NASA announces 10 new 'copies' of Earth that we now know

With 10 potential candidates, it turns out in the universe there are so many copies of the Earth that we now know. Yesterday (June 19), NASA held a press conference to announce the latest results of the Kepler mission - tracing the planets with the potential to nurture life at NASA's Ames Research Center.

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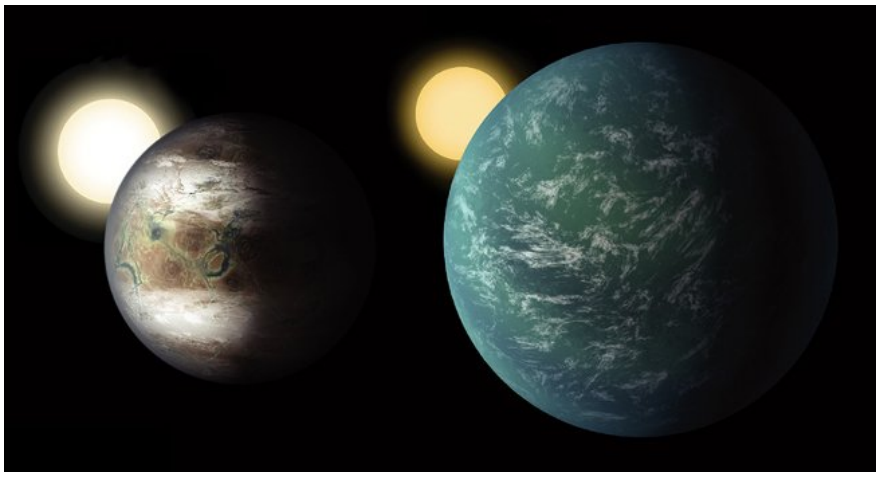
The press conference was held to announce the latest findings in **the Kepler mission** - the ship is carrying out the task of tracking real planets outside the solar system (*exoplanet*).

According to NASA, these findings will be the result of the most sophisticated and advanced analysis, allowing for accurate and reliable numbers of exoplanets. This time data will open many new and really necessary research directions.

Operated since 2009, **Kepler** is the first space telescope capable of tracing planets of similar size to the Earth, lying around or in the range of **Goldilocks** (*Goldilocks zone - the planet in the distance). enough to sustain life* .



Planets can be grouped into two groups: smaller or rocky surfaces like Kepler-452B (*left*) or larger like Kepler-22b (*right*).Photo source: W. STENZEL / NASA AMES

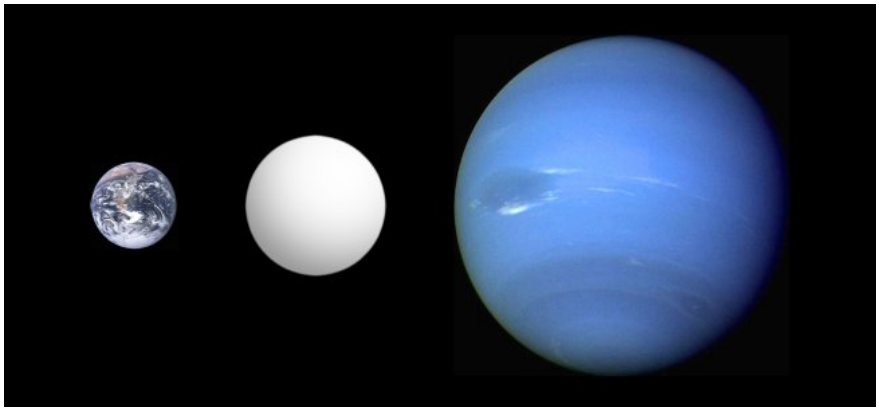
It is known that since the operation, this is the 8th list that **Kepler Space Telescope** brings. The data was analyzed and processed from Kepler observatory within 4 years to help people determine what the " *population* " of the universe is.

In order to reduce the number of abandoned planets, NASA entered the transition signals into the data set, then determined which signals were of a true planet. After that, they continued to import " *fake* " signals, combined with a lot of complicated analysis to get this announcement.

" *The list is very well-calculated, to be the basis to help us answer one of the most difficult questions in astronomical history: how many planets are like Earth in the universe?* " - **Susan Thompson** , expert The head of research Kepler of SETI Institute (California).

The complete set of *planet-hunting* **planetary Kepler Space Telescope** 's initial missions shows a split in the alien planetary diagram, setting different super-Earths small Neptune stars.

Kepler's exoplanet list, reported at the latest press conference held yesterday. With this list, the total number of " *potential* " planets *that* nurture life (whether or *not it is eligible to call the planet*) was discovered by Kepler to reach 4,034. In it, 2,334 have been confirmed as planets and have at least 10 " *closely* " planets to our Earth.



" *Measuring the distance between potential candidate stars carefully conducted reveals a surprising distance between planets about 1.5 and 2 times the size of the Earth. There are a few planets. it was in that distance, but most stood between it,* " **Benjamin Fulton** at the University of Hawaii at Manoa and Caltech and his colleagues found.

