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SELECTION OF ASTEROIDS WHICH ARE SUITABLE FOR COLLISION WITH MARS FOR THE  
PURPOSE OF TERRAFORMING

**Abstract**

For the purpose of terraforming mars, various methods are devised to augment temperature, water levels, atmospheric composition, and atmospheric pressure. However, no one approach was found that could tackle all of the requirements and thus, a synergistic approach to terraforming the planet Mars was taken. One of these approaches includes bombardment of planet from volatile rich asteroids. Importing volatiles is essential step for terraforming Mars since the abundance of nitrogen is currently too low to support Earth life. This can be achieved by impacting asteroids onto the surface of Mars in order to release the trapped constituents of the asteroid. Impact will also result in release of kinetic energy which in turn will heat the planet substantially as heating is another important requirement for terraforming Mars. Collision of asteroid with Mars will be beneficial but only if the appropriate asteroid is collided. Inappropriate asteroid can produce effects which will inhibit the process of terraforming and can damage the planet beyond repair. So it becomes very essential to select asteroids with suitable mass, density, diameter, composition and other parameters. In the paper, a list of possible candidates of asteroids from our current catalogue, which are suitable for collision and will assist in the process of terraforming Mars will be presented.