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THE NORTH POLE OF JUPITER-The planet Jupiter as seen from above its north pole by Pioneer-Saturn at a latitude of about 50 degrees above the equator. The pole itself is roughly on the line of the terminator (boundary between Jovian day and night) across the top of the planet. It is not possible to see into the night hemisphere of Jupiter because it is not illuminated. This view of the giant planet has never been seen before, because from the Earth we always see a "full Jupiter" that is the full hemisphere illuminated by the Sun. The darkened portion of the planet and the north pole are both at the top of the picture. Holding the picture so that the terminator is at the top, the north pole is at the top also. The blue or greyish areas may be "blue sky", similar to that of the Earth. This is caused by "Rayleigh scattering" of sunlight by the planet's atmosphere, or from a malfunction of the gain mechanism on the electronic sensors. Experimenters from the University of Arizona are now running checks on the gain of the camera. Experimenters believe that in any case the poles have a bluish cast. This unique polar view also shows rising "convection cells" like thunderstorms on Earth or bubbles in boiling water. The picture shows somewhat more rotary motion of the atmosphere around the planet than some scientists had expected. These rotary features are concentric with Jupiter's bands (the belts and zones) as seen from the Earth these are horizontal and parallel with Jupiter's equator. The picture does suggest that the polar regions are somewhat more placid than the vigorously circulating equatorial areas. Scientists have suggested that the polar regions are relatively stagnant providing a favorable environment. All the elements for life including the planet's internal energy appear to be present in the polar regions. This view of the planet's north pole was taken from 1,300,000 kilometers (about 750,000 miles) from the huge planet. After leaving Jupiter, route to Saturn, the Pioneer 11 spacecraft will fly 100 million miles above the plane of the orbits of the Earth and most of the planets, into unexplored territory. There it will study phenomena never seen

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before originating from areas on the Sun far above the solar equator. The Pioneer Project is managed by NASA's Area Research Center, Mountain View, California.