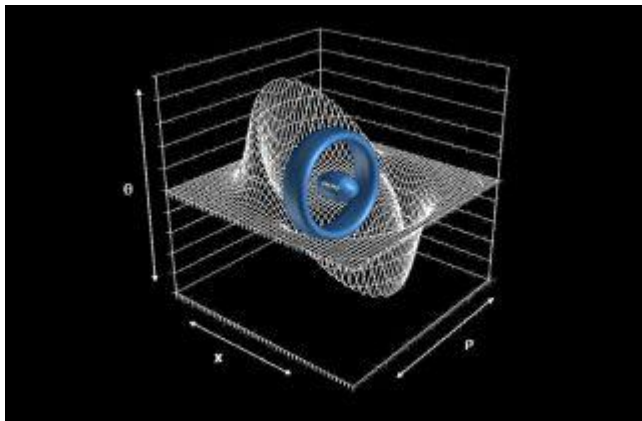


Warp Drive

7 June 2020

In 1994, physicist [Miguel Alcubierre](#) formulated a theoretical solution, called the [Alcubierre drive](#), for faster-than-light travel which models the warp drive concept. Calculations found that such a model would require prohibitive amounts of [negative energy](#) or mass". The illustration below depicts the concept of Alcubierre Drive.

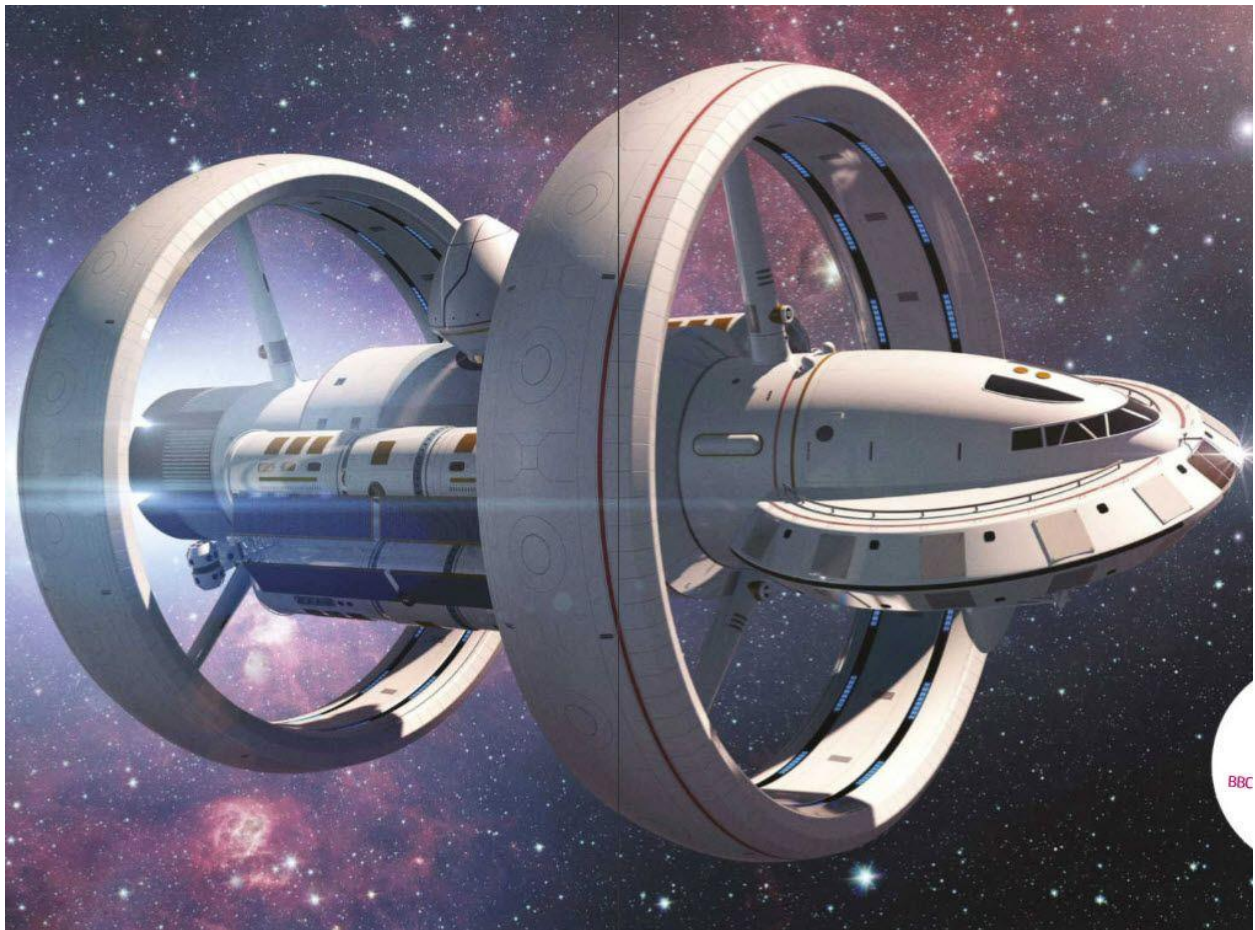


In 2012, NASA researcher Harold White hypothesized that by changing the shape of the warp drive, much less [negative mass](#) and energy could be used, though the energy required ranges from the mass of [Voyager 1](#) to the mass of the observable universe, or many orders of magnitude greater than anything currently possible by modern technology. [NASA](#) engineers have begun preliminary research into such technology.^[10]

In 2018, the U.S. [Defense Intelligence Agency](#) made public a 2010 report that surveyed multiple different approaches to faster-

than-light travel. One physicist who reviewed the report explained that, while the theories were legitimate, they did not represent "something that's going to connect with engineering anytime soon, probably anytime ever."^[11]

Here below is an artist conception of the Warp Drive Space Ship from NASA.



As a matter of fact in the year 2000 I had proposed to Dr. Unruh from the department of Physics in UBC (Vancouver, Canada), that if we can create a black hole right in front of a space ship. Then the space ship can travel through space-time with warp speed. Inside the black hole space-time is contracting while on the back of the space ship space-time is expanding. This is kind

of analogous to how a surfer being pushed by the ocean water wave, and in front of the surfer there is a void.

As we can see from my paper “Dark Matter Enigma” that spinning black hole in a spiral galaxy could create Lens-Thirring Effect or Frame Dragging, and we can also see how a massive object could bend the path of light coming from a star. Therefore we can conclude that space-time is malleable.