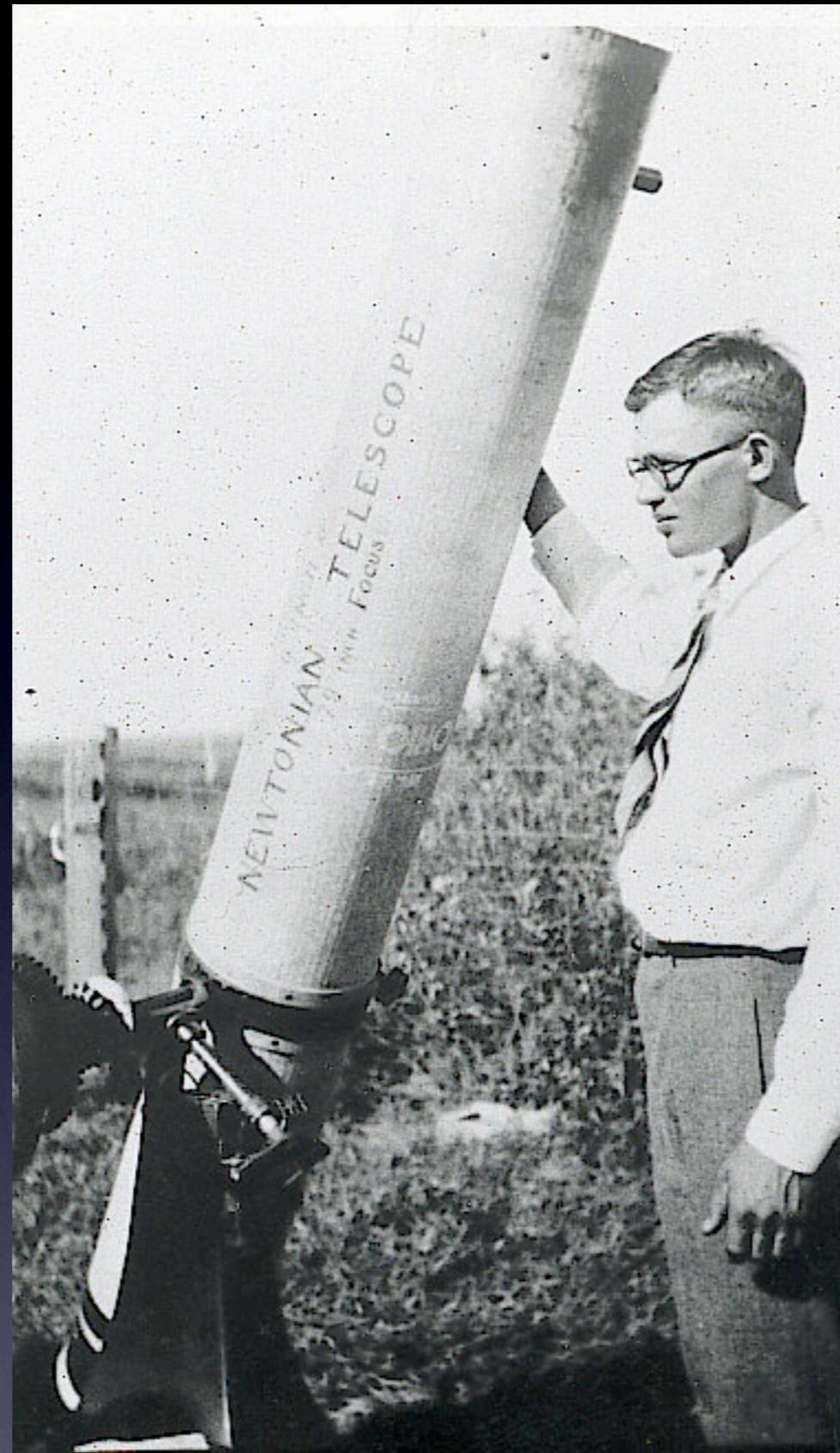
Urano

Neptune

Plutón



1905: Percival Lowell comienza la búsqueda de 'Planeta X' de Observatorio Lowell en Arizona.



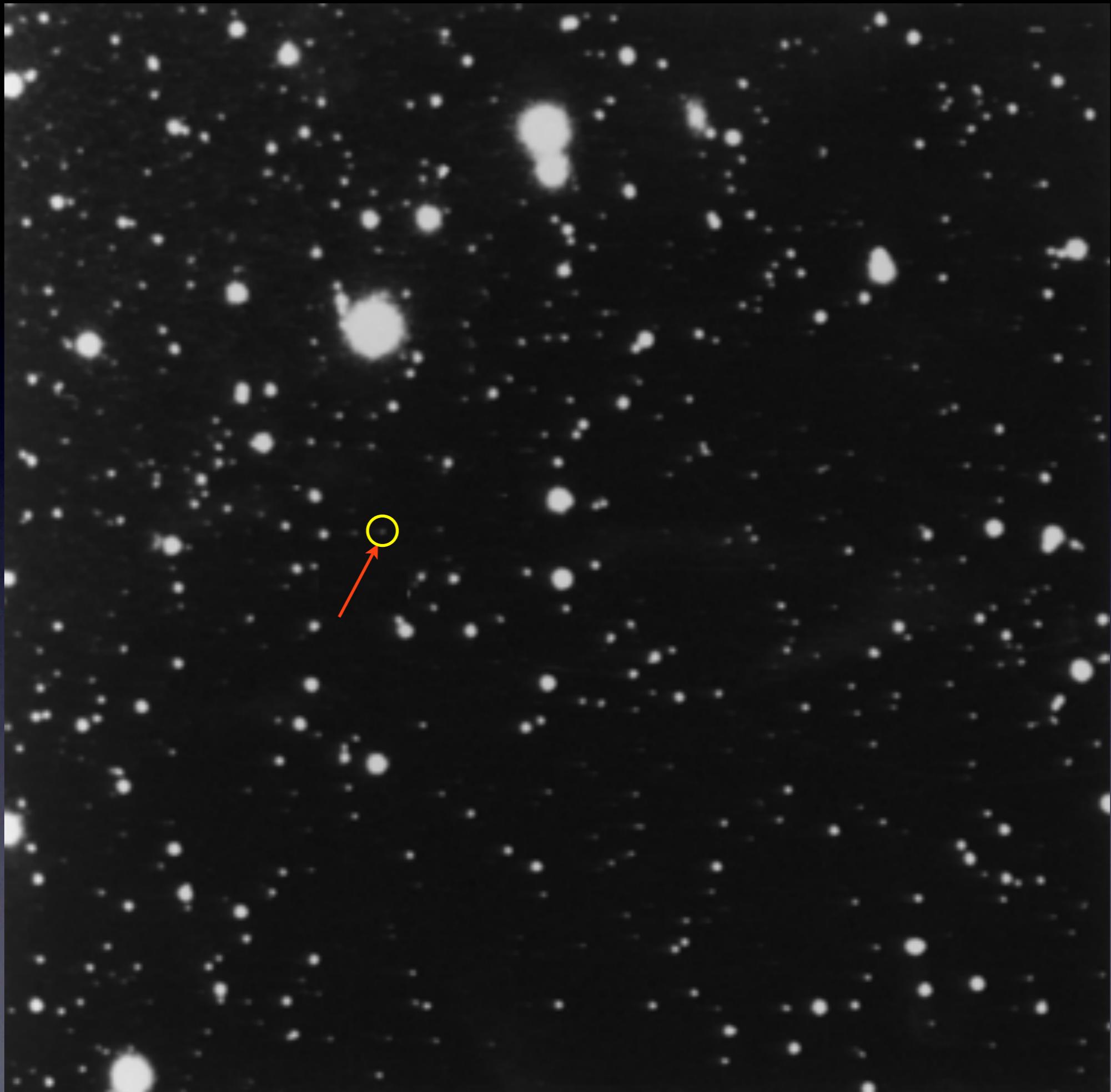
1925: Clyde Tombaugh es cedido a la búsqueda de Planeta X en Observatorio Lowell en Arizona.









