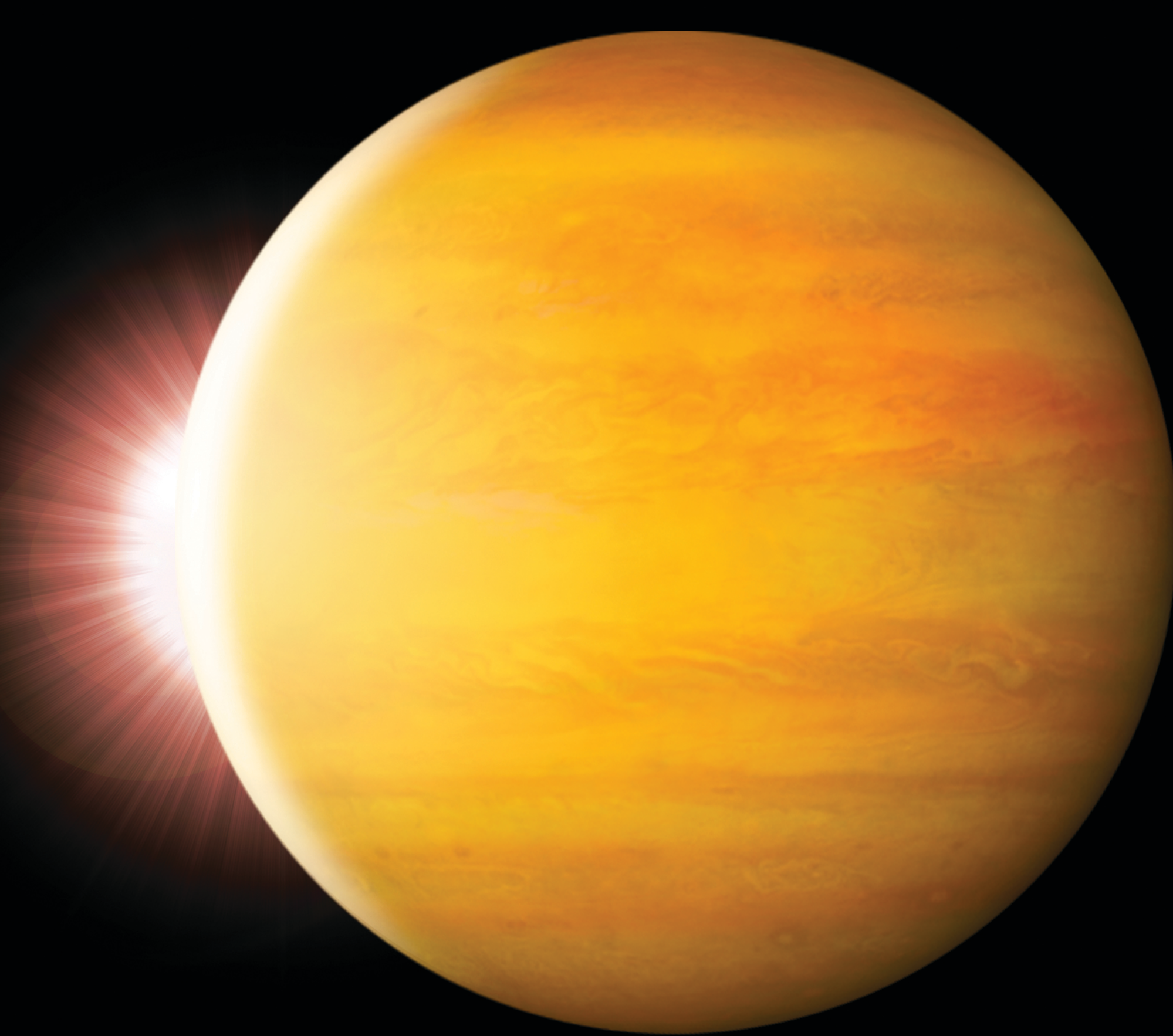


CELEBRATING 20 YEARS OF EXOPLANET DISCOVERIES

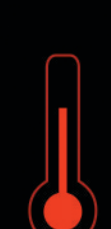
THE FIRST PLANET DISCOVERED AROUND A **SUN-LIKE** STAR



51 Pegasi b

Discovered October 6, 1995

This year we celebrate the discovery of 51 Pegasi b in October, 1995. This giant planet is about half the size of Jupiter and orbits its star in about 4 days. '51 Peg' helped launch a whole new field of exploration.



