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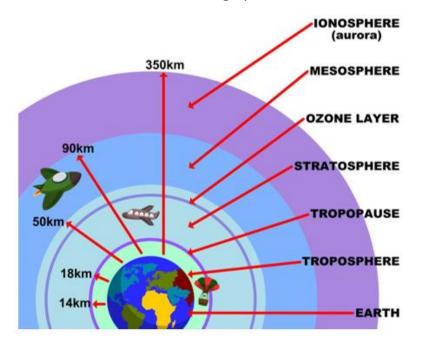




# Elon Musk's SpaceX Rocket Punches Hole In Ionosphere

## Why In The News?

 A Rocket Launched By Elon Musk's SpaceX Punched A Temporary Hole In The Ionosphere Surrounding Our Planet. The Falcon 9 Rocket Was Launched On July 19 From The Vandenberg Space Force Base In California.





# What Do We Know?

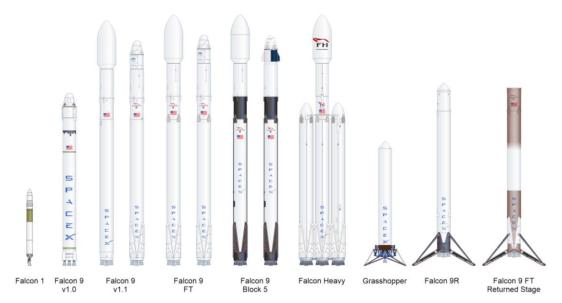
- It Is A Reusable, Two-Stage Rocket For The Reliable And Safe Transport Of People And Payloads Into Earth Orbit And Beyond. SpaceX Also Said That It Is The World's First Orbital Class Reusable Rocket. Falcon 9 Has Conducted 240 Launches And 198 Landings.
- Photos From The July 19 Launch Showed A Faint Red Glow, Which Was Studied By Space Physicist Jeff Baumgardner From Boston University. After Reviewed The Footage Of The Launch, He Said That The Red Glow Indicates That A Hole Was Made In The Ionosphere.
- The Ionosphere Lies On The Edge Of Space And Is Filled With Charged Particles Called Ions. According To NASA, It Is The Reason That Geomagnetic Storms

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Cause Aurora, With Solar Plasma Reacting With The Ions To Create The Spectacular Colours Seen In The Sky.



- The Ionosphere Is Important Because It Reflects And Modifies Radio Waves Used For Communication And Navigation. A Hole In The Ionosphere Can Impact The GPS Systems, Altering Location Accuracy By A Few Feet. However, It Wasn't Too Significant At This Time.
- In The Future, With Increasingly Powerful Rockets, It's Possible That The Impact Of Launches On The Ionosphere May Be Worsened, Leading To More Significant Impacts On GPS. A Similar Event Involving The Same Rocket Happened Earlier Too In August 2017 & June 2022.





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