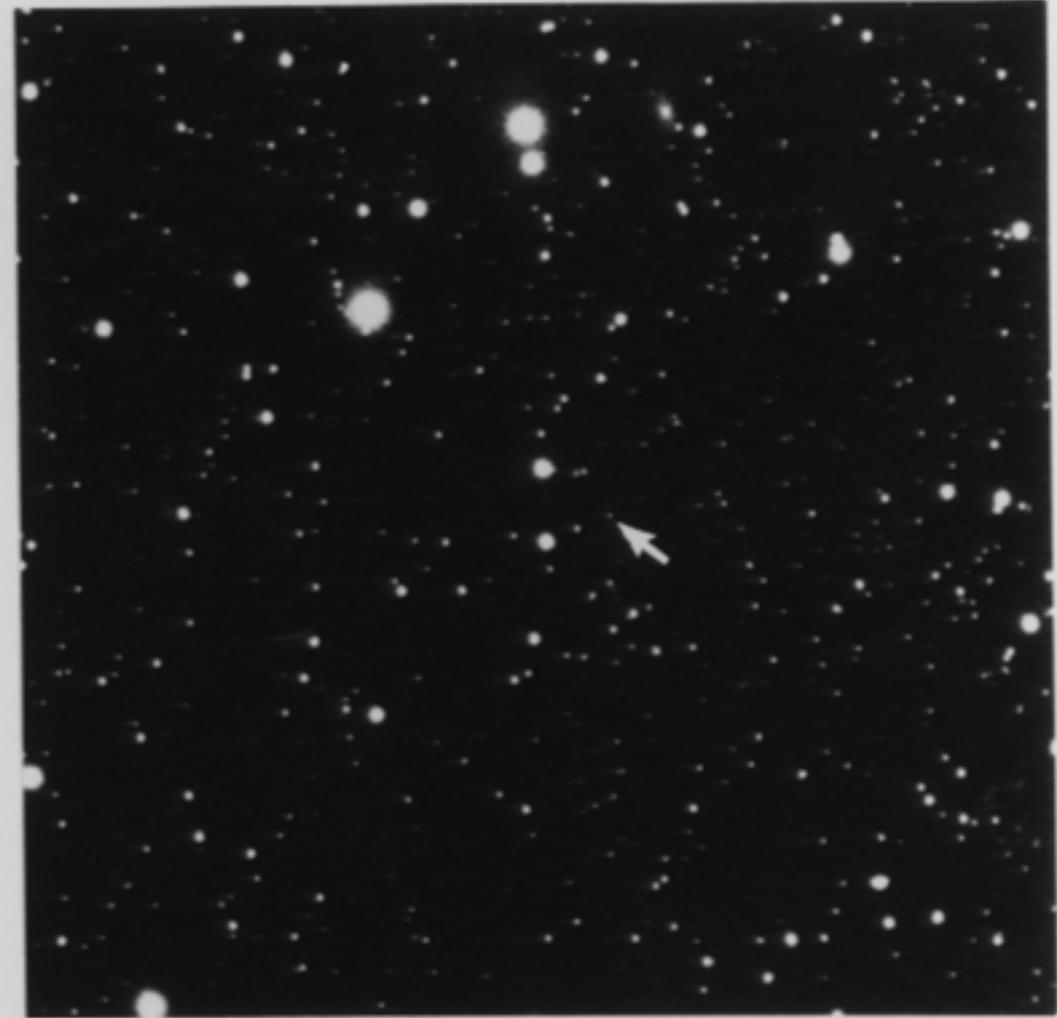




## DISCOVERY OF THE PLANET PLUTO



January 23, 1930



January 29, 1930

1930: Descubrimiento de Plutón



1932: Walt Disney también descubre a Pluto

# Plutón está...

- Muy lejos
- Muy frío
- Pequeño
- Viejo













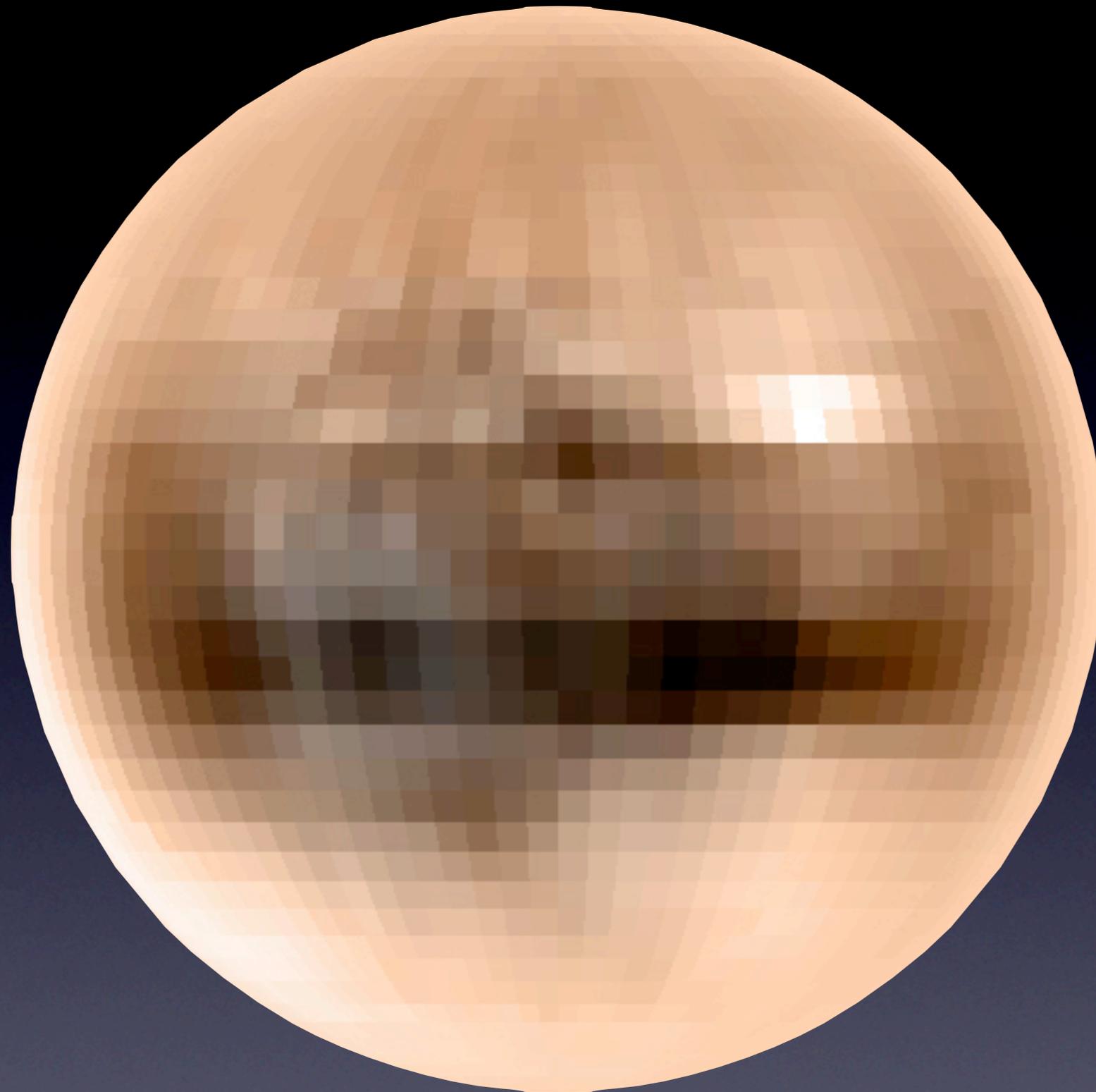
La tierra esta viejo, pero no tiene rocas veijos

Pero... todo de Plutón tiene rocas viejos!

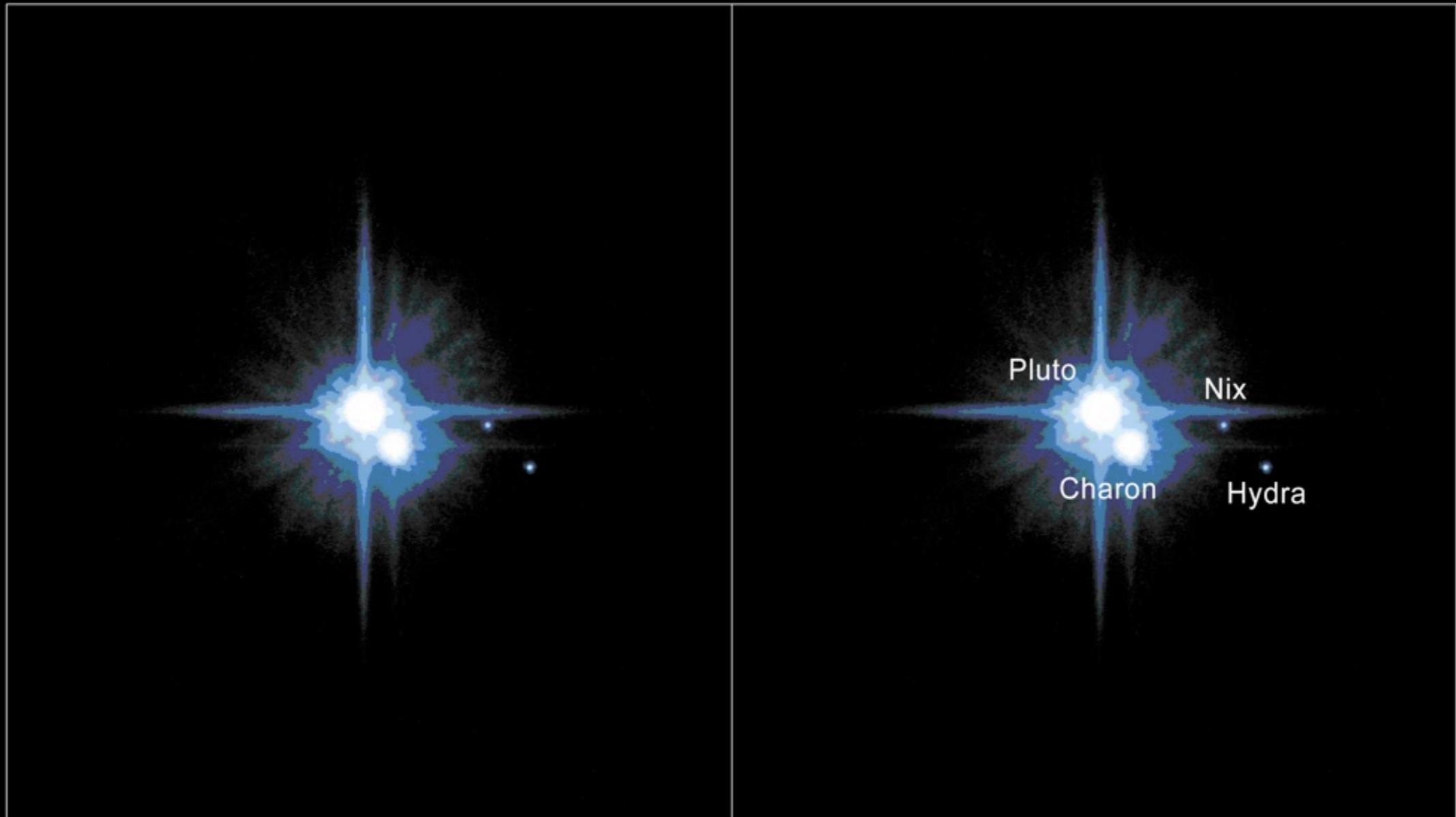








El mejor mapa de Plutón, desde Telescopio  
Espacial Hubble



Plutón tiene tres lunas: Charon, Nix, y Hydra.