TEMPERATURE
51 Pegasi b has a temperature of **1000C°/1800F°**.

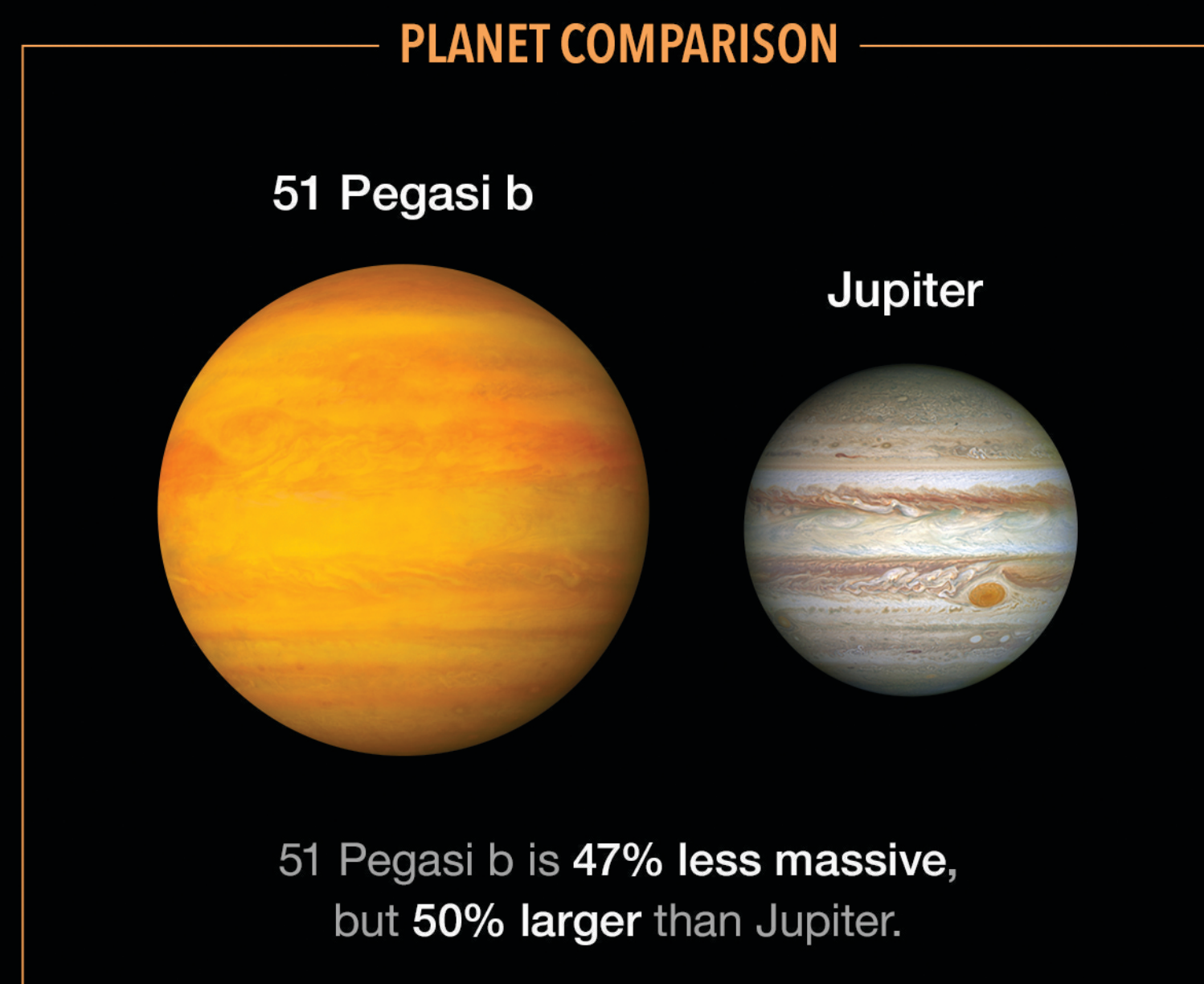


ORBITAL PERIOD
51 Pegasi b orbits its host star **every 4 days**.



DISTANCE FROM EARTH
51 Pegasi b is **50 light-years** from Earth.

