

Ep

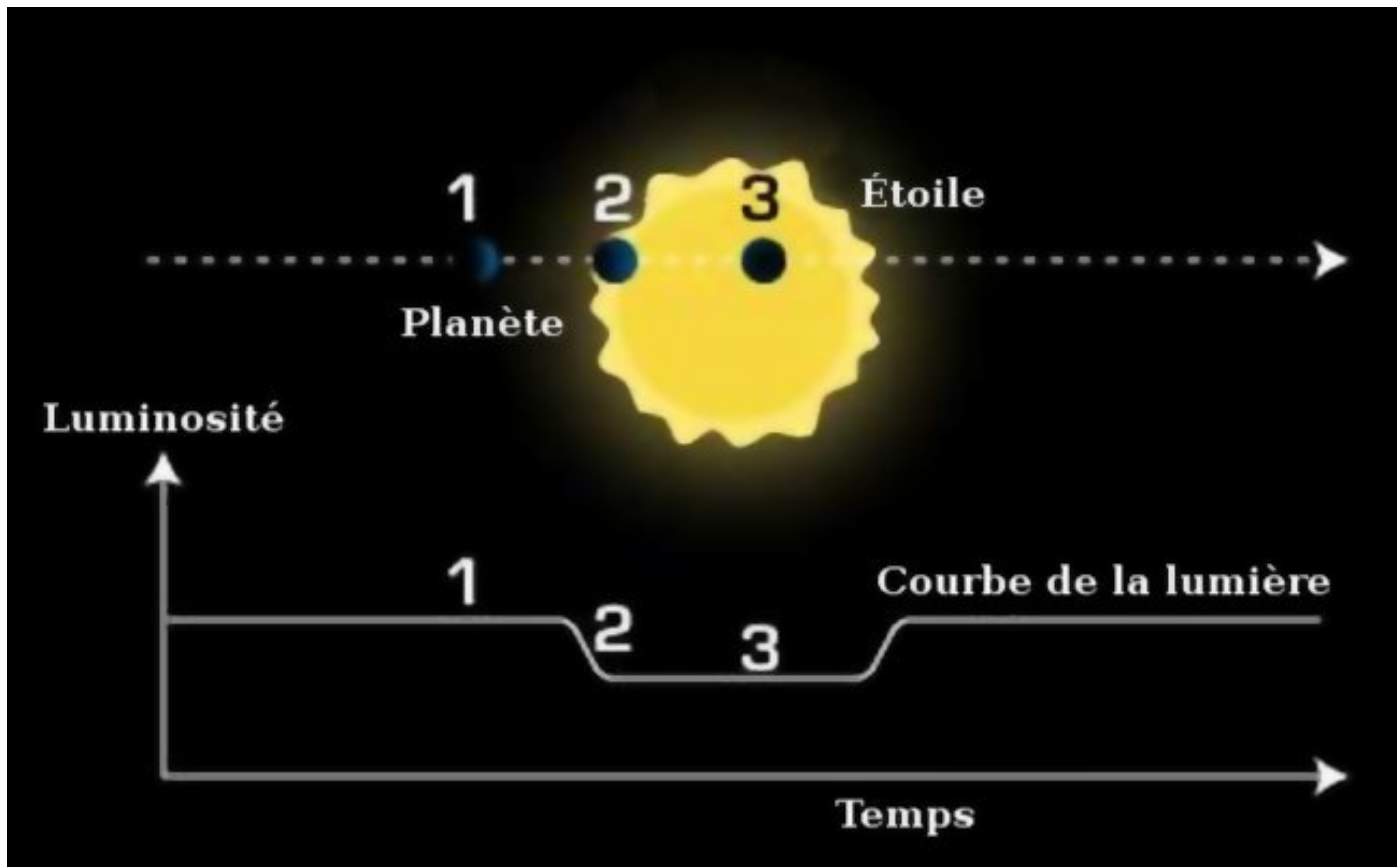
Stars showing eclipses by their planets. Prototype: V0376 Peg.



