

Open House HDTV Stereo Video

Welcome, today you will view images and animations in High Definition Stereo. The glasses you are using will allow you to see views of the solar system, which are completely unique.

Sun

We see the sun every day in visible light but here we are looking at it through the eyes of a soft xray telescope. As it rotates we can see some of the tremendous activity on the sun where plasma is heated by the magnetic field to temperatures over 1 million degrees.

Earth

This view of the earth is one that might be had by a spacecraft coming into our solar system headed in towards our sun. On the right hand side, we see a portion of the earth in sunlight. On the left, are the lights of cities, which show that life exists and thrives on this third rock from the sun.

Asteroid

Floating out of the screen against a backdrop of stars is the asteroid Toutatas. Its length is 4.6 kilometers, a little over 3 miles long. Every 4 years this asteroid passes near the earth. In fact, in the year 2004, on September 28, it will be only 4 times the distance from the earth that the moon is. On the middle of the screen you see a curve called a light curve. It shows how much light you would see if you were watching this asteroid from earth. The red stars are actually optical observations by telescopes on earth, which are matched against the radar observations we see here.

Mars – Viking

We are flying over the surface of Mars at 200,000 kilometers per hour over a region called Valles Marineras. A canyon system 4 times as deep as the Grand Canyon on earth and as wide as the United States. These images were made possible using stereo images taken from the Viking spacecraft.

Mars – Pathfinder

On July 4th 1997 the Mars Pathfinder successfully landed on Mars and a series of images were taken of the Martian landscape. Here using super resolution imaging we see close up views in color and stereo of the Martian surface. The rock in the upper right hand corner, we call flattop because of its shape. The rocks in the background are part of the rock garden and were probably pushed into place by a great flood.

Io

We are now off to visit Io, one of Jupiter's moons. Io is the most active volcanic body in our solar system. Here we see a computer graphic representation of one of the geysers of Io against the backdrop of Pele.

Earth

Returning to our home planet earth we see a river valley, coast line, and some high clouds taken from Earth Kam CCD camera. Earth Kam was mounted aboard the space shuttle and operated by a number of students in 9th through 12th grade. In this stereo image we can see cloud shadows and the height of the mountains around the river valley. We are also able to see both terrain and cloud shapes in this 3D image of the earth.

Cosmic View

On a more cosmic view we see a galaxy in the constellation fornax. Much like our own milkyway it is a spiral galaxy. This is but one image, of 10s of 1000's of images taken from the Palamar Telescope in a single sky survey. There is much work left to be done as we leave with our final view of our universe.

Thank you for coming today. We hope you have enjoyed the show. Please carefully remove your glasses and return them on your way out. Enjoy the rest of your day.