Nix



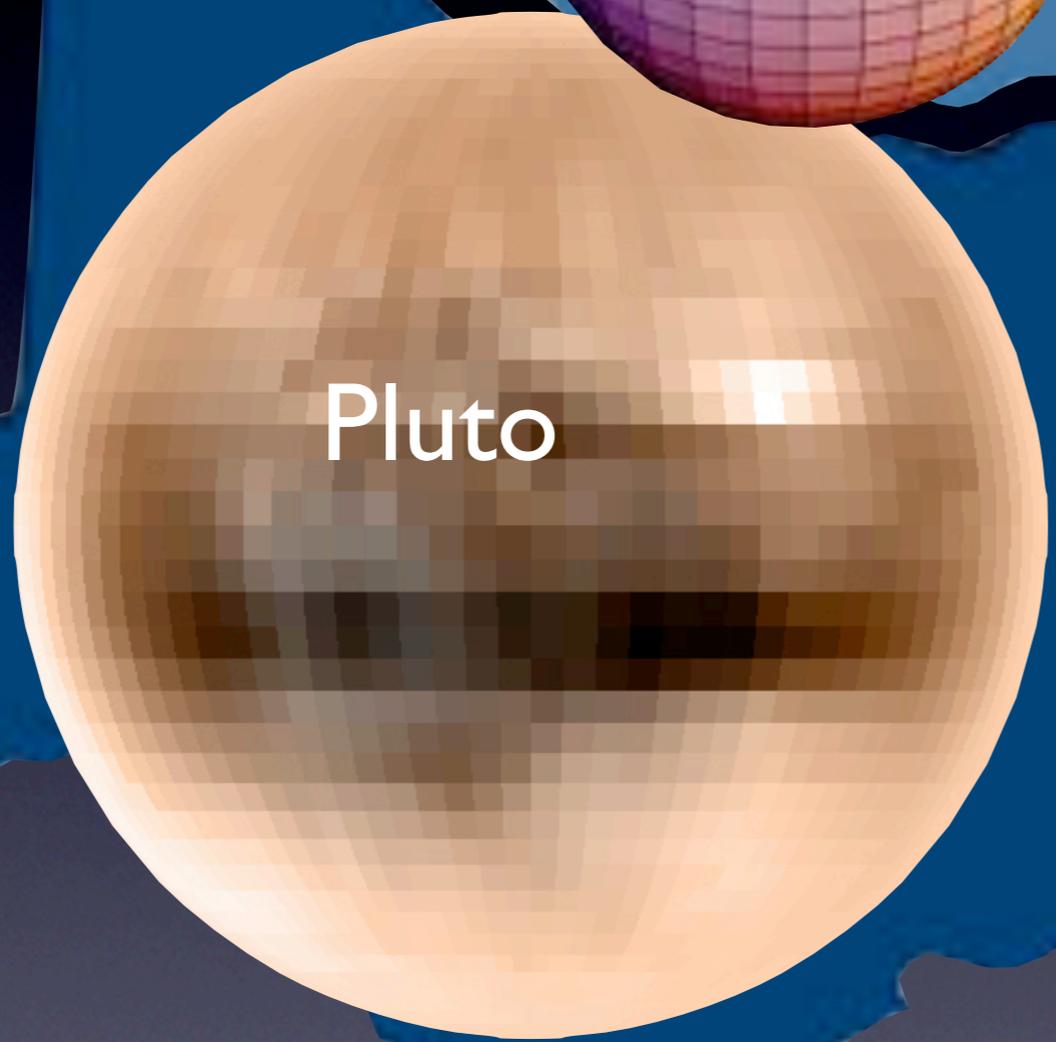
Charon



Hydra



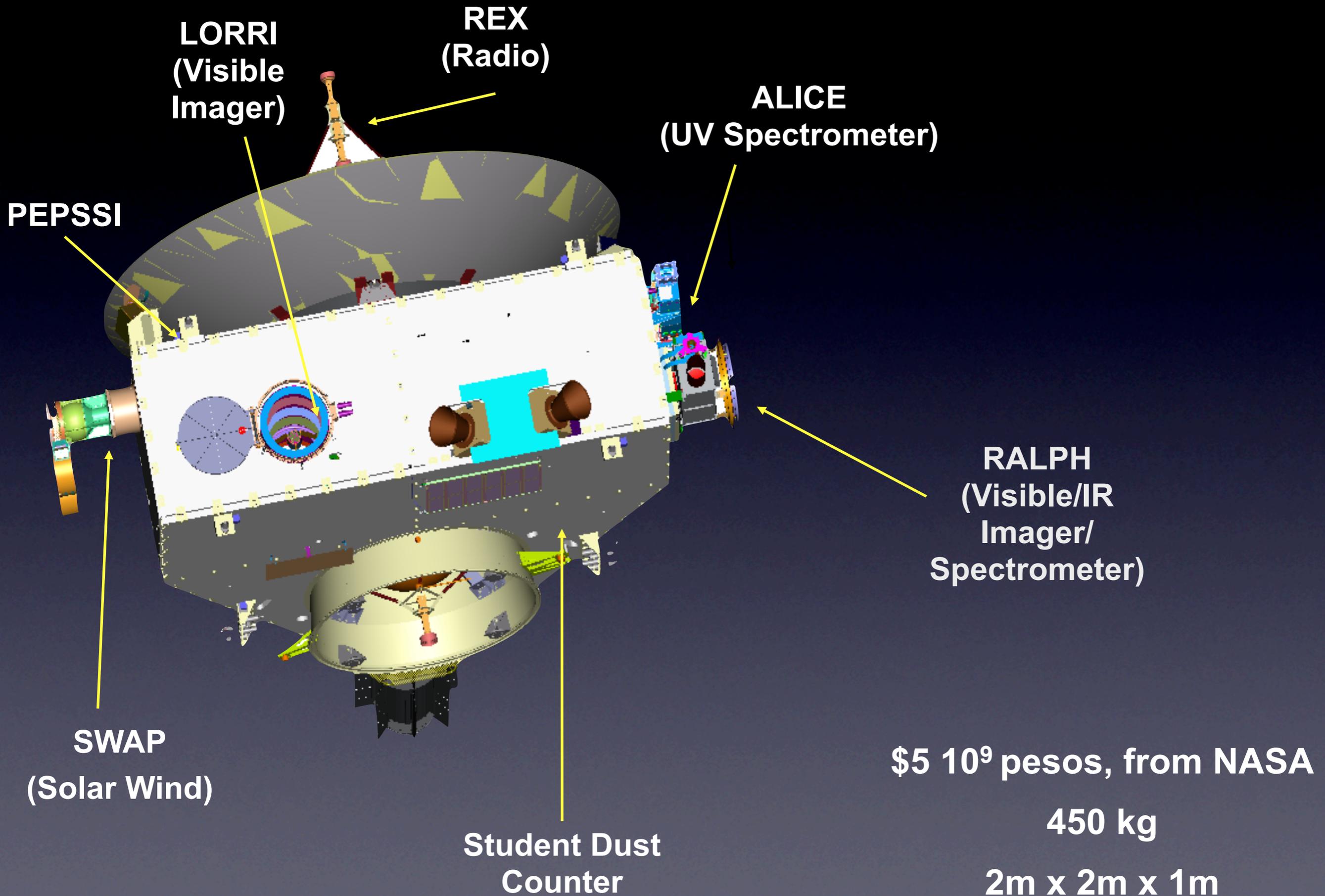
Pluto

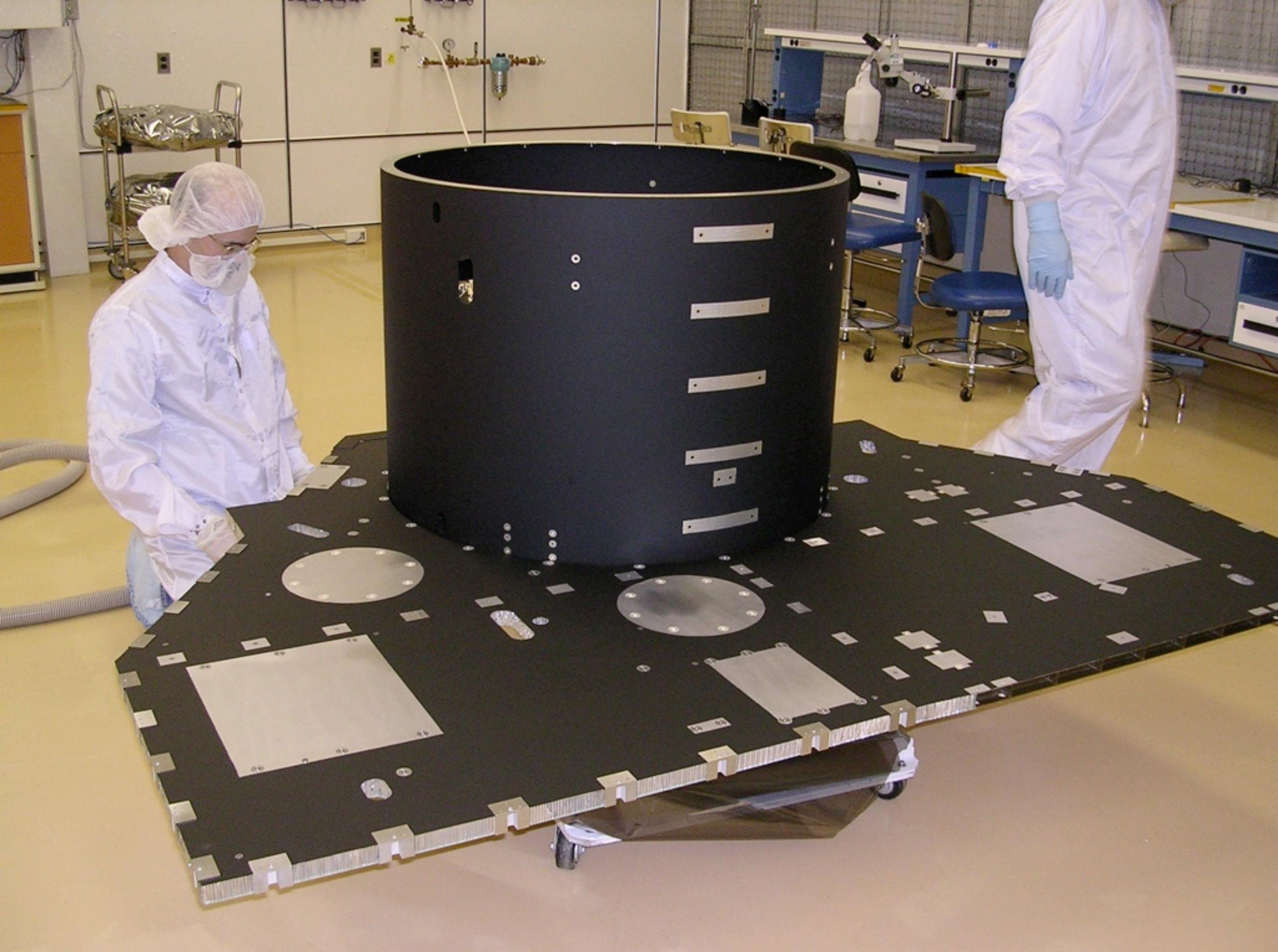


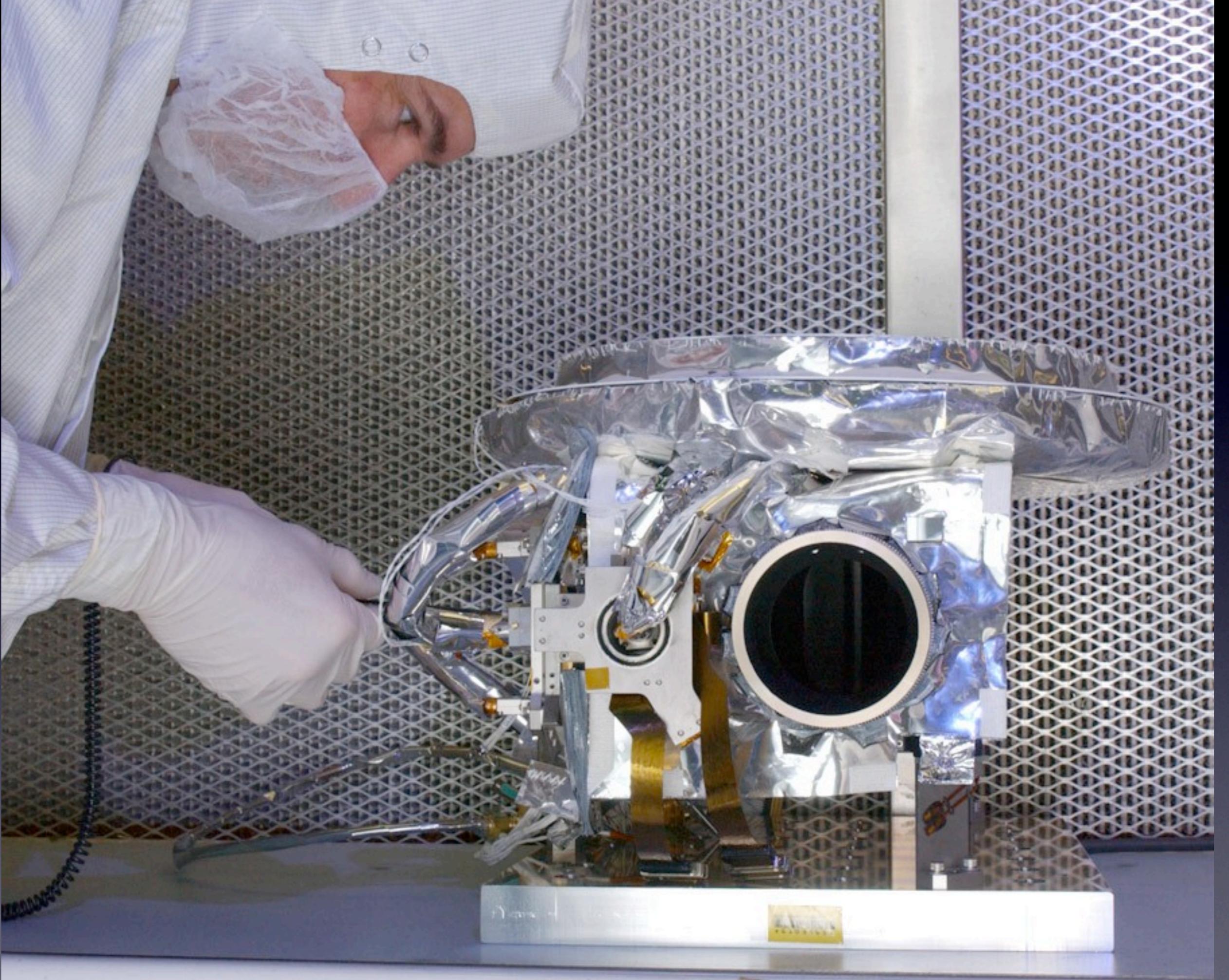




# New Horizons Spacecraft















# New Horizons Team

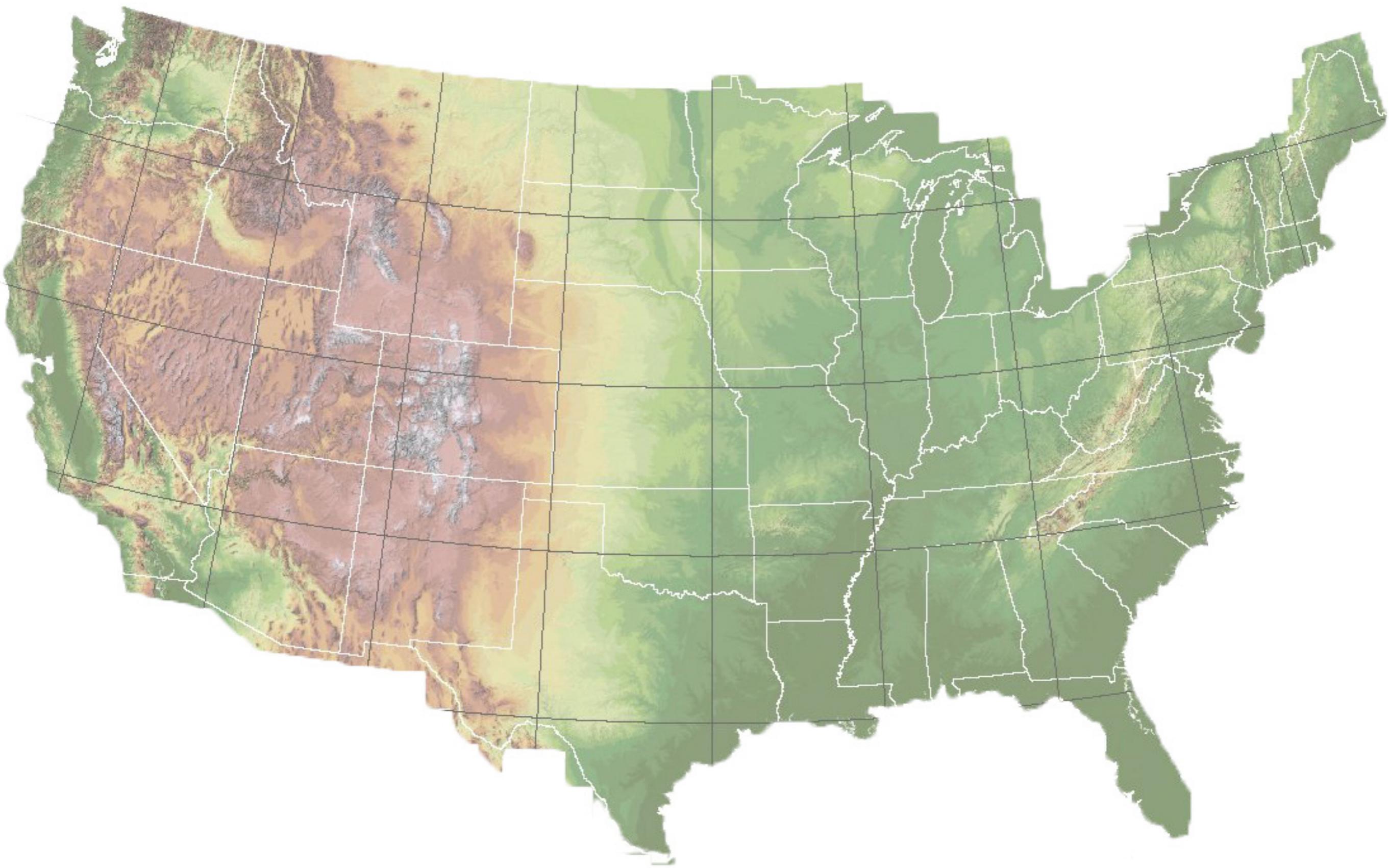


***New Horizons***  
Shedding Light on Frontier Worlds