Ontdekkingsmethoden

- Transits (occultations)
overgangen/bedekkingen
- Direct imaging
- Radial velocity (Doppler effekt)
- Transit time variations
- Microlensing

transits

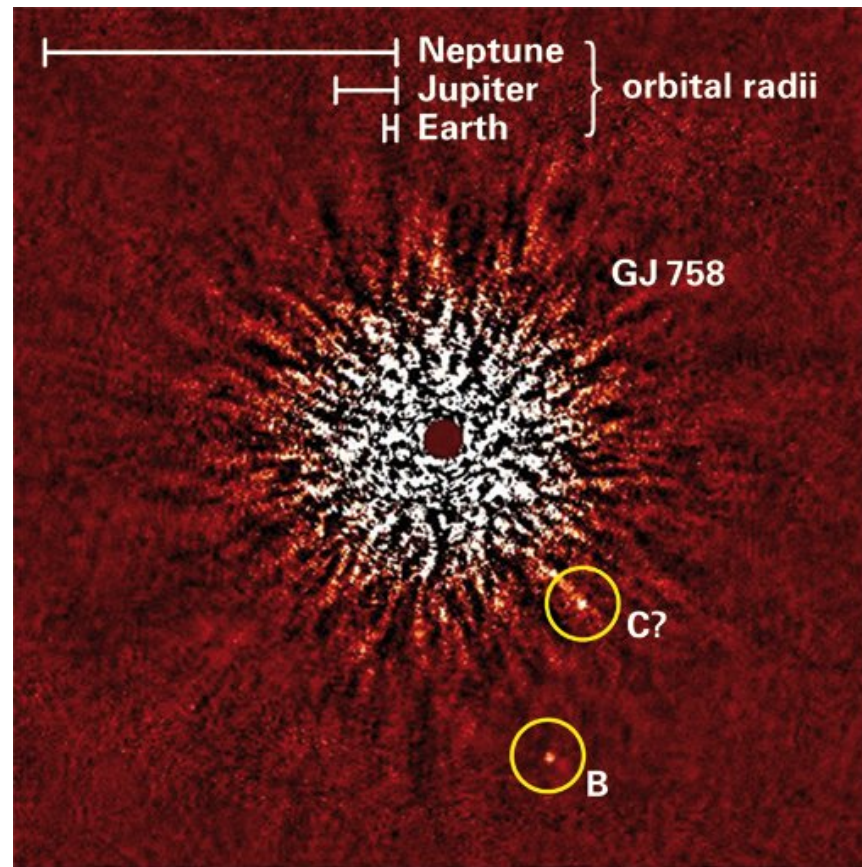


