

Solar System Family Portrait ??? Illustration. This simulated view, made using NASA's Eyes on the Solar System app, approximates Voyager 1's perspective when it took its final series of images known as the "Family Portrait of the Solar System," including the "Pale Blue Dot" image. Figure 1 shows the location of each image.



Solar System Family Portrait This narrow-angle color image of the Earth, dubbed "Pale Blue Dot", is a part of the first ever "portrait" of the solar system taken by Voyager 1. This data visualization uses actual spacecraft trajectory data to show the family portrait image from Voyager 1's perspective in February 1990.



Explanation: On another Valentine's Day (February 14, 1990), cruising four billion miles from the Sun, the Voyager 1 spacecraft looked back to make this first ever family portrait of our Solar System. The complete portrait is a 60 frame mosaic made from a vantage point 32 degrees above the ecliptic plane. In it, Voyager's wide angle camera

A Solar System Portrait Credit: Voyager 1 Team, NASA. Explanation: As the Voyager 1 spacecraft headed out of our Solar System, it looked back and took a parting family portrait of the Sun and planets. From beyond Pluto, our Solar System looks like a ???

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NASA's Voyager 1 spacecraft, having completed its mission along with Voyager 2 to explore the outer planets, will use its cameras February 13-14 to take an unprecedented family portrait of most of the planets in our solar system.

The complete portrait is a 60 frame mosaic made from a vantage point 32 degrees above the ecliptic plane. In it, Voyager's wide angle camera frames sweep through the inner Solar System at the left, linking up with gas giant Neptune, the Solar System's outermost planet, at the far right. Positions for Venus, Earth, Jupiter, Saturn, Uranus, and



MESSENGER's solar system family portrait On its way to its planned Mercury orbit insertion in March 2011, MESSENGER became the first spacecraft to be able to gaze out onto the solar system from its center. MESSENGER's cameras captured most of the 34 images on November 3, 2010, but, in order to protect its instruments from the glare of the Sun, had to wait ???

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6.4 billion kilometers (3.7 billion miles) from the center of the solar system, Voyager 1 looked back at the home it left behind in 1977, at the gas giant Jupiter, which it flew past in 1979; and

In order, left to right along the ecliptic plane, members of this Solar System family portrait are Earth, Saturn, Neptune, Jupiter, Mars, Uranus, Venus, Mercury, and Earth. To emphasize their locations, Neptune and Uranus have been artificially enhanced. The volcano just ???







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The MESSENGER spacecraft has captured the first portrait of our Solar System from the inside looking out. Comprised of 34 images, the mosaic provides a complement to the Solar System portrait ??? that one from the outside looking in ??? taken by Voyager 1 in 1990.



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The Solar System Family Portrait Voyager 1's last view, looking back on every planet in the solar system. Image: NASA / JPL. These family portraits of the Sun and planets were Voyager's final photographic assignment. Planetary Society President and Voyager Imaging Team member Carl Sagan worked for a decade to get these pictures taken. Between

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This "family portrait," a composite of the Jovian system, includes the edge of Jupiter with its Great Red Spot, and Jupiter's four largest moons, known as the Galilean satellites. the smallest of the four moons, is about ???

Original Caption Released with Image: The cameras of Voyager 1 on Feb. 14, 1990, pointed back toward the sun and took a series of pictures of the sun and the planets, making the first ever "portrait" of our solar system as seen from the outside.



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## FAMILY PORTRAIT OF THE SOLAR SYSTEM

This celebrated Voyager 1 view was part of a series of 60 images designed to produce what the mission called the "Family Portrait of the Solar System." This sequence of camera-pointing commands returned images of six of the solar system's planets, as well as the Sun. The Pale Blue Dot view was created using the color images Voyager took of Earth.

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This simulated view, made using NASA's Eyes on the Solar System app, approximates Voyager 1's perspective when it took its final series of images known as the "Family Portrait of the Solar System," including the "Pale Blue ???



The Voyager Family Portrait of the Solar System observation was fundamentally taken to make a statement: that this species had risen far enough out of the primordial ooze that it could send an emissary out beyond its own Solar System, capable of looking back, and taking a last farewell picture of home. Further, for each species in the universe



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The cameras of Voyager 1 on Feb. 14, 1990, pointed back toward the sun and took a series of pictures of the sun and the planets, making the first ever "portrait" of our solar system as seen from the outside.

NASA's MESSENGER spacecraft has constructed the first portrait of our solar system by combining 34 images taken by the spacecraft's Wide Angle Camera on Nov. 3 and 16, 2010. The mosaic, pieced together over a period of a few weeks, comprises all of the planets except for Uranus and Neptune, which were too faint to detect.



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# FAMILY PORTRAIT OF THE SOLAR SYSTEM

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This "family portrait," a composite of the Jovian system, includes the edge of Jupiter with its Great Red Spot, and Jupiter's four largest moons, known as the Galilean satellites. the smallest of the four moons, is about the size of Earth's moon, while Ganymede is the largest moon in the solar system. The Solid State Imaging system aboard

This narrow-angle color image of the Earth, dubbed "Pale Blue Dot", is a part of the first ever "portrait" of the solar system taken by Voyager 1. The spacecraft acquired a total of 60 frames for a mosaic of the solar system from a distance of more than 4 billion miles from Earth and about 32 degrees above the ecliptic. From Voyager's great