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PLANETARY DEFENCE AND COLLATERAL DAMAGE

Abstract

Near Earth Objects – asteroids, comets or similar celestial phenomena – can pose a threat to our planet. Although there is no known object threatening Earth at the moment, incidents such as the 2013 Chelyabinsk event have shown that there is a certain danger of NEOs being undetected for a considerable amount of time and hitting the planet Earth. Using currently existing technological means, our range of impact mitigation techniques is limited. Especially in the case of large masses, deflecting or destroying the incoming NEO with a nuclear explosive device might be the only feasible option. But also for other objects destruction or deflection by conventional explosives or kinetic impactors might humanity's only or last resort. As is frequently pointed out, the destruction or deflection of an asteroid might lead to certain collateral hazards. The asteroid could cause damage on its new (altered) trajectory or if it has been blown to pieces, those pieces could cause damage on Earth or to spacecraft. This inevitably leads to the questions of responsibility and liability. Who – if anybody – is to be held accountable for any such damages? Can an asteroid or part thereof be considered a space object? If so, it has not been launched into space. Can any party involved in the planetary defence operation be considered a launching state? Should certain legal provisions be put in place for such a situation?