

Planetary Defence

The golden era of planetary defence was back when space colonization was just getting started. Spaceships were still cumbersome and slow by modern EP standards, but it was getting possible to send manned expeditions to Near Earth Objects for investigation, mining and possibly deflection.

By this point satellite scanners had already identified most object of any relevant size. There had also been a few scares; the Mendahara Fireball when a meteor caused a destructive airburst above Sumatra, and the fiasco of the Wangkui Fireball when a radar detected impactor led to the panicked evacuation of parts of Harbin. People generally felt they wanted their planet protected and that it was now feasible. The UN Planetary Defence Committee began to coordinate US, Chinese and European efforts to handle potential impactors. A few worrisome NEOs like Apophis were redirected into safer orbits at great cost.

As the price for space work decreased the level of ambition increased: an increasing number of NEOs were redirected (paid for by reinsurance companies and non-profits supported by worried people) or even put into capture orbits to produce raw material for the space industry. Some last/minute planetary defence systems were also deployed, intended to deal with surprise impactors or accidents with asteroid capture. These systems were for a time very controversial, since they were also potential space warfare systems. There were also the case of attempted asteroid terrorism when a ship chartered by the Survivors of Sipsongpanna redirected 2021 AF118 towards Earth; despite their efforts the plot was discovered and dealt with.

As space colonization came into full gear planetary defence was extended to Mars and a few other places. On Mars the Martian Defence Consortium built the first iteration of the Batteries and funded efforts to redirect or capture impactors. The increasing flow of cometary ice led to the MDC growing into the biggest traffic control in the solar system, able to both nudge wayward ice back and to deal with surprise debris. Meanwhile private space salvage and debris-cleaning companies were expanding around Earth, Luna and Mars, making a living from keeping orbits safe. Many veterans from the early planetary defence projects went private and started salvage and safety companies.

Despite the name planetary defence organisations never aimed at being military defences, and when the Fall came they were largely ineffectual. Some of their assets were commandeered by the various human forces or refugees; others were taken over by TITANs using them to target humanity.

Ironically, the Fall finally made planetary defence a all-inclusive option – why keep defense against asteroids, industrial accidents, enemy action or emergent technological threats separate? When the dust settled the MDC was revived under the Planetary Consortium and beefed up as protection for the Mars system. Most other habitats also developed their own defences, often directly linked to their military defence forces. Since most locations no longer had a multitude of nations there was no public good problem that some habitats would freeride on the protection others gave them. Many people now lived outside any protection from an atmosphere, making them even more ready to pay for impactor protection.

Some of the system-wide scanning operations were revived as commercial or free services: NavSys Inc, The Register Group and WhereIs Network maintain sensor clusters that track

millions of objects - ships, asteroids, comets, debris and unknowns - across the solar system. Paying customers pay for premium access for the latest navigational information, and the services usually advise habitats freely about incoming potential impactors.

(Inspired by the [2011 IAA Planetary Defence conference](#))