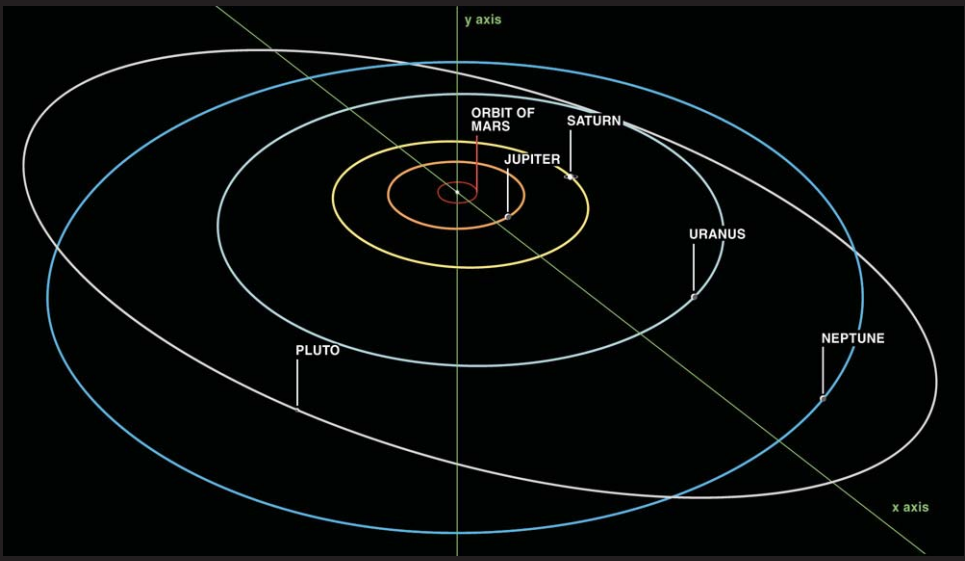
The First Annual Planet Awards!

Planet sizes, to scale.

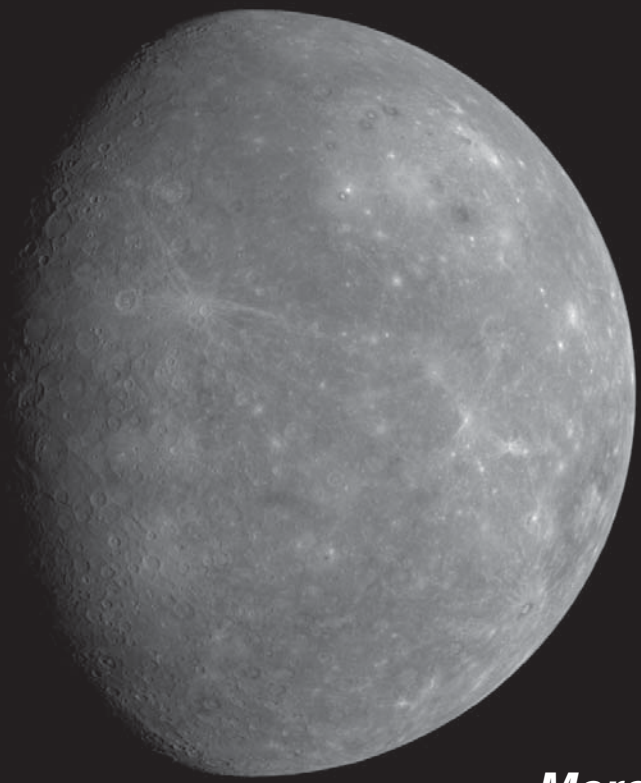


Planet orbits, to scale.

