WP Mission and Systems Engineering

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1 Mission

From the literature study, we know the problem at hand: for a long time, 140 meters was seen as the diameter to design asteroid surveys for. The result is that a lot of smaller sized asteroids are still unknown. Survey completeness for asteroids such as the one that impacted Chelyabinsk in 2013 is only around 10%. Several studies have been conducted on possible future space-based surveys, but the survey completeness they reach is not very impressive.

1.1 Determination of Mission

1.1.1 Mission Objective

The main objective of the mission is to raise the completeness of Near-Earth Asteroid catalogues to the highest feasible level using technology that is currently available. A secondary objective of the system is to raise the warning time for asteroids that do end up impacting Earth.