Animatie

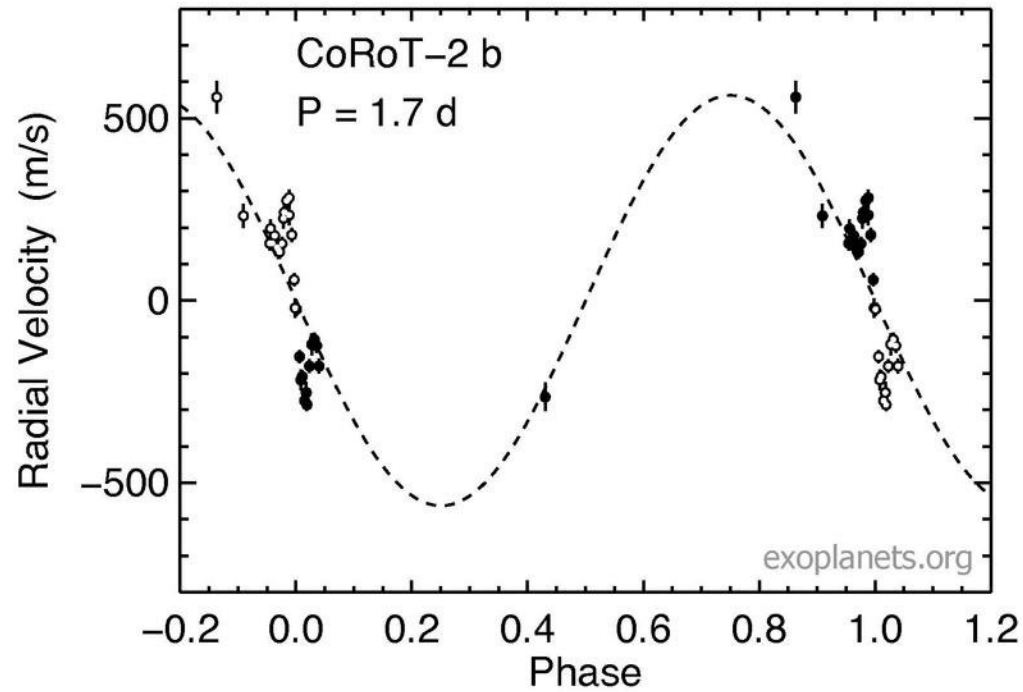


HATp7CurveMagnified.avi

Direct imaging



Radial velocity

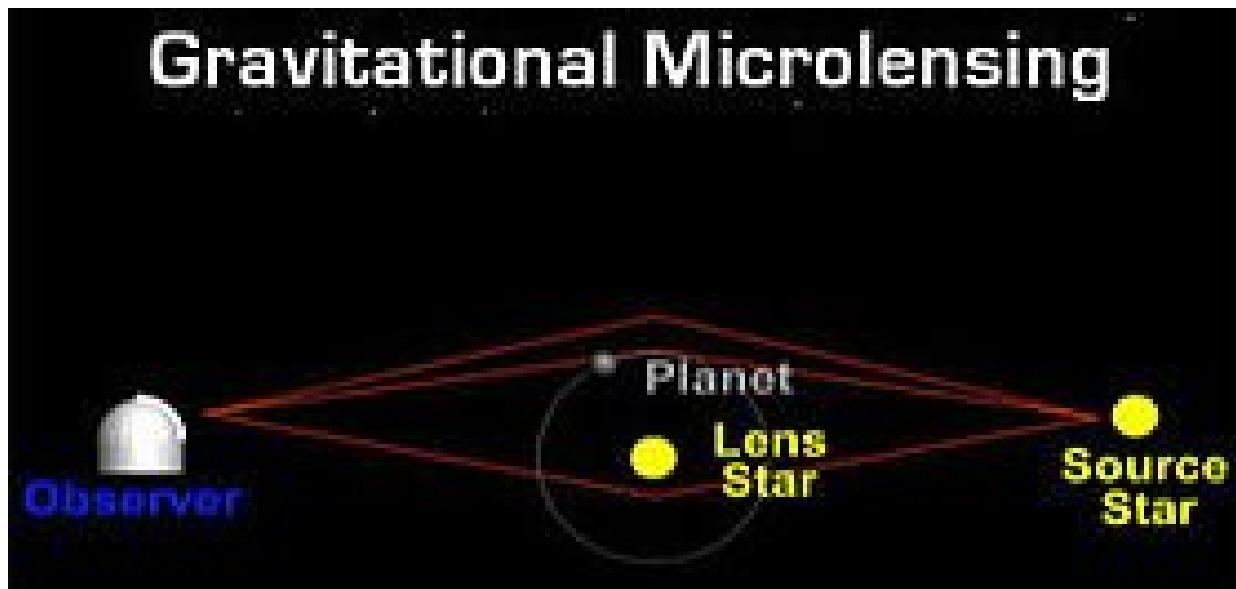


Transit time variations