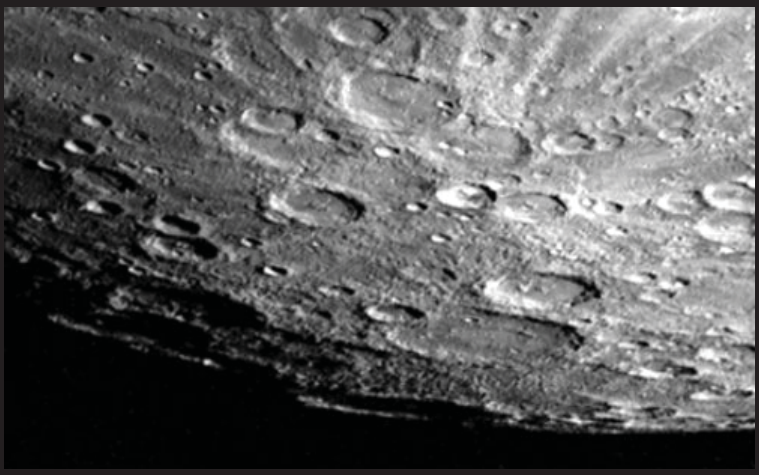
Welcome!

Today we will see which planets are the best in the solar system. We have nine contestants—eight planets and a dwarf planet—who will compete for awards. Each planet will tell us about itself and why it is unique among the planets. When all the planets have spoken, the judges will decide which planets will receive a Best Planet Award.

Let’s meet our first contestant.



Mercury



Mercury's South Pole

Let’s give a big welcome to Mercury.

HOST: Tell us about yourself, Mercury.

MERCURY: OK. I am the closest planet to the Sun. I am the second smallest planet in the solar system. I rotate so slowly that my day is 58-1/2 Earth days long! I am rocky, nearly airless, and covered with craters.

HOST: Do you have any moons?

MERCURY: Nope, no moons.

HOST: What makes you special?

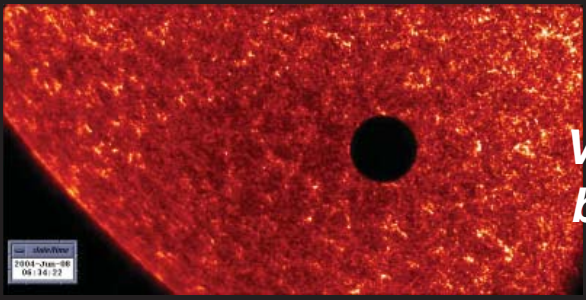
MERCURY: I am the fastest of all the planets when it comes to orbiting the Sun. It takes me only 88 Earth days, which is the length of my year. Also, I have the most extreme temperatures of any planet. I can be as cold as –300° Fahrenheit at night and as hot as 870° Fahrenheit during the day!

HOST: Whew! Thank you, Mercury.

Now, on to our next contestant.

Venus is shrouded in thick clouds.

With radar, we see through the clouds to the surface.



Venus passing between Earth and the Sun.

Our next contestant is Venus.

HOST: Tell us about yourself, Venus.

VENUS: I am the second planet from the Sun, and I am about the same size as Earth. I am rocky. I have mountains, valleys, and active volcanoes. I am covered with very thick clouds, which makes it hard to see my surface.

HOST: Do you have any moons?

VENUS: No, I have no moons.

HOST: What makes you unique?

VENUS: Well, my very thick atmosphere, which is about 100 times thicker than Earth's, traps heat from the Sun, making me the hottest planet. I have the longest day of any planet because I rotate so slowly. Actually, my day is slightly longer than my year. It is 243 Earth days long, while my year is 225 Earth days long. By the way, I also rotate backwards. No other planet rotates in the direction I do, except maybe Uranus.

HOST: Hmm. That is weird. Well, thank you, Venus. Let's see who's next.

Earth, planet of life.

Next up is Earth.

HOST: So, what's your story, Earth?

EARTH: I am the third planet from the Sun. I am a rocky planet whose surface is covered mostly by water. I have continents, mountains, valleys, and active volcanoes. I have an atmosphere that creates a variety of weather and protects my surface from the harsh environment of space. Thus, I am proud to say, I am home to a huge variety of plants and animals.