PLANET COMPARISON

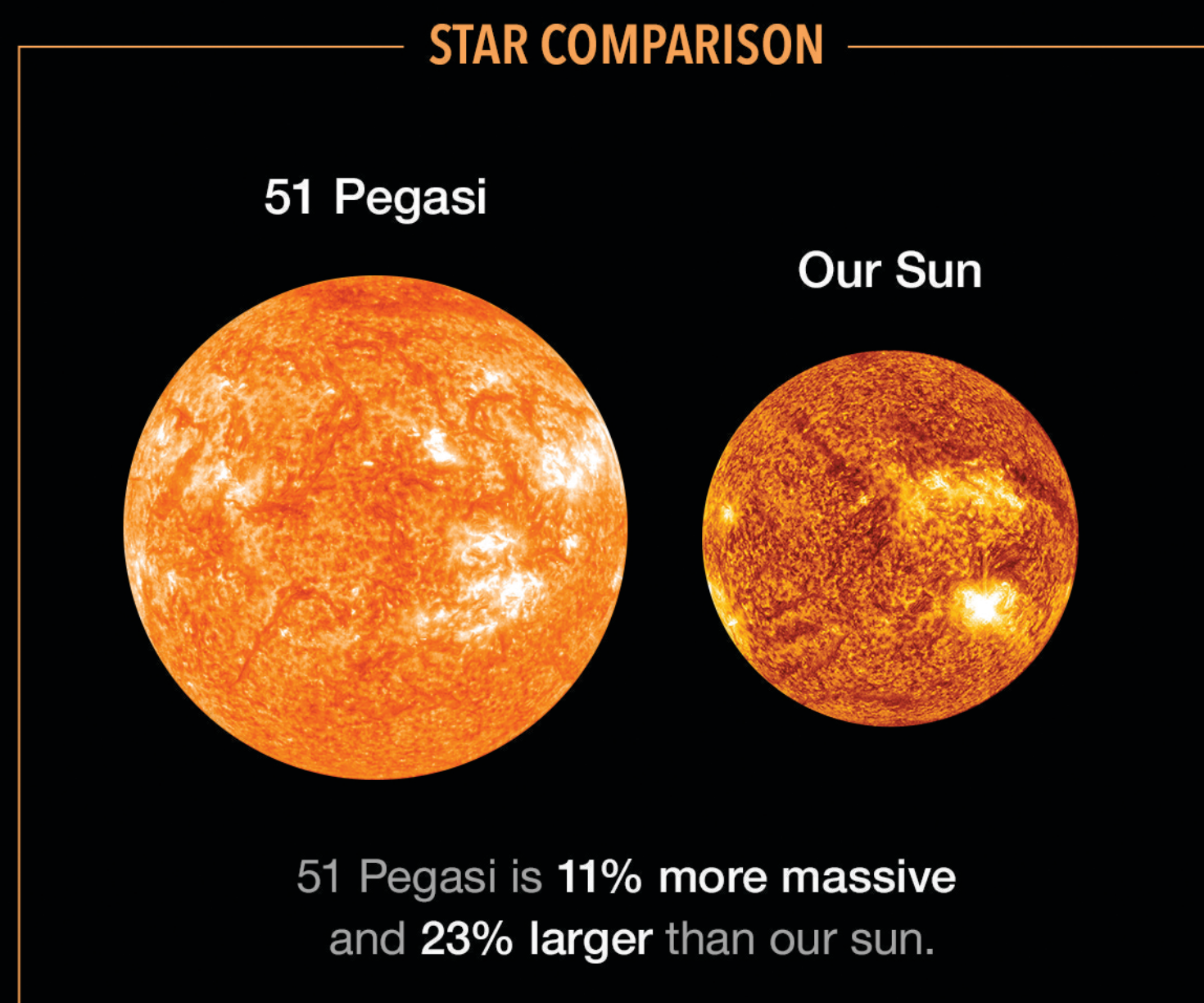


51 Pegasi b

Jupiter

51 Pegasi b is **47% less massive**, but **50% larger** than Jupiter.

STAR COMPARISON



51 Pegasi

Our Sun

51 Pegasi is **11% more massive** and **23% larger** than our sun.

Extreme Conditions

Hot Jupiters were not thought to be possible 20 years ago - this discovery challenged existing theories of planet formation. Astronomers now believe that large planets may form far from their stars and 'migrate' closer to their stars over millions of years.



Did you know?



The discovery of 51 Pegasi b created quite a stir, launching a whole new field in astronomical research.