That divides the number of small planets into Earth-like terrestrial planets - a radius of 1.5 times the Earth's radius or smaller - and the planet similar to Neptune, about 2 to 3.5 Earth radius.

Kepler's data this time show that small planets will be classified into two groups: one is the solid-surface planets, the same size as the Earth, and the other is the gas globes like Hai. King However, there are also a number of planets located between two groups, but the number is negligible.

" *This study is similar to the way biologists find a new species. Finding two alien planet groups is like distinguishing mammals and reptiles from the evolutionary branch* ." - **Benjamin Fulton** , researcher is completing a PhD project at the University of Hawaii.

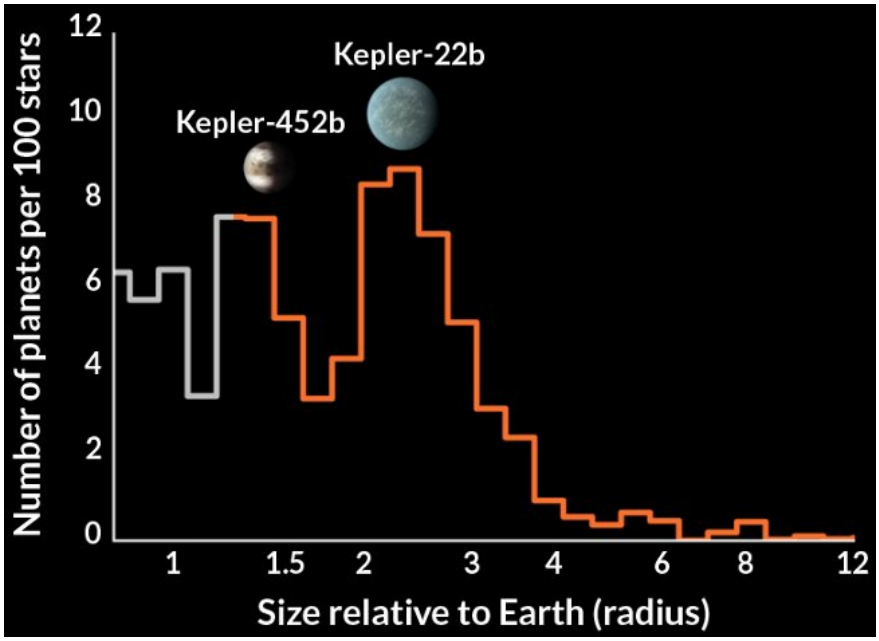
As reported, NASA will hold a press conference to announce the latest discovery of Kepler, in the mission of finding exoplanets (exoplanets - *or exoplanets*). Many people have made predictions about a concussion

detection involving aliens. But the main problem of this press conference is a list of new planets, including at least 10 " *close* " planets to our Earth.

What is almost like? These are planets similar in size to the Earth, and have orbits around the star at a distance sufficient to nourish life, allowing liquid water to exist on the surface. Experts say this is the most complete and detailed list of exoplanets from data collected during the first four years of Kepler's operation.

NASA's Kepler space telescope was launched in 2009 and began to closely observe a " *single patch* " in the sky in the *Cygnus constellation* for four years. (*The stable circular motion response then broke and it started a new task called K2*). Kepler observed that the star is like the Sun in terms of inclination to show bright light, which will reveal a planet passing by, before moving to a new sky.

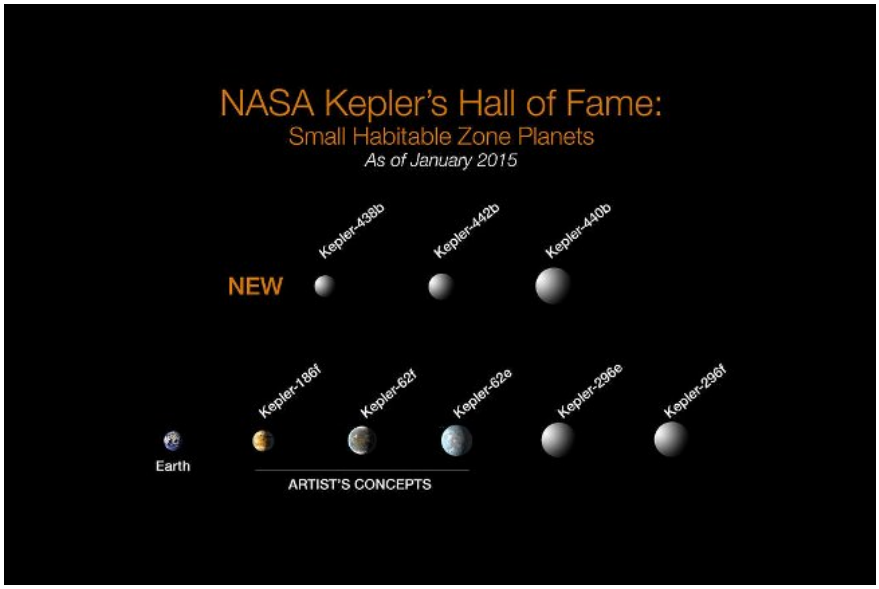
Distance between planets



Kepler found many terrestrial planets close to Earth or similar to Neptune, but not in the middle.Photo source: BJ FULTON / Univ.Hawaii, Caltech, AMES / NASA
According to NASA, the list will lay the foundation for studies of total planets in the universe. Previously, science had confirmed that at least half the planets in the universe were **air globes** - that is, no surface, or lying in an area that could not sustain life.