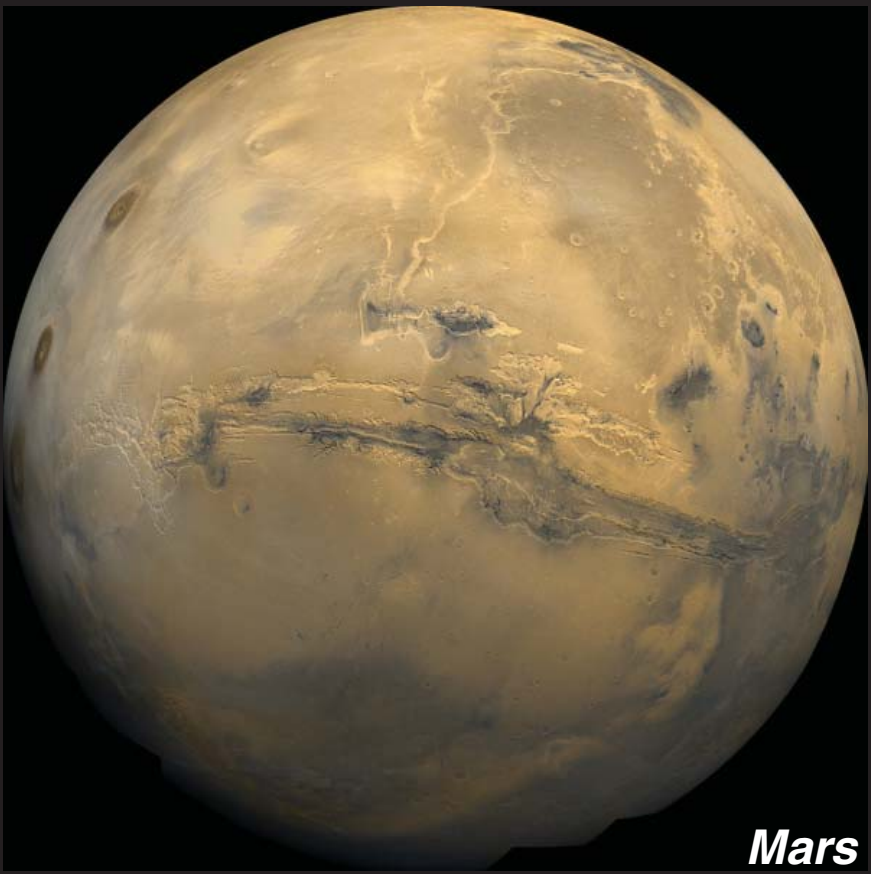
HOST: Any moons?

EARTH: Yes, I have one large and beautiful moon.

HOST: What makes you special?

EARTH: I am the only planet known to have life, and I have a lot of it! I provide a cozy home to billions of plants and animals. I am the only planet known to have liquid water. I also have the highest density of any planet in the solar system. This means that I am very heavy for my size.

HOST: You are indeed special. Thank you, Earth. Moving on to our next contestant . . .



Olympus Mons from space

Let’s welcome Mars.

HOST: Tell us about yourself, Mars.

MARS: I am a dry, rocky planet with high mountains and large, deep canyons. I am the fourth planet from the Sun. I am about half the size of Earth. My atmosphere is very thin, and my surface is covered with reddish dust. I have water ice in my polar caps.

HOST: Do you have any moons?

MARS: Yes, indeed. I have two small, irregularly shaped moons. You Earthlings have named them Phobos and Deimos.

HOST: What makes you stand out?

MARS: I hate to brag, but I have the highest mountain in the entire solar system. It is called Olympus Mons, and it is 17 miles tall. That’s about three times higher than Mt. Everest on Earth. I also have the largest canyon of all of the planets. It is called Valles Marineris, and it is about 5 times as long and 3 times as deep as Earth’s Grand Canyon.

HOST: Wow. Thank you, Mars. Moving on to our next contestant . . .

Jupiter

Jupiter and its four largest moons, Io, Europa, Calisto, and Ganymede.

Our next contestant is Jupiter.

HOST: So, what are you all about, Jupiter?

JUPITER: That's "Mr. Jupiter" to you. I am a giant gas planet—the largest planet in the solar system. I am the fifth planet from the Sun. My very windy, thick atmosphere is covered with light and dark colored bands. I also have a large, oval shaped storm that you call the Great Red Spot.