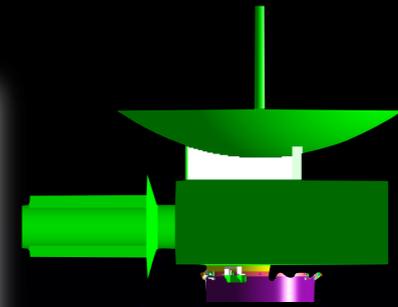






# Lockheed-Martin Atlas V 551

Rocket: 1,000,000 kg  
Spacecraft: 450 kg  
Cameras: 60 kg





LOCKHEED  
MARTIN  
ILS  
AV-010

ILS











UTO  
HORIZONS

LOCKHEED MARTIN

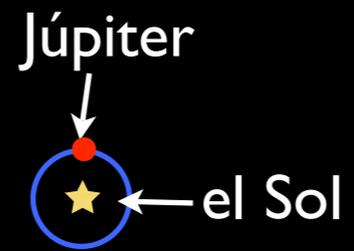




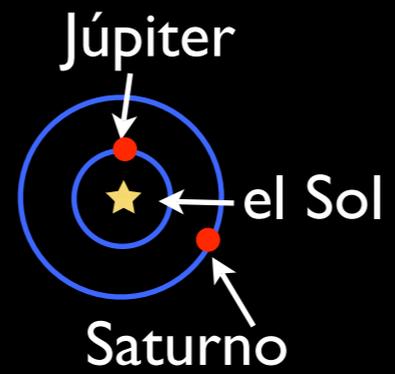
# Nuestro Sistema Solar

★ ← el Sol

