David Burns from NASA's Marshall Space Flight Center proposed the 'helical engine,' which could enable space travel without fuel. This engine challenges existing physics laws, especially Newton's third law of motion. The helical engine operates by having a ring and box system where the ring's motion creates forward momentum due to relativistic effects. This mechanism relies on the mass increase of the ring as it moves near the speed of light. The engine concept uses a particle accelerator and ion particles for operation. Traditional propulsion systems require large propellant storage, limiting performance, whereas the helical engine uses a closed-cycle propellant. The engine could potentially achieve speeds up to 99% of the speed of light without violating Einstein's theories but contradicts Newton's. Practical implementation challenges include its large size (200m long and 12m wide) and the necessity for a frictionless space environment. Burns acknowledges the possibility of failure, comparing it to other controversial propulsion concepts like the EM drive. Despite potential embarrassment, Burns believes in the value of innovative experimentation in advancing space travel technology.