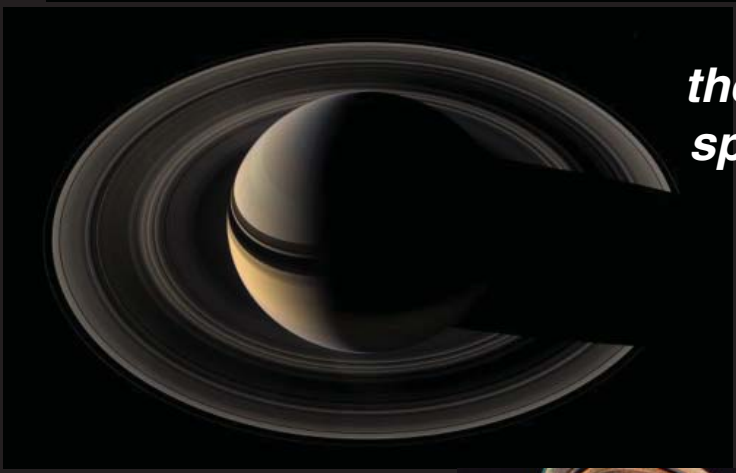
HOST: Do you have any moons?

JUPITER: Boy, do I have moons! I have at least 63 moons that you Earthlings know about. I also have several thin, faint rings.

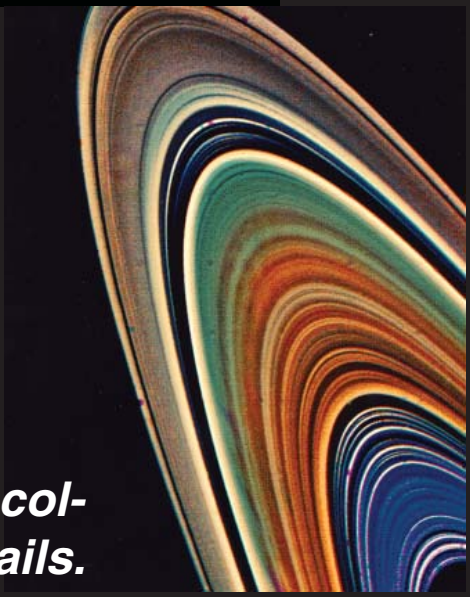
HOST: What makes you special?

JUPITER: I am so large that all the other planets could fit inside me! My Great Red Spot is the largest storm in the solar system— much larger than Earth. I also rotate faster than any other planet. I make one complete rotation in less than 10 Earth hours. My fast rotation rate also means that I have the shortest day of all the planets.

HOST: Very impressive! Thank you, Jupiter. Next up . . .



Saturn, as seen by the Cassini spacecraft.



Rings with false color to show details.

Let’s give a big hello to Saturn.

HOST: Please introduce yourself, Saturn.

SATURN: Oh, where to begin? Well, I am the sixth planet from the Sun. I am a fast rotating, gas giant planet. I am the second largest planet in the solar system, next to Jupiter. But I think I am much more beautiful, because I have a majestic system of rings made up of chunks of ice and rocks.

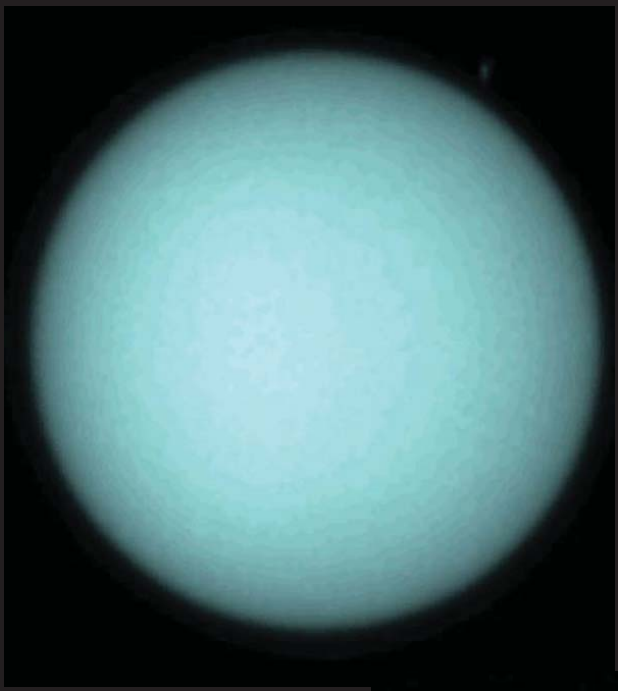
HOST: Any moons?