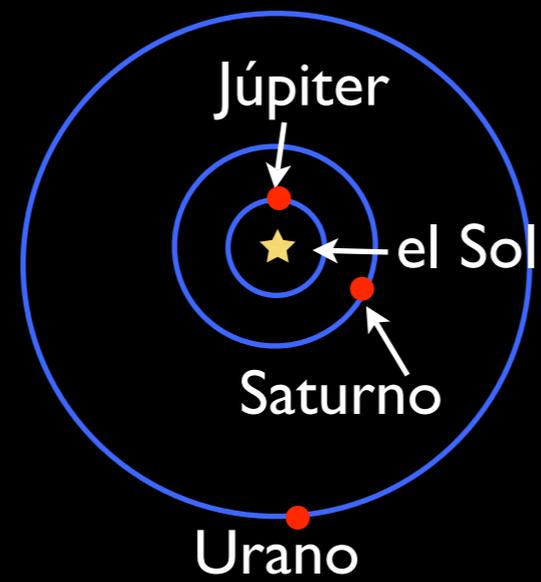
# Nuestro Sistema Solar



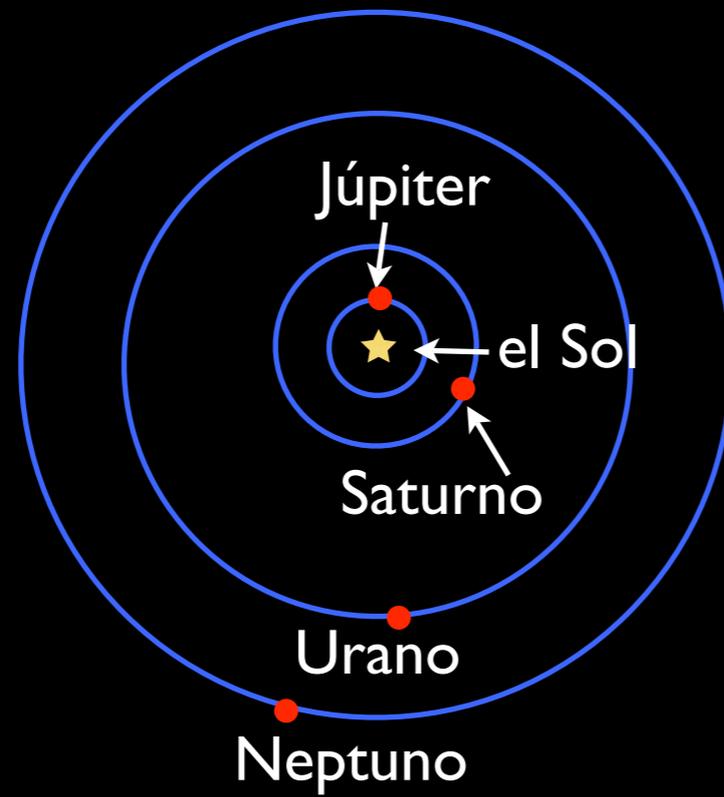
# Nuestro Sistema Solar



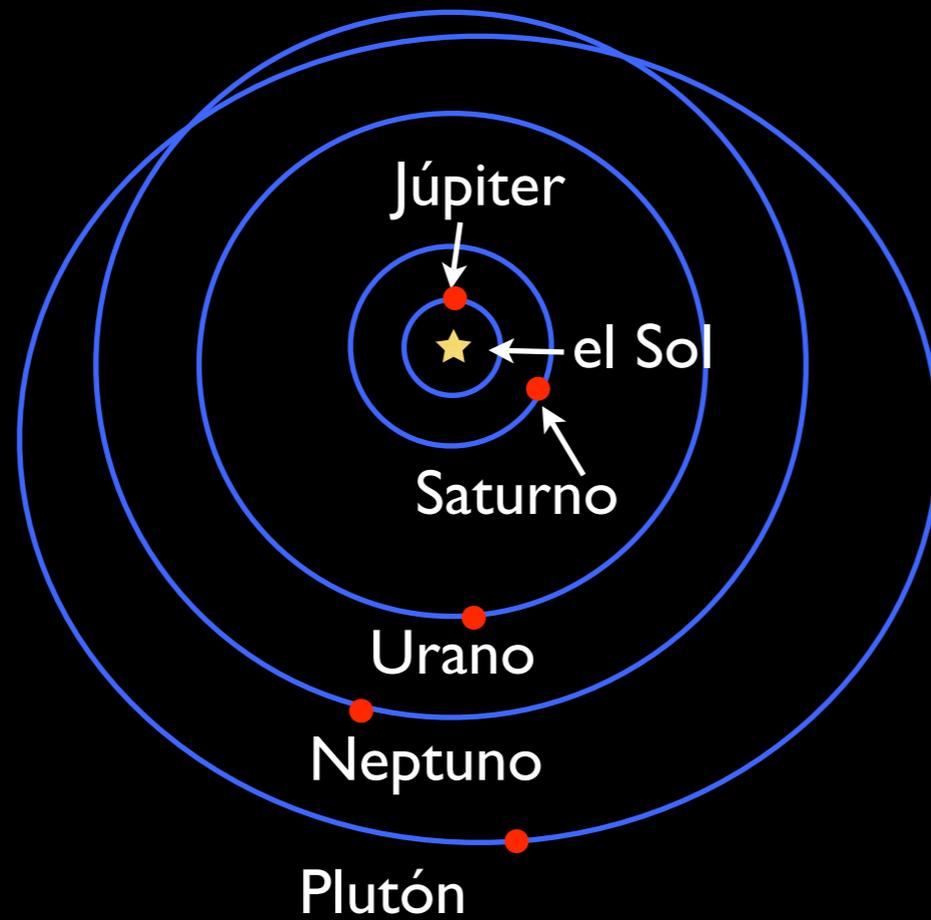
# Nuestro Sistema Solar



# Nuestro Sistema Solar

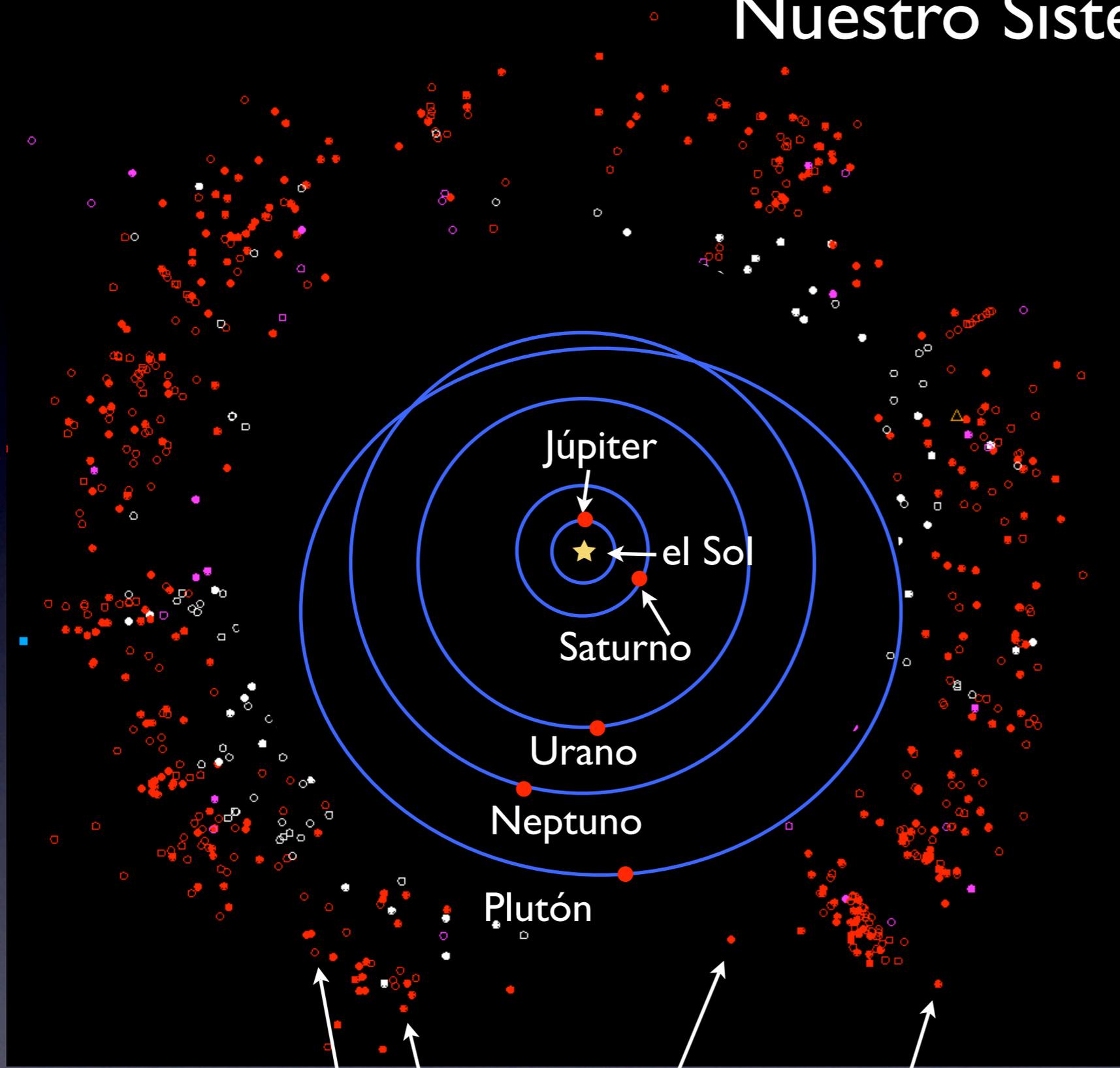


# Nuestro Sistema Solar



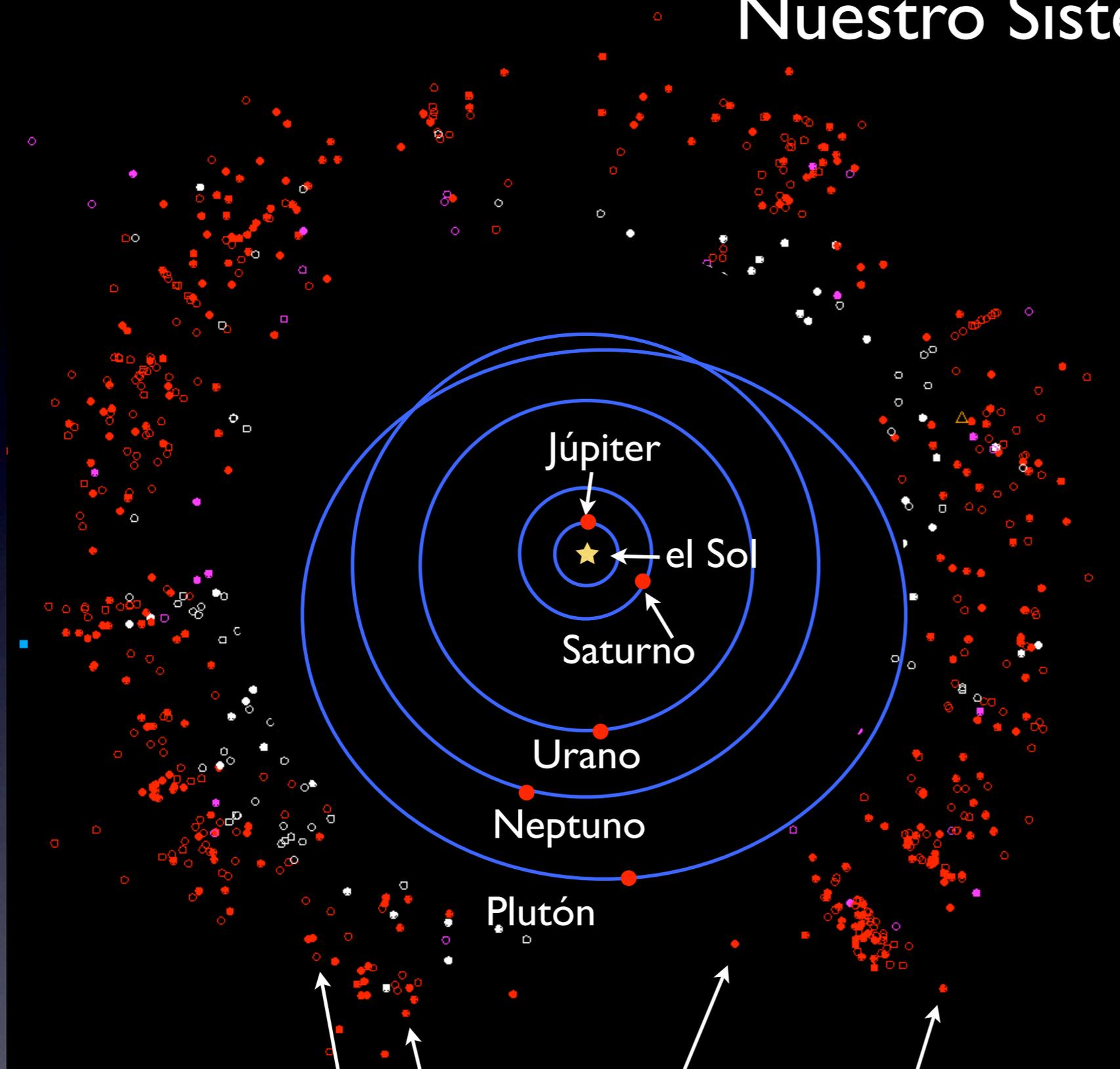
Cinturón de Kuiper