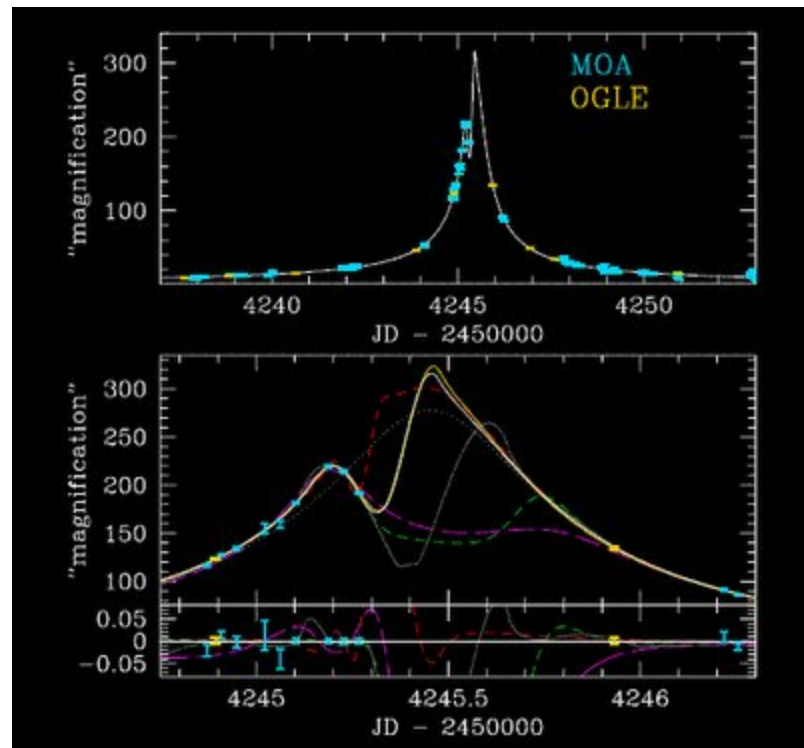


201008-2a_PlanetOrbits_16x9-_Transit_timing_of_1-planet_vs_2-planet_systems.ogv.part

Microlensing



Microlensing



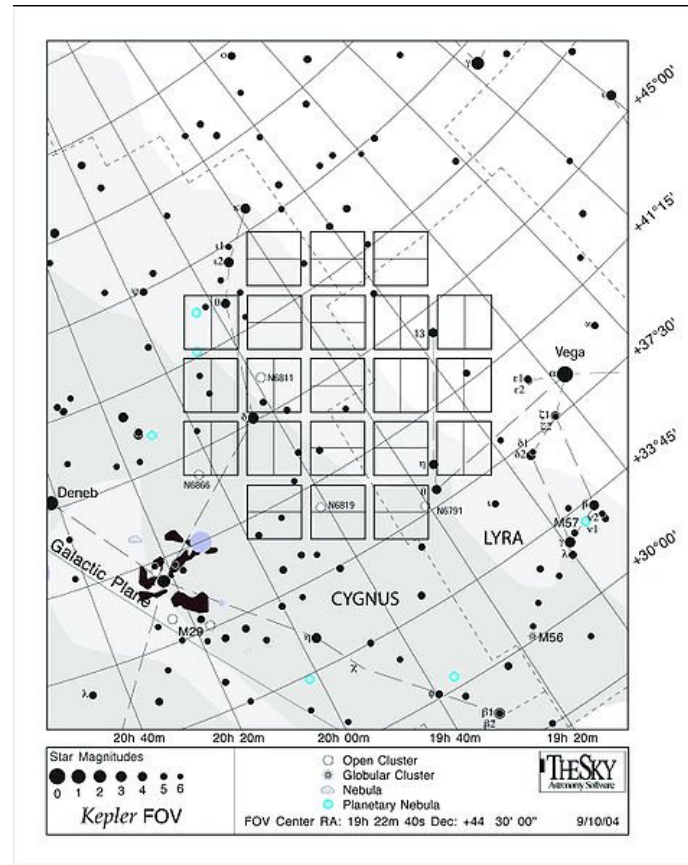
Aantallen 12-06-13 (conf.)

