# NEG

### Advantage CP

#### Counterplan: Space-faring nations should restrict asteroid relocation done by private entities.

#### This whole aff is a lie. Their crucial link card is not about asteroid mining in general and their cutting leaves out key context. It’s about moving asteroids nearby and mining them in our orbit. It makes no sense at all to say mining distant asteroids would put debris into low earth orbit and the full card concedes that they’re all only describing relocating asteroids which they distinguish from mining them on site. Here’s their author: [I read YELLOW]

Sarah Scoles 15, “Dust from asteroid mining spells danger for satellites,” New Scientist, 5-27-2015, <https://www.newscientist.com/article/mg22630235-100-dust-from-asteroid-mining-spells-danger-for-satellites/>

IF THE gold mine is too far from home, why not move it nearby? It sounds like a fantasy, but would-be miners are already dreaming up ways to drag resource-rich space rocks closer to home. Trouble is, that could threaten the web of satellites around Earth.

Asteroids are not only stepping stones for cosmic colonisation, but may contain metals like gold, platinum, iron and titanium, plus life-sustaining hydrogen and oxygen, and rocket-fuelling ammonia. Space age forty-niners can either try to **work** an asteroid **where it is**, or tug it into a more convenient orbit.

**\*\*\*[Harker’s Card Begins]\*\*\***

NASA chose the second option for its Asteroid Redirect Mission, which aims to pluck a boulder from an asteroid’s surface and relocate it to a stable orbit around the moon. But an asteroid’s gravity is so weak that it’s not hard for surface particles to escape into space. Now a new model warns that debris shed by such transplanted rocks could intrude where many defence and communication satellites live – in geosynchronous orbit. According to Casey Handmer of the California Institute of Technology in Pasadena and Javier Roa of the Technical University of Madrid in Spain, 5 per cent of the escaped debris will end up in regions traversed by satellites. Over 10 years, it would cross geosynchronous orbit 63 times on average. A satellite in the wrong spot at the wrong time will suffer a damaging high-speed collision with that dust. The study also looks at the “catastrophic disruption” of an asteroid 5 metres across or bigger. Its total break-up into a pile of rubble would increase the risk to satellites by more than 30 per cent (arxiv.org/abs/1505.03800). That may not have immediate consequences. But as Earth orbits get more crowded with spent rocket stages and satellites, we will have to worry about cascades of collisions like the one depicted in the movie Gravity. Handmer and Roa want to point out the problem now so that we can find a solution before any satellites get dinged. “It is possible to quantify and manage the risk,” says Handmer. “A few basic precautions will prevent harm due to stray asteroid material.”

#### Their author also agrees asteroid mining is fundamentally good and the CP wouldn’t get circumvented or rolled back as long as we do it now

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Aspiring space miners are taking the risk seriously. “We will be utilising containment techniques,” says Meagan Crawford of Deep Space Industries, a California-based firm which hopes to be mining metals from asteroids by 2020. One possibility is bagging, in which the asteroid is placed in a kind of shroud to prevent dust and loose stones from escaping. “All of our mining targets will be chosen specifically to minimise the risk of particulate interaction with other bodies,” she says.

The risk from NASA’s mission, planned for the 2020s, is small, Nolan points out. But if space mining takes off, things will get complicated. “**The establishment of good asteroid mining practices early on is essential** for the preservation of a non-renewable resource: uncluttered space,” says Handmer.