# Nuestro Sistema Solar

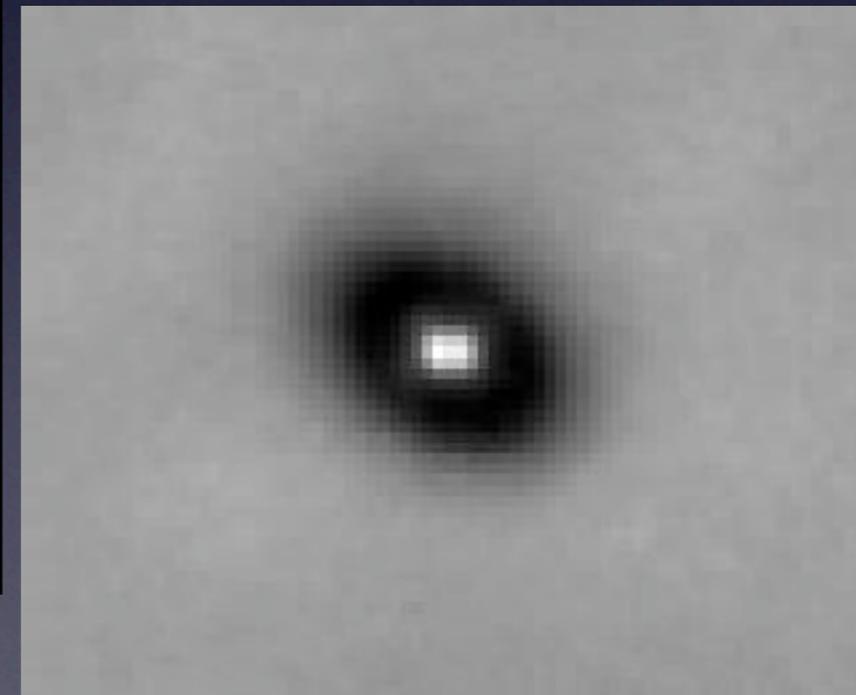


Cinturón de Kuiper

# Nuestro Sistema Solar



Cinturón de Kuiper



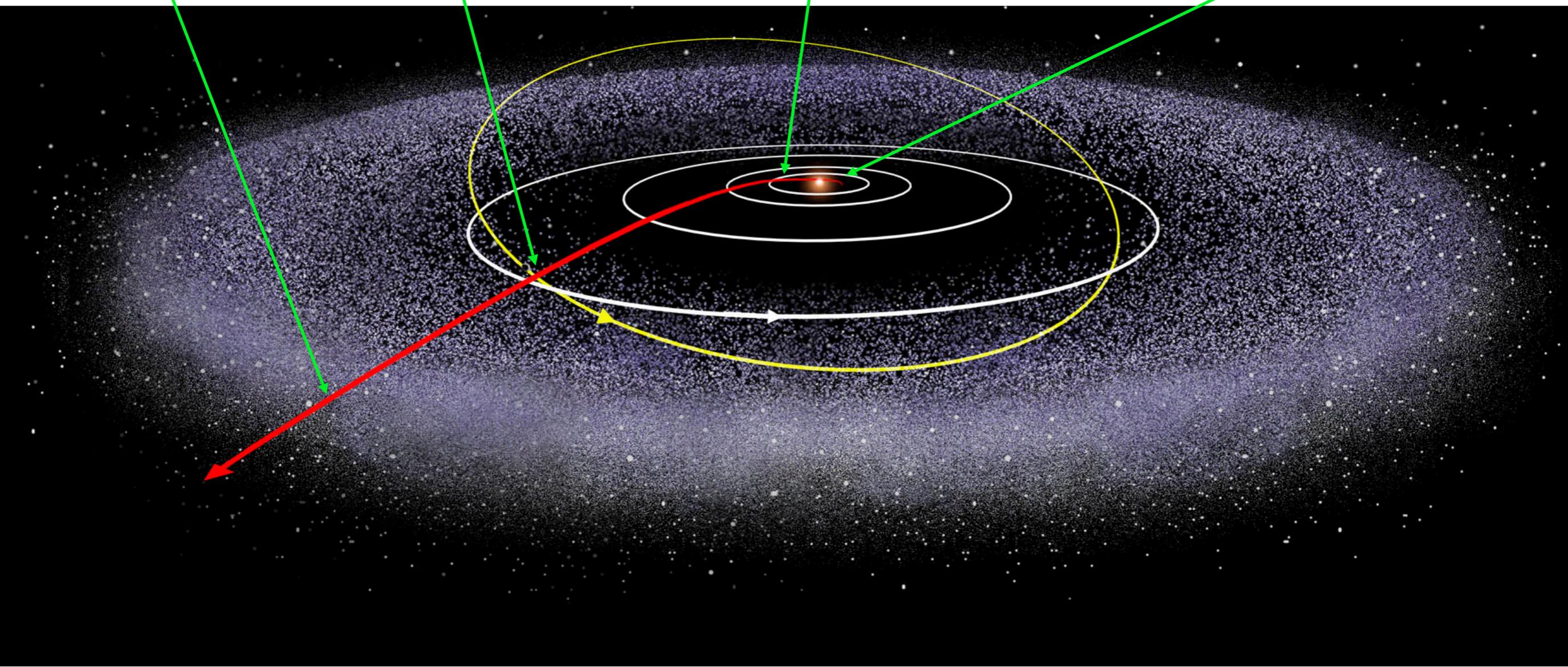
Cinturón de Kuiper en otro sistemas solares

**Plutón**  
**Julio 2015**

**Jupiter**  
**Marzo 2007**

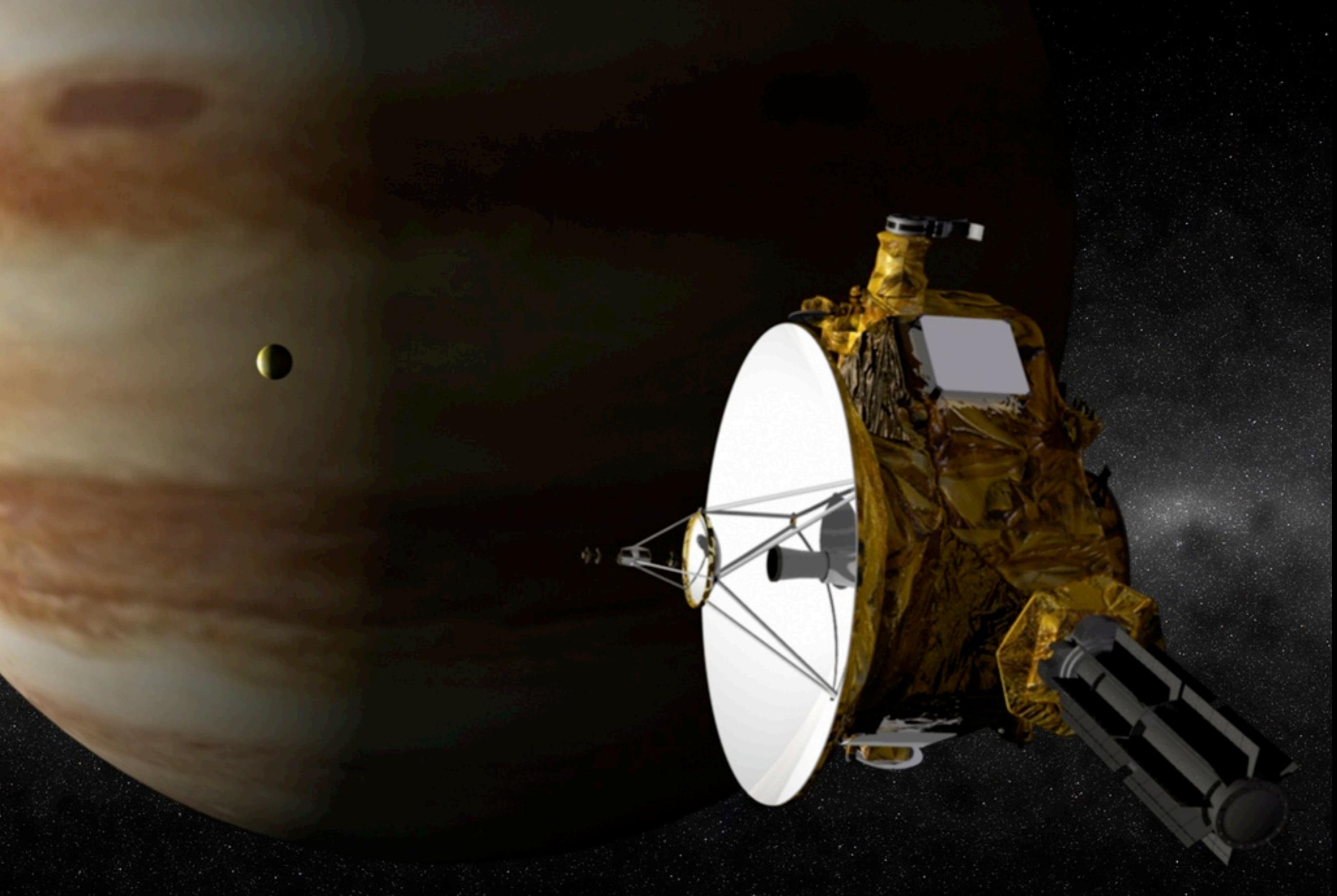
**Cinturón de**  
**Kuiper**  
**2016-2020**