SATURN: Oh, yes. Your astronomers on Earth have found at least 31 moons of mine. My largest moon, Titan, is bigger than Mercury and even has an atmosphere.

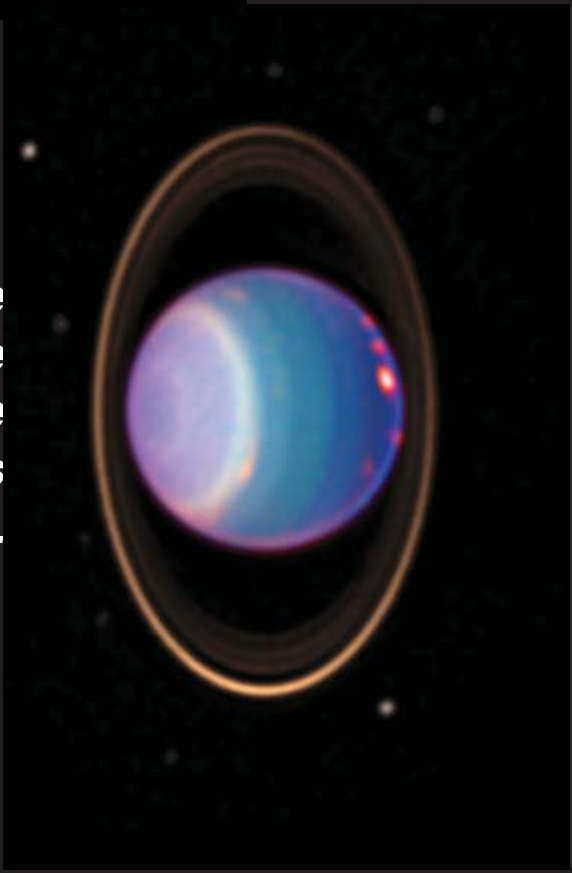
HOST: What makes you unique?

SATURN: Well, I have the largest and most beautiful rings in the solar system! I also have the lowest density of all the planets. That means I weigh least for my size of all the planets. Actually, I could float in a bathtub, if you could find one big enough. My moon Titan is the largest moon in the solar system.

HOST: OK! Thank you, Saturn. And who do we have next?



Uranus as it looks to human eyes through a telescope.



This Hubble Space Telescope picture shows the rings.

Let’s welcome Uranus.

HOST: So what’s up with you, Uranus?

URANUS: First of all, my name is pronounced YOOR-un-us. I am the third largest and the seventh planet from the Sun. I am a large, gas planet with no solid surface. I appear blue-green, and I rotate on my side.

HOST: Do you have any moons?

URANUS: Yes, your astronomers have found at least 27 moons of mine. Five are large moons and the rest are much smaller. I also have faint, thin rings.

