VER 0.1 / 05-06 OCTOBER 2024 @ SPACEAPP CHALLENGE

CHRONICLES OF EXOPLANET EXPLORATION

EXOPLAN

NOTRYCATCH × NASA

notrycatchteam.github.io/NasaChallenge2024/

THE TASK SELECTED BY THE TEAM

Starting with the first confirmed planet discovered in 1995, we are approaching 5,600 confirmed exoplanets today, and the number will continue to grow along with our knowledge of them, thanks to NASA's James Webb Space Telescope and the future Nancy Grace Roman Space Telescope.

Existing traditional educational materials that talk about exoplanets can have drawbacks, such as: not being accessible to everyone, not providing the necessary level of interactivity and engagement, scattered across multiple sources, and being difficult to understand for younger age groups.

EXOPLAN is an app whose mission is to educate students about the wonders and diversity of exoplanets.

The app consists of 4 main sections:

- Exoplanets (objects of observation)
- Observatories (subjects of observation)
- Quizzes as a game form of knowledge acquisition and testing
- Study materials to familiarize you with exoplanets and methods of studying them.

NASA data used in the app can give users an idea of the huge variety of planetary systems in the Universe.

exoplan

VR MODE UI

MISTER TURBOCORN 658

- PLANETS
- OBSERVATORIES
- QUIZ
- LEARN

KEPLER-186F

KEPLER 186

550 LIGHT YEARS FROM EARTH

LIGHT SPEED | AUTO | BULLET TRAIN | JET | VOYAGER

Travel speed: 671 Million miles per hour
Travel time: 245 Years

planet radius (Earth)
0.1283 compare →

Planet Name	Kepler 186 f
Host Name	Kepler 186
Number of Planet	5
Status	Published Confirmed
Stellar Effective Temperature [K]	3748±75
Stellar Radius [Solar Radius]	0.539±0.015
Stellar Mass [Solar Mass]	
Detected by	Transit
Observed by	Kepler

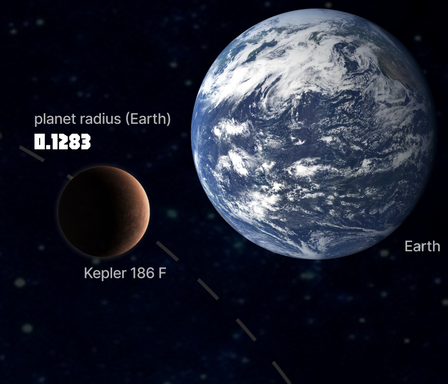
Torres et al. 2015
Planetary Parameter Reference

ALL PLANETS NEXT PLANET →

2014	0.7048	228.8
discovery year	orbital radius (AU)	orbital period (days)

We can't imaging or compare real sizes of stars and planets. But with the help of visualization we can do it!

schematic presentation



There a lot of scientist, astrophysics and stargazes who collect data about the planets and their systems. Feel free to review all of them!

If you're not interested in browsing whole table, just take a quick look at a random planet. All links to 3D model, observatory, detection methods and other visualizations available from the home screen!

Speaking about distances, '1 light year to the Sun' or '500 light years to another system', is it short or long distance? Don't think too long, just get in the jet and take a flight.

** Don't forget you insurance PLEASE*

5000+ planets with a long list of science data? Don't stress out, take a look at the most interesting facts about them and move on to 3D model of the planet or whole system!

Search Filter

Photo	Planet Name	Host name	Number of Planet	Status	Stellar Effective Temperature [K]	Stellar Radius [Solar Radius]	Stellar Mass [Solar Mass]	Detected by	Observed by
	24 Boo b	24 Boo	1	Published Confirmed	4893±15	$10.64^{+0.84}_{-0.59}$	$0.990^{+0.190}_{-0.130}$	Radial Velo..	Okayama...
	75 Cet b	75 Cet	2	Published Confirmed	4809	$10.38^{+0.15}_{-0.59}$	$1.92^{+0.07}_{-0.08}$	Radial Velo..	Okayama...

