NASA Curiosity rover drilling holes on Mars

NASA's engineers have been undergoing a lot of toil in the process of testing a new way for Curiosity Mars rover to drill rocks on Mars and extract powder from them. After working hard for it since past more than a year, the Curiosity rover is now drilling holes on the surface of Mars to study the red planet closely.

Curiosity rover underwent percussive drilling in the past weekend and penetrated about 2 inches (50 millimeters) into a target called "Duluth." Jet Propulsion Laboratory of NASA located at Pasadena, California was working on this new drilling method since a mechanical problem stopped Curiosity's drilling on Mars in December 2016. This new drilling technique is called Feed Extended Drilling and it enables keeping the drill's bit extended out past two stabilizer posts originally used to steady the drill against Martian rocks. It lets Curiosity drill on Mars using the force of its robotic arm which is very much similar to the way any person would drill into a wall in his home.

To achieve this phenomenal success, the team used tremendous ingenuity to devise a new drilling technique and implement it on another planet - the two vital inches of innovation from 60 million miles away. Drilling is not just a useful capability of Curiosity rover but it is a crucial process in studying the layers of Mars, as the two laboratories inside the rover will conduct chemical and mineralogical analyses of rock and soil samples. The samples have been collected from Gale Crater which happens to be an arena being explored by the rover since 2012.

The science team of Curiosity rover was anxious for drilling to be done before the rover leaves its current location near Vera Rubin Ridge. The good thing is that drill targets like Duluth have made it easy for the rover science team now to move on to another location. The success of Curiosity's percussive drilling technique has added a feather in the cap of NASA's space explorations. Further, the rock samples collected by drilling need to be sent to the two laboratories inside the rover so that the engineers can study the samples and come to new conclusions about Mars' landmass and understand the red planet better.