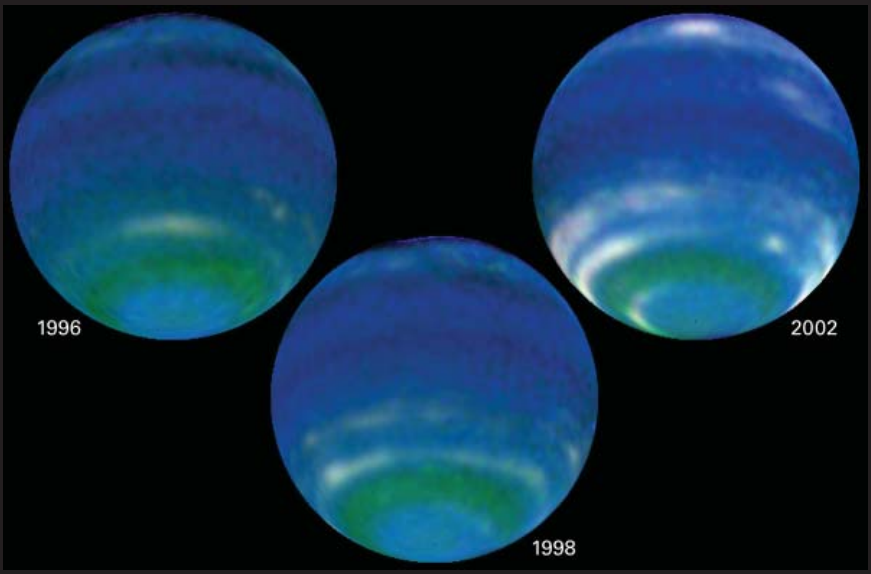
HOST: What makes you special?

URANUS: Well, I am more tilted than any other planet, and I do not rotate in the same way that the other planets do. I am the only planet that rotates on its side. This means that one of my poles is often pointed towards the Sun giving me very long seasons. My rings are also sideways compared to the rings of other planets.

HOST: Something big must have knocked you over! Thanks, Uranus. Moving right along . . .

Neptune, as seen by Voyager 2.

Neptune's seasons, as seen by the Hubble Space Telescope.



Our next contestant is Neptune.

HOST: So who are you, Neptune?

NEPTUNE: I am the eighth planet from the Sun. Although I am the smallest of the large gas planets, I am still large enough to hold nearly 60 of your puny little Earths! I am a blue planet with very strong winds.

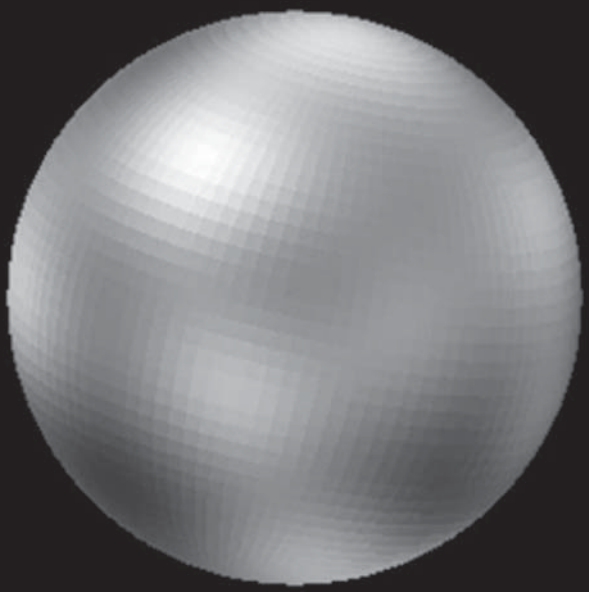
HOST: Do you have any moons?

NEPTUNE: Yes, your observers on Earth have found 13 moons and several rings.