**Tierra**  
**Enero 2006**



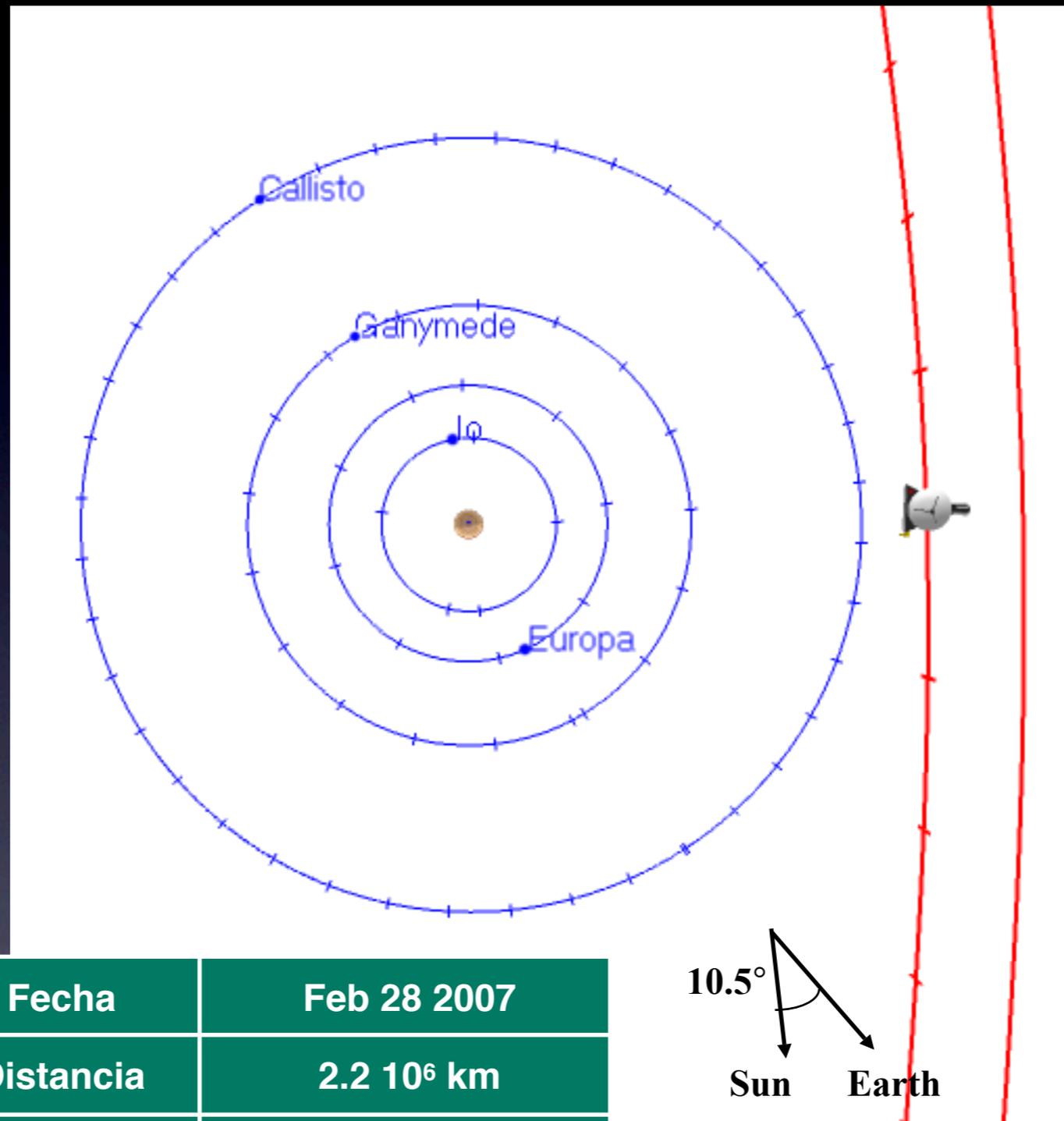
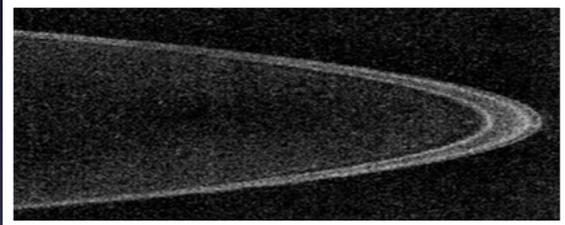
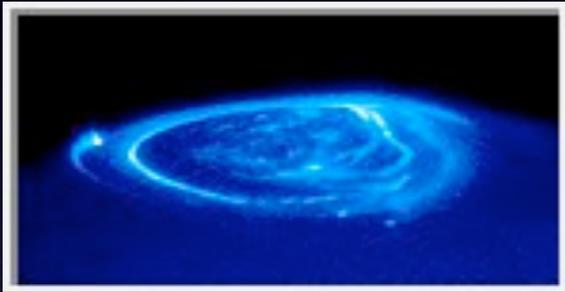


DURDA  
6-2000

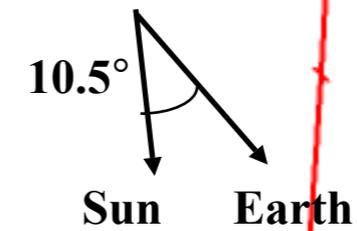


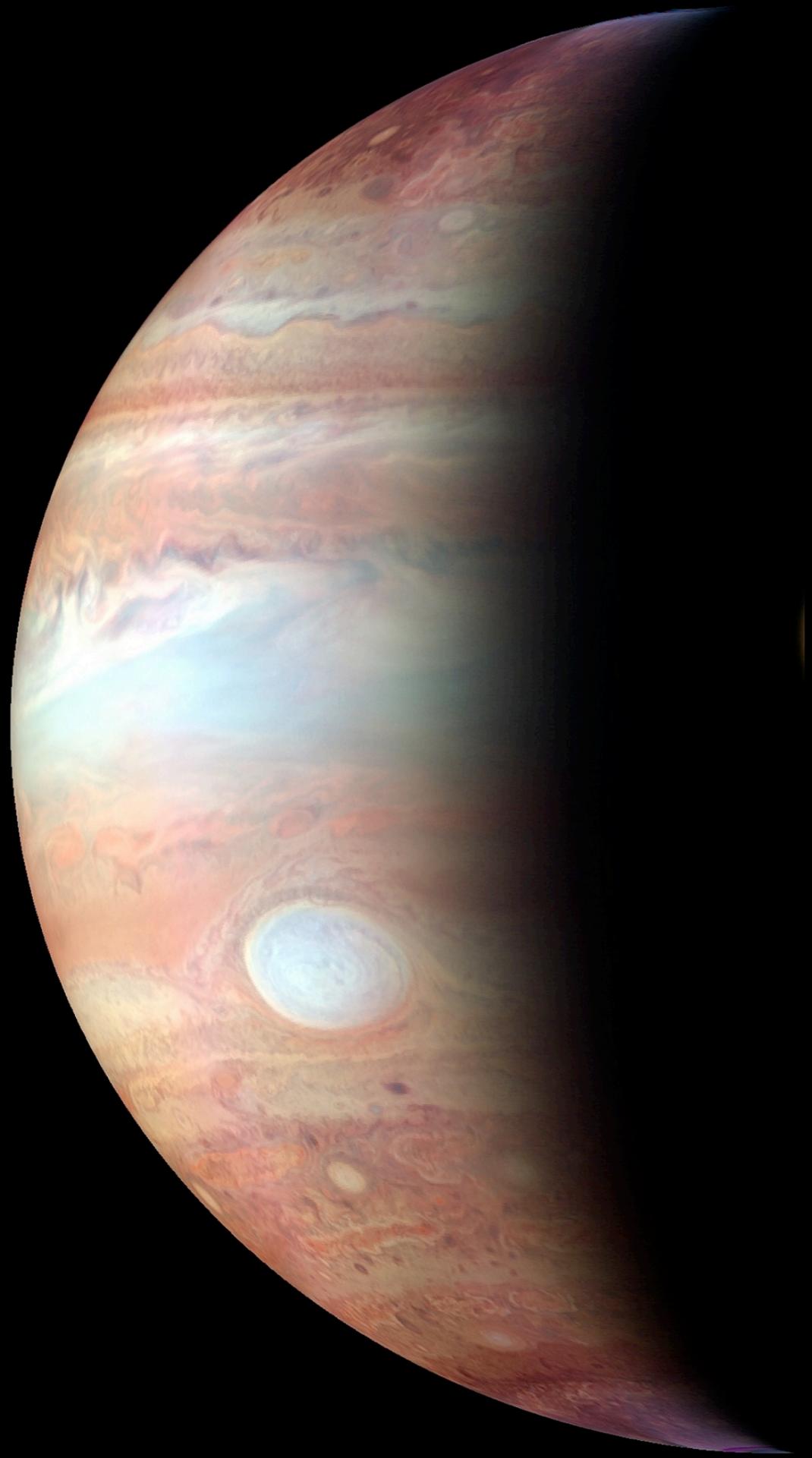
New Horizons en Júpiter: febrero 28 2007, 05:41 UTC