- Transits (occultations) : 308
overgangen/bedekkingen
- Direct imaging : 31
- Radial velocity (Doppler effekt) : 516
- Transit time variations : 15
- Microlensing : 21

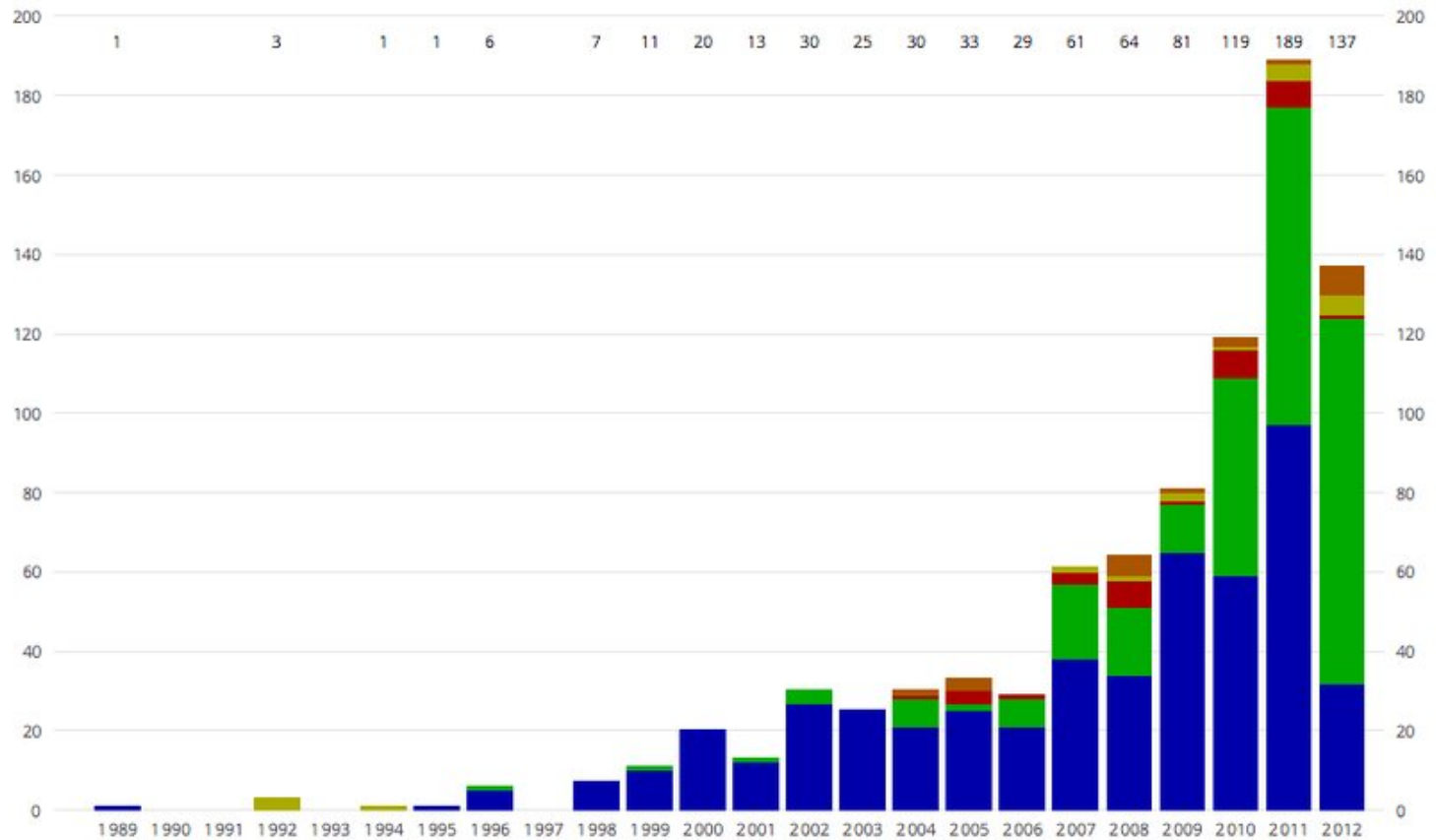
geschiedenis

- Grieken?
- Eerste exoplaneet rond pulsar 1991
- Eerste exoplaneet rond ster 1995
- Kepler : 5465 (false positive 829)
- waarvan 1421 “not dispositioned”
- Indikatie totale aantal planeten.....