" *Kepler's data is very special, because it is the only list of Earth-like planets. This result will bring more information to NASA's missions in the future, aiming for an Earth. second* "- **Mario Perez** , Kepler program manager scientist at NASA's Space Physics Division, said.

" *The Kepler team has not yet calculated that number, but astronomers believe they have enough data to do that,* " **Susan Thompson** of the SETI Institute in Mountain View, Calif. She presented the results obtained during the Kepler / K2 IV Scientific Conference held at NASA's Ames Research Center at Moffett Field, California.

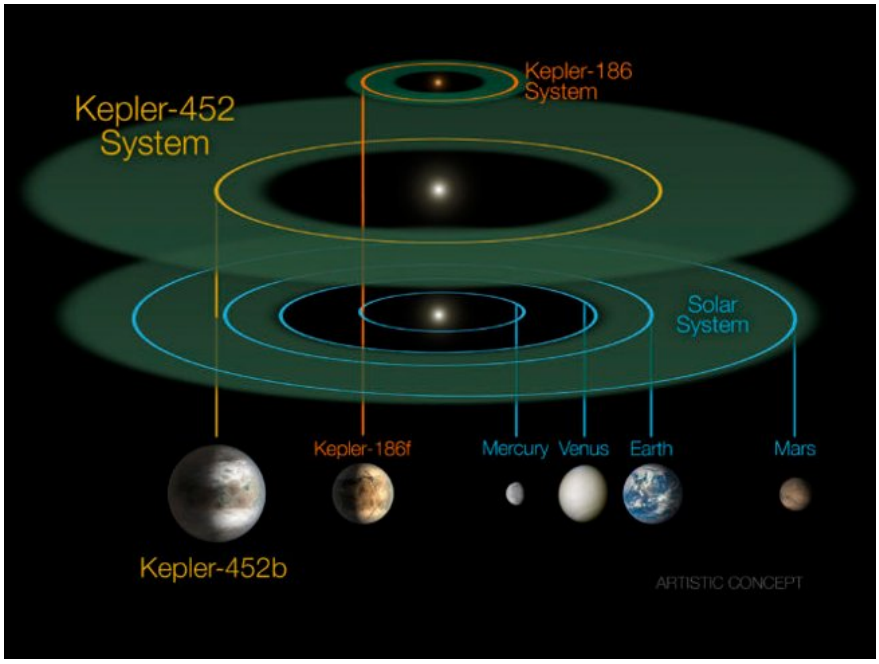


Thompson and his colleagues control the Kepler data set through " *Robovetter* " software, which acts as a filter to catch all **potential planets** . Fake planetary data works through software that accurately identifies the possibility of confusing other signals for a missed planet or " *real* " planet.

" *This is the first time we have a truly outstanding 'population' so we can do a statistical study and understand the similarity of Earth outside* ," Thompson said.

Astronomers' knowledge of these planets is as good as the knowledge they have about their star. Thus, Fulton and his colleagues used the Keck telescope in Hawaii to accurately measure the size of 1,300 planet star stars within Kepler's field of view. Those dimensions in turn help " *positive lace below* " the size of the planets with an accuracy of 4 times greater than the previous one.

" *The division in the types of planets they discover may come from small differences in the size, layout and distance from their stars. Young stars blow away charged particles, the If a planet is too close to its star or too small to have a thick atmosphere - about 75 percent larger than Earth - it will lose its atmosphere and ends in smaller groups, the planets that look almost like Neptune now have plenty of gas to start or grow in a small environment* , "Fulton said.



Divergence can have implications for the abundance of life in the galaxy. Small Neptune's surface - if they exist - will be subjected to the crushing pressure of such a thick atmosphere.

" *This will not be a good place to survive. Our results increase the dividing line between habitable planets and harsh places where life does not exist* ," Fulton said.

Upcoming missions, such as **the** *Transition Exoplanet Survey Satellite (TESS*), which is in *Transiting Exoplanet Survey Satellite, will* be released in 2018, which will fill the details of the planetary surroundings with greater observations of planets orbiting bright stars. Subsequently, the telescope, such as **the James Webb** *Space* **Telescope** (*JWST*), is also expected to be operational by 2018, which can mark the atmosphere of planets with signs of life.

" *Now, we can really ask the question, 'Is our planetary system unique in the galaxy?* '", Planetarium astronomer **Courtney Dressing** - NASA expert at Caltech for know. " *I guess its answer is no. Planet Earth is not unique* ."

Currently, Kepler will turn to observe other areas, which experts say are " *more interesting* ". For example, **TRAPPIST-1** , the star system - the most potential planet to nurture life today.

See also: Cosmic Science: The star system TRAPPIST-1 does not "exist" the big Moon

Having fun!