There are a lot of space telescopes and surface stations that allows scientists to observe far distances of our Universe.

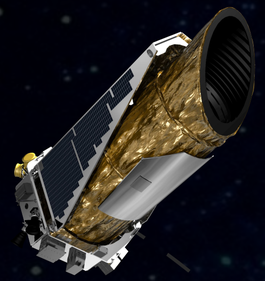
You could reach every ground station simply by rotating and zooming the 3D model of Earth. Every label on the model is the real location on the planet while tap on this label will lead you to interesting facts about it.

On the top side of the screen you can look at the space telescopes that currently 'on a duty' or already finished their mission.

James Webb

TESS

Hubble



Kepler / K2

Space Observatories

Earth Observatories

LA SILLA OBSERVATORY

Established Year	1964
Latitude	-29.25627
Longitude	-70.73805

La Silla Observatory is an astronomical observatory in Chile with three telescopes built and operated by the European Southern Observatory (ESO).

TESS (TRANSITING EXOPLANET SURVEY SATELLITE)

Mission Type	Space Telescope
Launch Date	2018-04-18
Objective	Extended mission
Wave Light	Visible light
Type	Space
Type	Space

NASA's TESS discovers exoplanets, worlds beyond our solar system. In the course of its extended observations of the sky, TESS also finds and monitors all types of objects that change in brightness, from nearby asteroids to pulsating stars and distant galaxies containing supernovae.

LEARN

A DATABASE OF SCIENTIFIC MATERIAL IN ACCESSIBLE FORMATS TO EXPLORE THE ACCUMULATED KNOWLEDGE OVER MANY YEARS

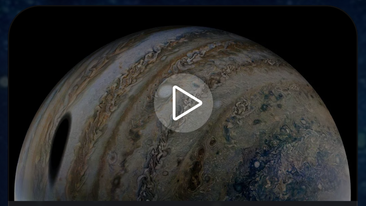
VIDEOHUB ARTICLES SCIENTIFIC RESEARCH

A NEW MISSION FROM NASA

#missions

SOUNDS OF MARS FROM PERSEVERANCE ROVER

#space #sound



AUDIO OF JUNO'S GANYMEDE FLYBY

#space #sound

We have introduced Learn section so students could get latest video courses, news, real footages and hypothetical visualizations from NASA. Everything for studying in one place.

Complete quizzes – earn experience. Quite simple :)

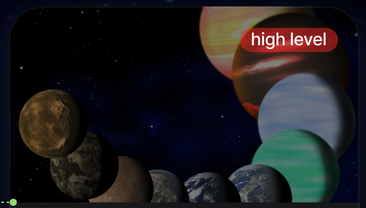
MISTER TURBOCORN 200

MISTER TURBOCORN 480

MISTER TURBOCORN 658

QUIZZES

HI! 👋 HERE YOU CAN PRACTICE YOUR KNOWLEDGE. CHOOSE A QUIZ, ANSWER QUESTIONS AND IMPROVE YOUR KNOWLEDGE



PARAMETERS OF EXOPLANETS

10 Questions • 5 minutes

TELESCOPES

15 Questions • 8 minutes

THE HISTORY OF SPACESHIPS

24 Questions • 10 minutes

To make learning process more interesting and unforgettable there are a lot of quizzes where students can participate to earn a space-experience to be ready to move further after their graduation.

DATA & TECHNOLOGIES

BLAZOR

DOTNET.MICROSOFT.COM/EN-US/APPS/ASPNET/WEB-APPS/BLAZOR

THREE.JS

THREEJS.ORG

GITHUB

GITHUB.COM

CHAT GPT

CHATGPT.COM

FIGMA

FIGMA.COM

EXOPLANETARCHIVE.IPAC.CALTECH.EDU

EXOPLANETS.NASA.GOV

SCIENCE.NASA.GOV

EYES.NASA.GOV

OUR TEAM

Sergey Kolchin

Eugeniy Sheutsou

Dmitri Ordenou

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Thanks for watching 👌

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