

# Pluto isn't a planet (but it's okay)

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Astrozoom

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# The International Astronomical Union



- ▶ International Astronomical Union (IAU)
- ▶ Decides on how things should be named
- ⇒ make sure that everybody uses the same words to talk about the same things
- ▶ 2006 : defines the word “planet”

# 2006 IAU decision

A planet is an object that...

1. Goes around the Sun
2. Is roughly spherical
3. Has cleared its orbit

A dwarf planet fulfills criteria 1 and 2, but not 3.



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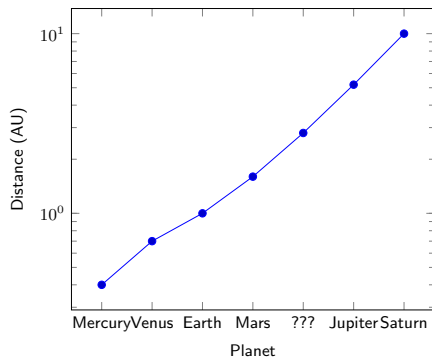
Planetary bodies that aren't planets: exoplanets, moons, Pluto, rogue planets, protoplanets...

# Public outcry!



# Historical intermezzo

- ▶ 18th century, Johannes Bode: planets follow a geometrical sequence
- ▶ Missing planet between Mars and Jupiter

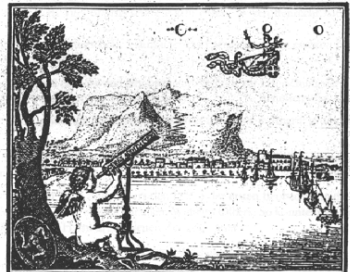


# Historical intermezzo

- ▶ 18th century, Johannes Bode: planets follow a geometrical sequence
- ▶ Missing planet between Mars and Jupiter
- ▶ Giuseppe Piazzi in 1801 discovers the planet Ceres

DELLA SCOPERTA  
DEL NUOVO PIANETA  
CERERE FERDINANDEA

OTTAVO TRA I PRIMI DEL NOSTRO SISTEMA  
SOLARE.



P A L E R M O

1802

NELLA STAMPERIA REALE.

# More new planets!

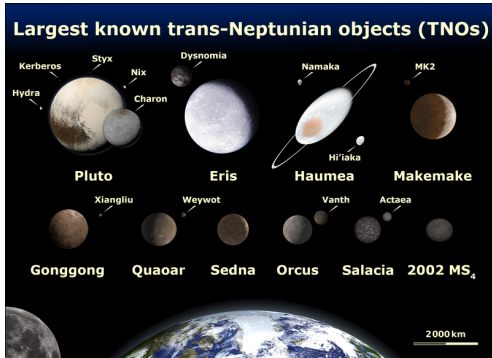
1801	Ceres
1802	Pallas
1804	Juno
1807	Vesta
1845	Astraea
1847	Hebe
1847	Iris



- ▶ 1850s: discovering new objects between Mars and Jupiter (almost) every year!
- ▶ 1855: Ceres and Vesta are much smaller than initially thought
- ▶ 1867: a new category of objects is defined: the asteroids
- ▶ Ceres is “demoted” from planet
- ▶ Not just a matter of nomenclature



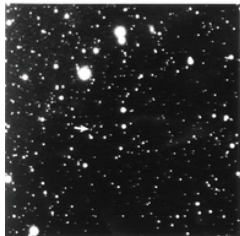
# But why formalize the definition anyway???



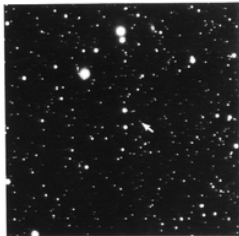
- ▶ No definition of what a planet is before 2006
- ▶ 90s: astronomers asking “Is Pluto really a planet?”
- ▶ 2000s: better telescopes  
⇒ many new discoveries
- ▶ Eris is even heavier than Pluto
- ▶ 2006: 12 planets and the list is getting longer

# Pluto never really was a planet

## DISCOVERY OF THE PLANET PLUTO



January 23, 1930



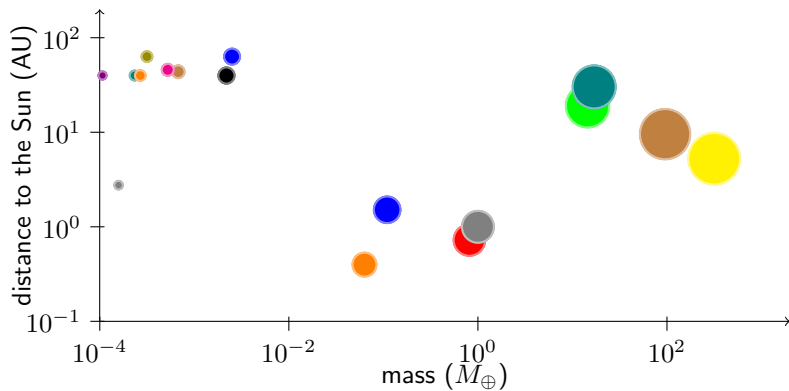
January 29, 1930

- ▶ 19th century: Uranus doesn't quite follow the laws of gravity
- ⇒ Neptune in 1846 by Le Verrier
- ▶ 1906: Lowell and Pickering hunt for "Planet X"
- ▶ Pluto turns out to be very different

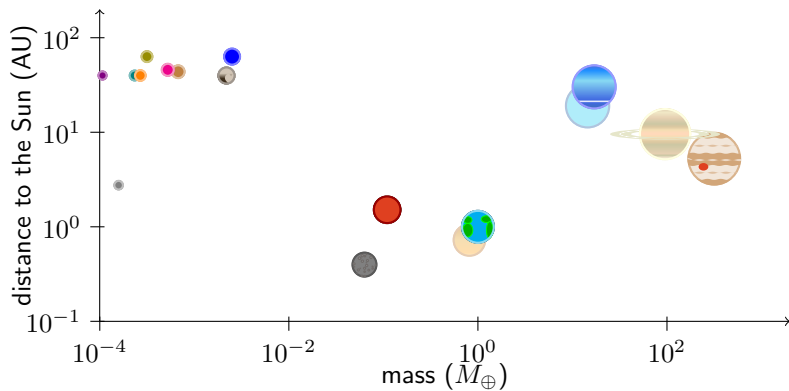


1930, Clyde Tombaugh

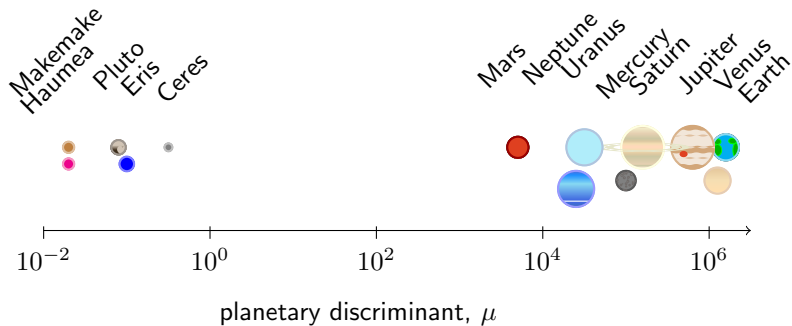
What do you think?



What do you think?



# What do you think?



Thank you!