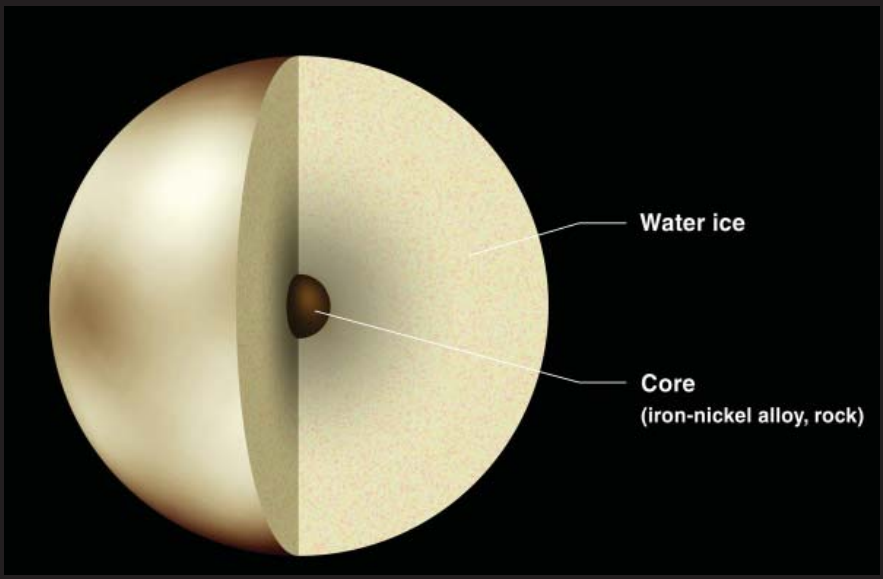
HOST: What makes you unique?

NEPTUNE: That's easy. I have the fastest winds in the solar system. Winds on my surface have been measured at up to 1,500 miles per hour! One of my storms, which you called the Great Dark Spot, was larger than Earth! I am the farthest of the giant gas planets from the Sun, and my tilt gives me some of the most extreme seasons in the solar system. My seasons lasts 41 Earth years!

HOST: Wow, that would be a very long winter! Thank you, Neptune. Now let's meet our final contestant.



Pluto. This is a processed image from the Hubble Space Telescope



Pluto seems to be made of water ice, with a small core of metal and rock.

Let’s welcome dwarf planet Pluto.

HOST: Please tell us your story, little Pluto.

PLUTO: I was once the ninth and farthest planet from the Sun, but now I am classified in the group of dwarf planets. I am what I am, whatever you call me. I am rocky and covered with ice.My orbit is very lop-sided, which means that sometimes I am closer to the Sun than Neptune is. When I am closer to the Sun, some of the ices on my surface evaporate and give me a thin atmosphere.

HOST: Do you have any moons?

PLUTO: Yes, three. A larger moon you call Charon and two tiny moons, Nix and Hydra.

HOST: Why are you special?

PLUTO: Well, with my small size, odd orbit and distant location, Earth astronomers have disagreed about whether I really am a planet. Since I am so far away, I’ve had no visits from Earth. I’m lonely way out here. But finally a NASA mission is on the way! I am so excited! So, when it arrives in 2015, you will learn much more about me.

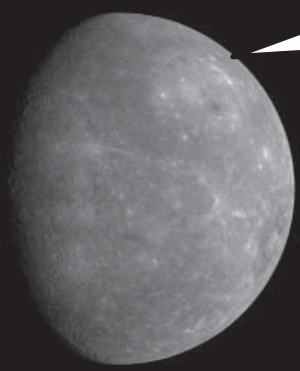
HOST: Thank you, Pluto.

We have now heard from all of the contestants. The judges are carefully considering all the planets' merits and weighing their important decision.

Let's see who has won!

The judges have decided to

They are all unique a



This was great fun!

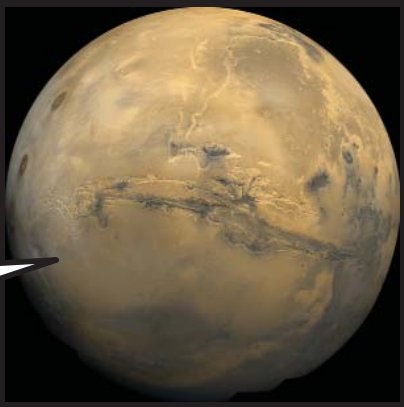
OK, I'll see you again in 225 Earth days.

o give each planet an award!

and beyond compare!