Kepler waarnemingsgebied



Aantallen ontdekte exoplaneten



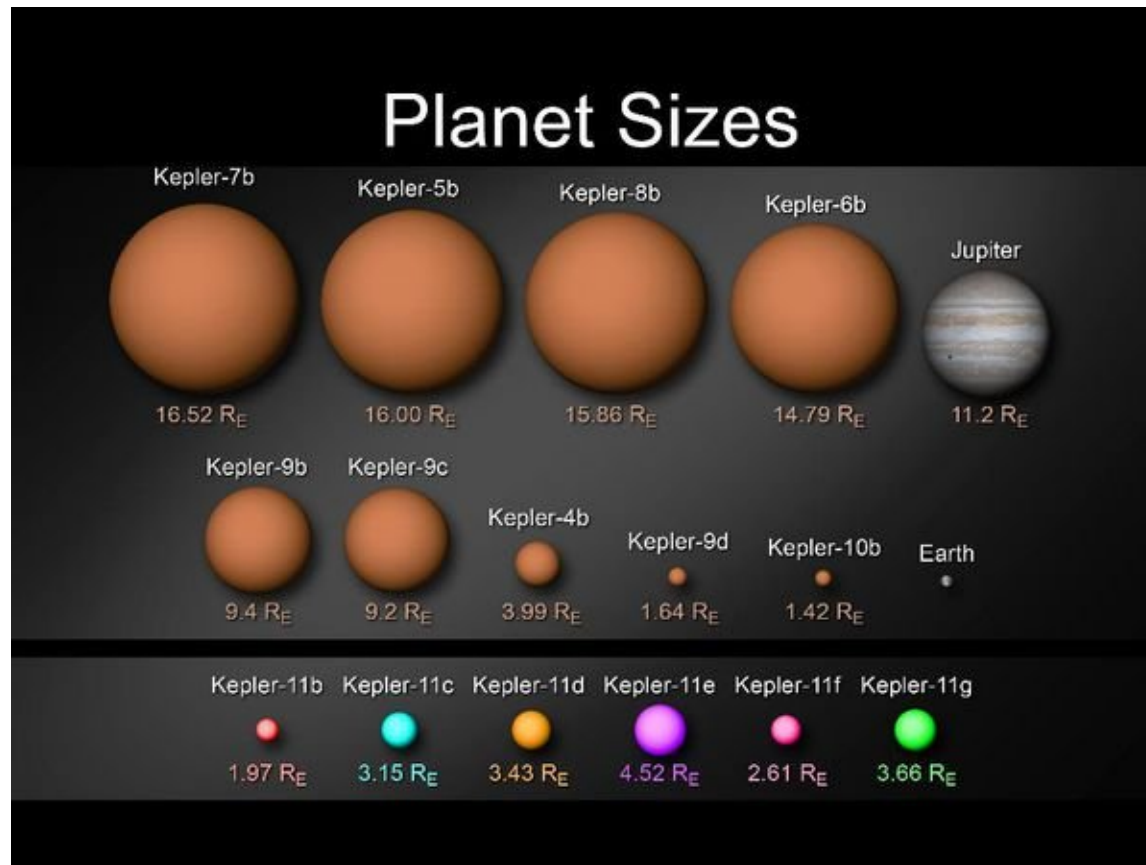
De 5 methoden

- Transits = veranderlijke sterren
- Direct imaging
- Radial velocity
- Transit time variations
- Microlensing = veranderlijke sterren

Resultaten zijn verbluffend

- Planeten rondom dubbel/meervoudige sterren
- Planeten in stofschijven
- Afwisselende gas/rots planeten
- Planeten in pulsar systeem
- Planeten op grens van planeet/stervorming
- Verdampende planeten
- Planeten in polaire banen
- Nu : circa 10 exoplaneten bekend in HBZ

