= Puck (moon) =

Puck (/ ?p?k / PUK) is an inner moon of Uranus . It was discovered in December 1985 by the Voyager 2 spacecraft . The name Puck follows the convention of naming Uranus 's moons after characters from Shakespeare . The orbit of Puck lies between the rings of Uranus and the first of Uranus 's large moons , Miranda . Puck is approximately spherical in shape and has diameter of about 162 km . It has a dark , heavily cratered surface , which shows spectral signs of water ice .

= = Discovery and naming = =

Puck ? the largest inner moon of Uranus ? was discovered from the images taken by Voyager 2 on 30 December 1985 . It was given the temporary designation S / 1985 U 1 .

The moon was later named after the character Puck who appears in Shakespeare 's A Midsummer Night 's Dream , a little sprite who travels around the globe at night with the fairies . In Celtic mythology and English folklore , a Puck is a mischievous sprite , imagined as an evil demon by Christians .

It is also designated Uranus XV .

= = Physical characteristics = =

Puck is the largest small inner moon of Uranus , which orbits inside the orbit of Miranda . It is intermediate in size between Portia (the second @-@ largest inner moon) and Miranda (the smallest of the five large classical moons) . Puck 's orbit is located between the rings of Uranus and Miranda . Little is known about Puck aside from its orbit , radius of about 81 km , and geometric albedo in visible light of approximately 0 @.@ 11 .

Of the moons discovered by the Voyager 2 imaging team , only Puck was discovered early enough that the probe could be programmed to image it in some detail . Images showed that Puck has a shape of a slightly prolate spheroid (ratio between axes is 0 @.@ 97 ± 0 @.@ 04) . Its surface is heavily cratered and is grey in color . There are three named craters on the surface of Puck , the largest being about 45 km in diameter . Observations with the Hubble Space Telescope and large terrestrial telescopes found water @-@ ice absorption features in the spectrum of Puck .

Nothing is known about the internal structure of Puck . It is probably made of a mixture of water ice with the dark material similar to that found in the rings . This dark material is probably made of rocks or radiation @-@ processed organics . The absence of craters with bright rays implies that Puck is not differentiated , meaning that ice and non @-@ ice components have not separated from each other into a core and mantle .