# New Horizons en Júpiter



Fecha	Feb 28 2007
Distancia	$2.2 \cdot 10^6$ km
Velocidad	21 km/s

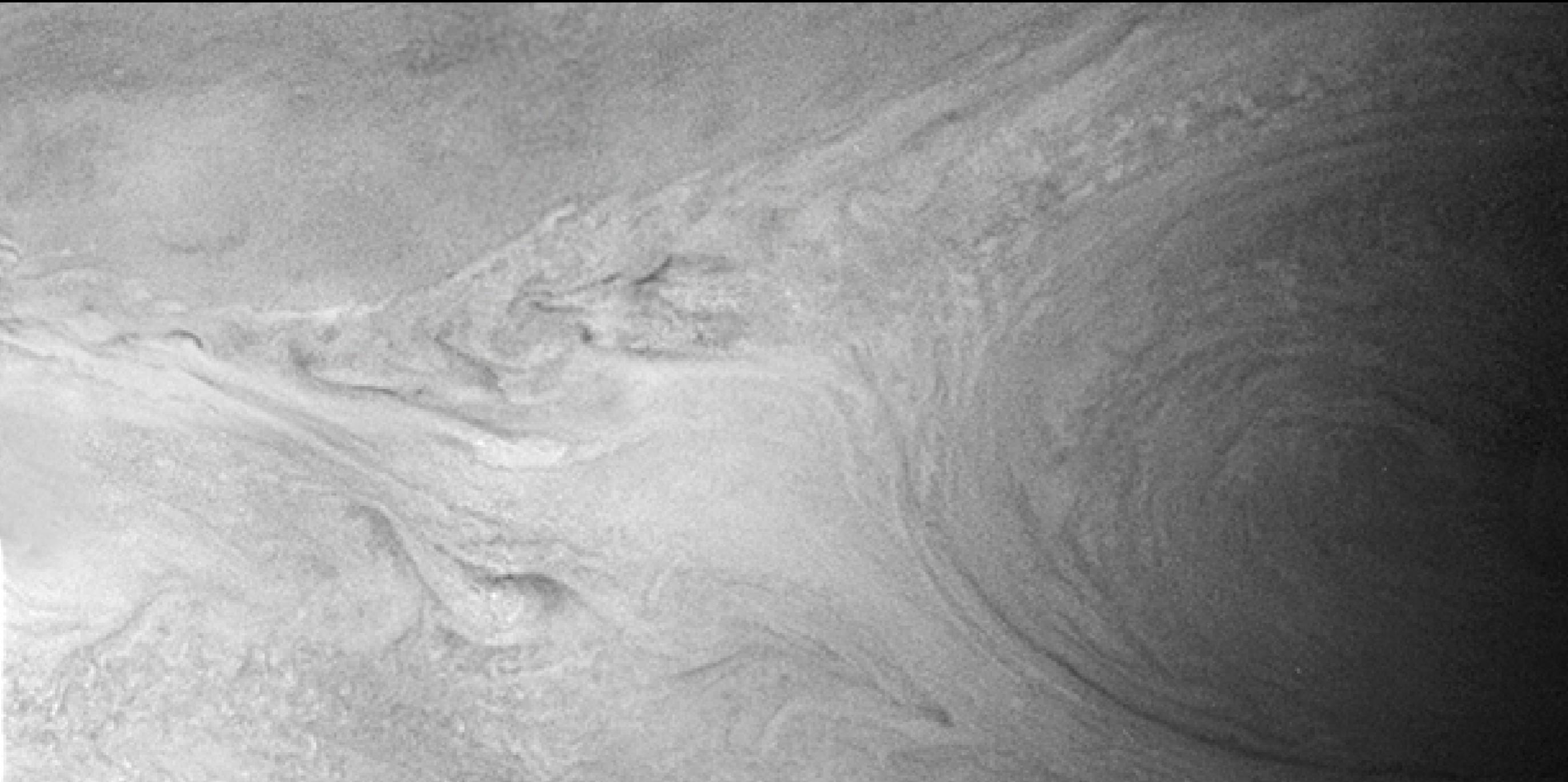




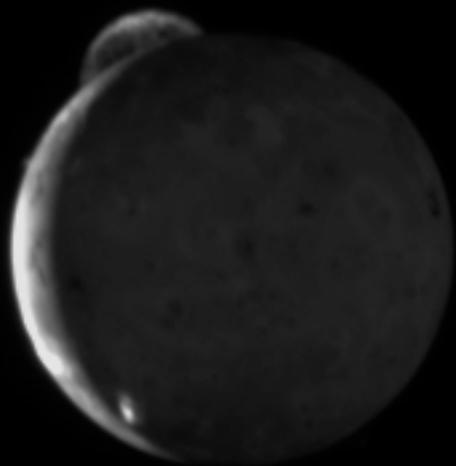
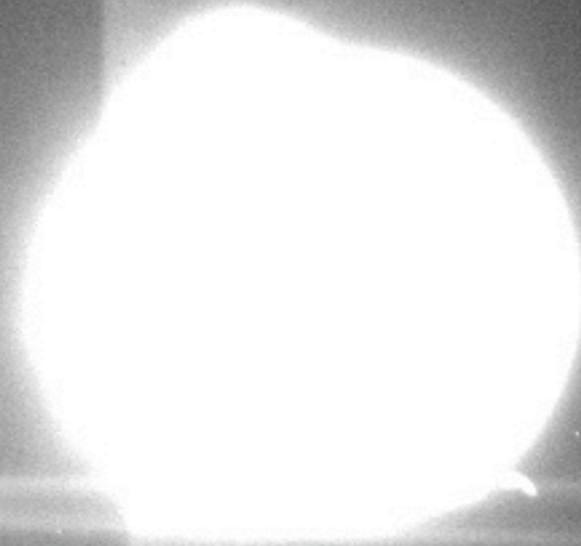
New Horizon at Jupiter  
Best Color Portrait

February 28, 2007

Cerca de la gran mancha roja ('Great Red Spot')



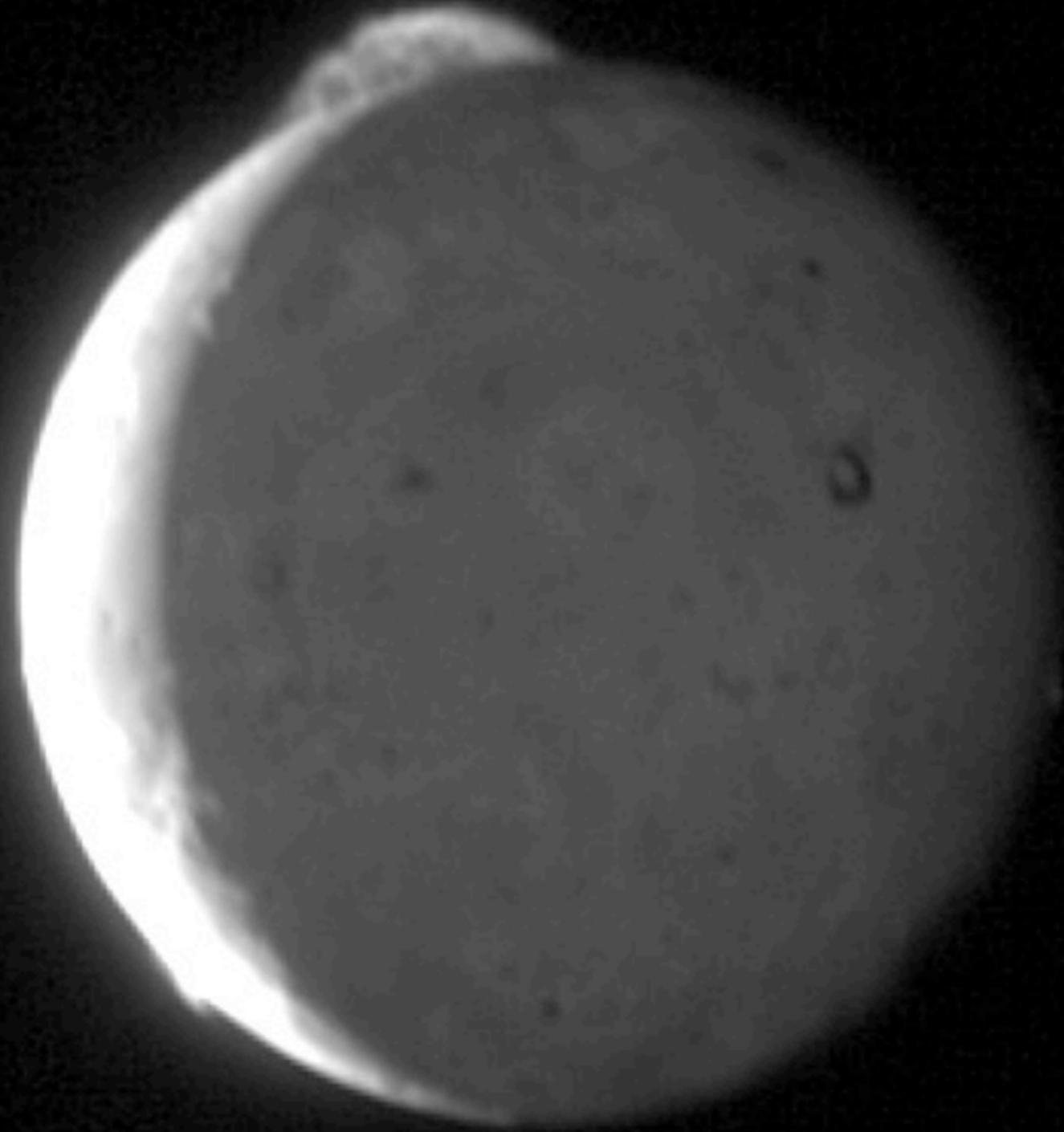
# Io y el anillo de Júpiter



# La luna Io de Júpiter y sus volcanes



# La luna Io de Júpiter y sus volcanes



# Es Plutón un planeta?

- Si:
  - Orbits Sun
  - Historically planet
  - Solar System has 9 planets
- No:
  - Small
  - Similar to Kuiper Belt objects
  - No atmosphere

August 2006: International Astronomical Union, Prague



Ahora plutón es un planeta enano ('dwarf planet')

Onward...