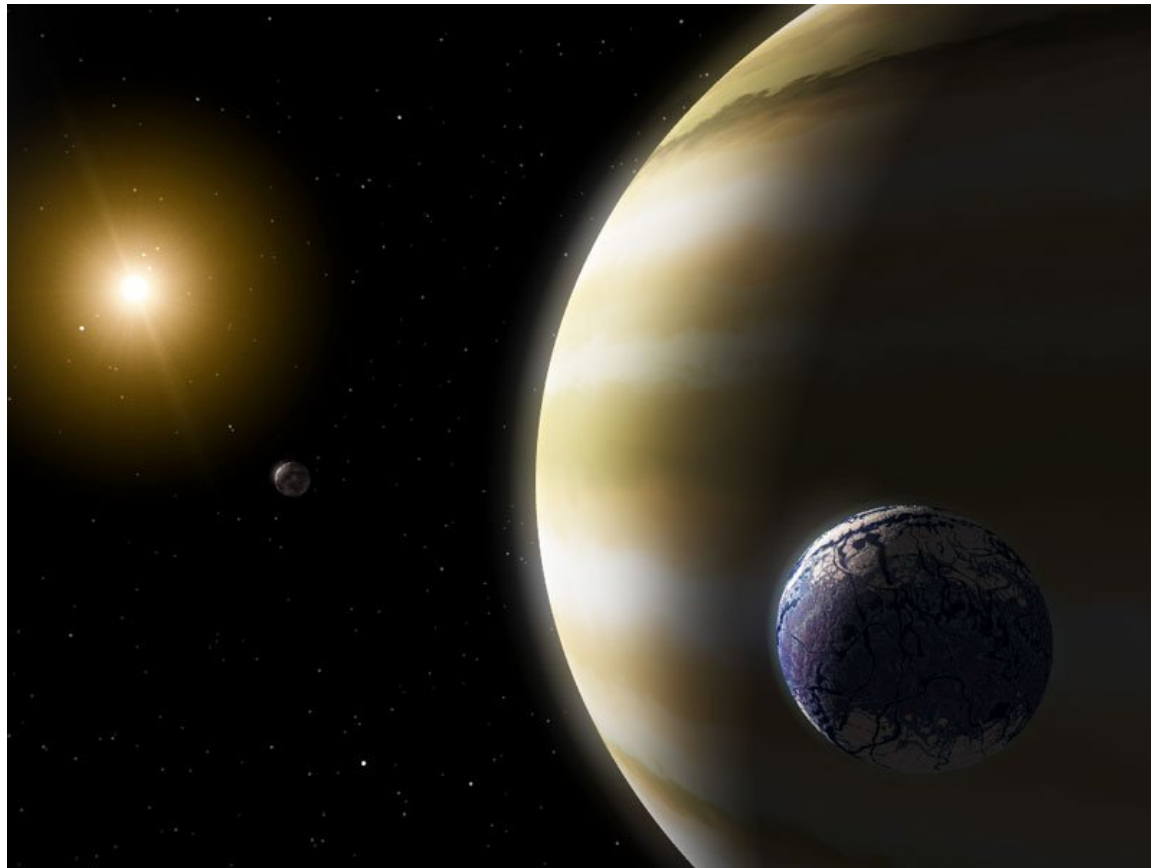
Voorbeelden



Eigen project

- Wat ontbreekt er?
- katalogus
- centrale administratie
- naamgevingsstelsel

WWW.EXOPLANEET.INFO



Informatiebronnen

- www.exoplanet.eu (Parijs)
- Centre de Donnees Stellaires (CDS, Parijs)
- Kepler website
- GCVS
- Amateurwaarnemingen (AAVSO, Meduza)
- Arxiv
- Planethunters (Citizen science project)

Naamgeving exoplaneten

- OGLE-2009-BLG-151/MOA-2009-232b
- SSTc2d J183027.89+011452b
- SCR J1845-6357b
- CI* NGC 1039 W 410b
- WDS J07467+2001AB b
- Chi Vir b
- Systematische naamgeving????

www.exoplaneet.info

- Stand per 09-06-2013 : 3770
- Exclusief de 1421 Kepler 'not dispositioned'
- Uitbreiding: lichtkurven

WASP-44b

from arxiv1105.3179

WASP-45

from arxiv1105.3179

WASP-46

from arxiv1105.3179

Kepler

