

High-Speed Missions and Vehicles

The supersonic penetrators for delivering of any kind payload

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Any payload can be delivered safely into any space object, or into any earth point with end velocity of some km/s. To do so, the payload has to be protected inside material that is stronger than target body. In this case, a kinetic energy of bullet will be totally spent on destroying material of a target. After lost of velocity the penetrator will contain its payload packed in hard material. Inside the monolithic protection, the payload can suffer any accelerations, because the pressure in the zone of contact between projectile and target results in a destruction of the target. At any moment, the pressure is still insufficient for the destruction of protective material. The best possibility to delete the material is its evaporation. We proposed using as protective material clean water in form ice Ic, that at cryogenic temperatures is more durable, than steel. Water can be easily evaporated by the primitive heating, as well as any the form of his ices. After freeing of payload it can be used for its primary setting. We suppose to deliver thus scientific devices on Moon and other minor bodies of the Solar system without the charges of fuel on braking of probes.