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## **Ariel**

Twenty-seven moons in Uranus, why choose Ariel to visit? Well, apart from the fact that Ariel is the fourth largest moon, it orbits and rotates in an almost perpendicular way and in the equatorial plane of Uranus. This is a special moon, and we need to explore it.

Scientists had studied Ariel for the last 80 years and they have a very interesting conclusion, that Ariel is a young moon thanks to its active volcanic eruption, caused by the combination of water and ammonia. The flyby by the Voyager 2 spacecraft in 1986 managed to image about 35% of Ariel's surface, hugely helping scientists conclude that its surface is similar to Mars' surface. However, we would like to know if it has the same properties.

Another thing we would like to know is why Ariel is among the brightest moon Uranus has. Is it because of its distance from the sun, or is it because of the way it orbits? Could the ammonia found in Ariel have degreasing or cleaning properties? Since Ariel is a young moon, could it be possible that someday it can have any living things on it thanks to its geochemical and geophysical characteristics, and its composition and potential chemical interactions.

Despite the fact that current studies are revealing important findings, it will be very important to send a spacecraft to study the remaining 65% of the surface not yet explored. Understanding the climatic conditions of Ariel can provide us with invaluable knowledge on how best to protect our glaciers threatened by global warming. The composition of minerals found on Ariel's surface can help us discover ways to enrich Earth's soils and improve agricultural productivity. In conclusion, comparing Ariel geological features could provide answers on how best to solve other environmental problems.