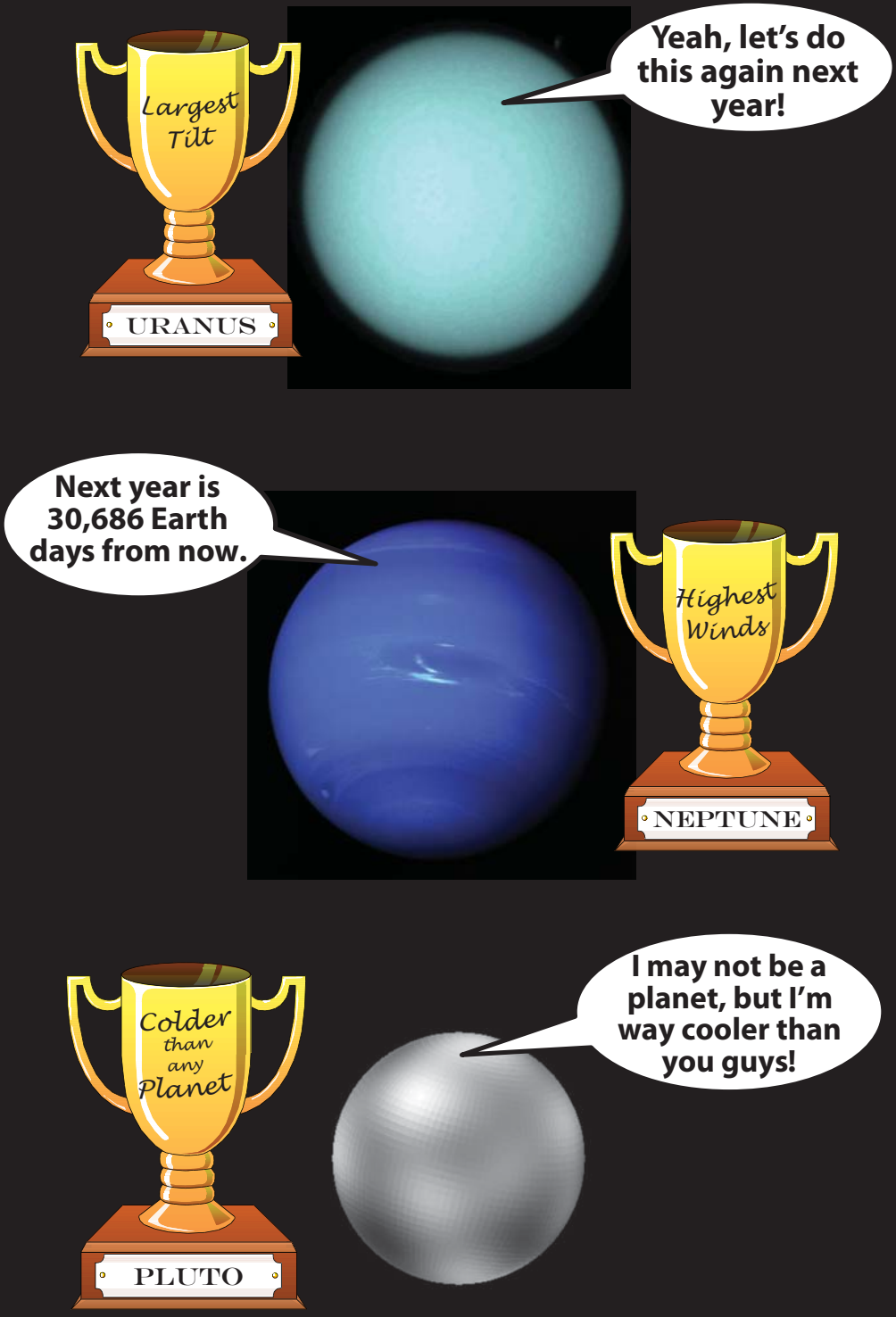
Let's do this again in a year!

No, it's 688 days!



I'd like to thank all the little planets who helped make this possible.

A year is 10, 747 Earth days for me!


Largest Tilt
URANUS
Yeah, let's do this again next year!
Next year is 30,686 Earth days from now.
Highest Winds
NEPTUNE
Colder than any Planet
PLUTO
I may not be a planet, but I'm way cooler than you guys!

Hmmmm. Isn't it great when everyone is a winner?

Well, thanks for joining us, and congratulations to all our winners!

The End

The First Annual Planet Awards!