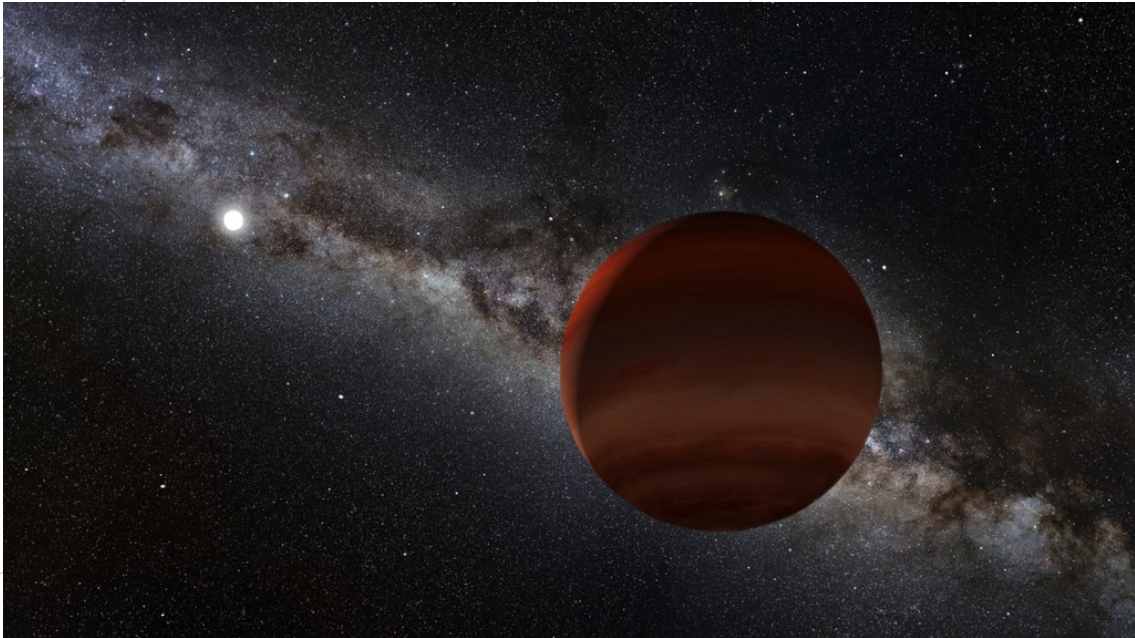


SPACE SCOOP  
NEWS FROM ACROSS THE UNIVERSE



## New Worlds in Our Own Backyard

Aug. 18, 2020

Space is so big that sometimes surprises and new findings can pop up in our own backyard. A team of astronomers have done just that by finding around 100 new worlds known as brown dwarfs!

### Failed Stars

Brown dwarfs are called “failed stars” by some astronomers. In size, they are somewhere between a giant planet like Jupiter, the largest planet in our Solar System, and a small star. But, unlike stars like our Sun, they never become hot enough for the gases inside them to begin merging and giving off energy in a process called nuclear fusion. Instead, after they form, brown dwarfs simply begin to fade and cool down.

Because of their cooler temperatures, these objects are not very bright. This makes them very hard for astronomers to find. This is why scientists normally look for brown dwarfs that are relatively close to us, because they will seem brighter.

### Treasure Hunt

To help find our Sun’s coldest and nearest neighbors, the astronomers using NSF’s NOIRLab facilities and a worldwide network of volunteers collaborated as part of the Backyard Worlds project. This large team searches carefully through troves of telescope images in search of tiny movements of brown dwarfs and planets. Today, the team announced they have found roughly 100 new worlds near the Sun!

Many of the new brown dwarfs discovered are among the very coolest known. Some of them even have temperatures similar to those we have on Earth. This means they are cool enough to possibly be home to water clouds.

The closest of these new discoveries is roughly 23 light years away from the Sun. Many more of these brown dwarf objects are around 30 to 60 light years away.

Who knows what other worlds we'll find in the future!

Image credit: NOIRLab/NSF/AURA/P. Marenfeld. Acknowledgement: William Pendrill

▲ **COOL FACT!**

So far, the keen volunteers of the Backyard Worlds project have already discovered more than 1,500 cold worlds near to the Sun!