

The structure of the solar system

Do My Homework

According to modern ideas, the solar system consists of 8 planets, their satellites, small bodies and small planets.

The space between the planets and other solar bodies is filled with interstellar dust and gas.

In accordance with the size, density and chemical composition of the planet of the solar system are divided into 2 groups: the planets of the earth group and the planet are giants.

Planets of the earth group: Mercury, Venus, Earth, Mars.

Planet.

Giants: Jupiter, Saturn, Uranus, Neptune.

Small solar body bodies: comets, asteroids, meteors and meteorites.

Small planets or dwarf planets: Pluto, Ceres, Erida, Sedna, Haumet, Mchamaks.

The sun

Home Star Solar System

In the center of the Solar System is a star

The sun.

Surface temperature: 6000 K

Chemical composition: helium and hydrogen

Energy source: Thermonuclear reaction

The internal structure of the Sun: the core, radiant zone, convective zone.

Sun atmosphere structure: photosphere, chromosphere, crown.

Solar spots

Chromosphere

Solar crown

Planets of the earth group: Mercury, Venus, Earth, Mars.

Mercury and its characteristics:

Radius - 0.38 R_Z

Mass - 0.055 M_W

Density - 5.4 g / cm³

Sideric period T - 88 Earth days (Z.S.)

Sunny day - 176 Earth days

Acceleration of free fall G = 0.38G_Z

The atmosphere is absent

Magnetic field - no

Satellites - no

The big half-axis - 0.39 AE.

Configurations - Eastern and Western elongation, lower and top connection

Venus and its characteristics:

Radius - 0.95R

Mass - 0.82 M_W

Density - 5.2 g / cm³

Sideric period T - 225 Earth days (s.)

Sunny day - 243 Z.S.

Acceleration of free fall G = 0,9G_Z

The atmosphere - is, $p = 90$ atmospheres

Magnetic field - no

Satellites - no

The big half-axis - 0.7 AE.

Configurations - Eastern and Western elongation, lower and top connection

Earth and its characteristics:

Radius - 6378 km

Weight - $6 \cdot 10^{24}$ kg

Density - 5.5 g / cm³

SideRic period, T - 365.4 days

Sunny day - 23h 56 min

Acceleration of free fall $G = 9.8$ m / s²

The atmosphere is, $p = 1$ atmosphere or 100,000 pa

Magnetic field - there

Satellites - Moon

Large half - 1 AE.

Mars and its characteristics:

Radius - 0.53 r_z

Weight - 0.11 MW

Density - 3.9 g / cm³

SideRic period T - 687 Earth days (s.)

Sunny day - 24h 37 min.

Acceleration of free fall $G = 0.37G_Z$

The atmosphere - is, $p = 0.06$ atmospheres

Magnetic field - there

Satellites - 2 (Phobos and Deimos)

The big half-one - 1.5 AE.

Configurations - Eastern and Western Quadrature, Connection and confrontation

Planet.

Giants: Jupiter, Saturn, Uranus, Neptune.

Jupiter and its characteristics:

Radius - $11.2r_E$

Mass - $318 M_E$

Density - 1.3 g/cm^3

Sidereal period $T - 11.2$ Earth years (Z.)

Sunny day - 9 h 50 min.

Acceleration of free fall $G = 2.5G_Z$

The atmosphere is

Magnetic field - there

Satellites - more than 69

Large half-axis - 5.2 A.E.

Configurations - Eastern and Western Quadrature, Connection and confrontation

Saturn and its characteristics:

Radius - $9.4 R_E$

Mass - 95.2 MW

Density - 0.7 g / cm³

SideRical period T - 29.67 Earth years (Z.L.)

Sunny day - 10 h 12 min.

Acceleration of free fall G = 1.1 GZ

The atmosphere is

Magnetic field - there

Satellites - 56.

The big half-axis is 9.6 AE.

Configurations - Eastern and Western quadrature, connection and confrontation.

Uranus and its characteristics:

Radius - 4 R_Z

Weight - 14.5 MW

Density - 1.2 g / cm³

SideRical period T - 84.05 Earth days (Z.S.)

Sunny day - 17 h 14 min.

Acceleration of free fall G = 0,9GZ

The atmosphere is

Magnetic field - there

Satellites - 26.

The big half-axis - 19.2 AE.

Configurations - Eastern and Western quadrature, connection and confrontation.

Neptune and its characteristics:

Radius - 3.9R

Mass - 17,2mz

Density - 1.6 g / cm³

SideRical period T - 164.49 Earth years (Z.L.)

Sunny day - 16 h 07 min.

Acceleration of free fall G = 1,2GZ

The atmosphere is

Magnetic field - there

Satellites - 13.

The big half-axis is 30 A.E.

Configurations - Eastern and Western quadrature, connection and confrontation. Small solar body bodies: comets, asteroids, meteors and meteorites.

Comet

Asteroid

Meteorite

Meteoric bodies

remnants passing through the solar system comet

Boll

The lighting phenomenon formed as a result of the combustion of meteorite in the Earth's atmosphere asteroid belts

The main belt of asteroids between Mars and Jupiter

Groups of dangerous asteroids

Trojans, Greeks and Hilda

Oorta cloud

The area of the outer space, from which comets arrive in the solar system. Small planets or dwarf planets

Pluto

Ceres

Sedna

Erida

Hawmer

McAMaki

In the next article, we will analyze the solution of the first type of tasks "Characteristics of the Planets of the Solar System".

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