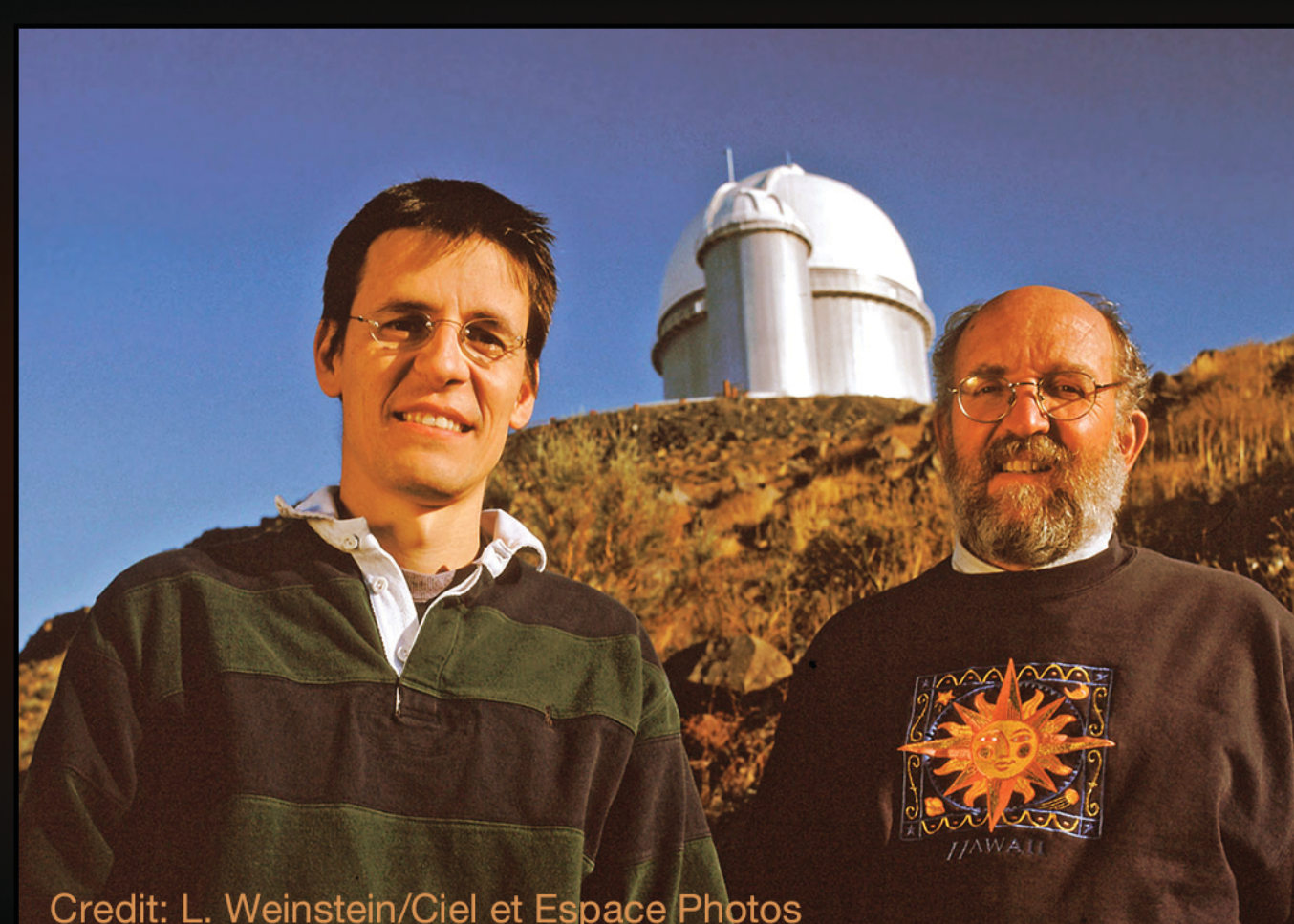


51 Pegasi b was the first planet to have its reflected visible light spectrum detected.



51 Pegasi b was the first planet confirmed around a sun-like star. A previous discovery in 1992 found planets orbiting a pulsar star but at that time many were skeptical planets could exist around these volatile stars.

Observatories



Credit: L. Weinstein/Ciel et Espace/Photos

Discovered by Michel Mayor and Didier Queloz using the ELODIE spectrograph at the Observatoire de Haute-Provence



Credit: NASA

Credit: Richard Ulloa / La Terceira

Confirmed by Geoff Marcy and Paul Butler using the Hamilton Spectrograph at the Lick Observatory

Additional observations have been made using the High Accuracy Radial velocity Planet Searcher (HARPS) instrument at La Silla Observatory (Chile)

Jet Propulsion Laboratory
California Institute of Technology

www.nasa.gov

YEARS OF



EXOPLANETS