

Gaiashield Group



You Don't Get What You Don't Pay For The Case for Funding IAWN

When we consider the empirical evidence apparent from observations of the surface of the Moon and the surface of the Earth we can conclude that in the past Earth has been struck by many asteroids. From this we can reason that in Earth's past, there have been many asteroids in our Solar System. Since today, when we consider the empirical evidence that there are still many asteroids in our Solar System we must conclude that Earth will be struck by many asteroids in the future. The threat of asteroid impact is an existential condition that will be with us Forever.

The primary cause that generates the effect of asteroids impacting Earth is either some kinetic or gravitational force that displaces these objects from a relatively stable circular Main Belt orbit between Jupiter and Mars, where they were formed, into eccentric and elliptical rogue orbits that take them into the inner Solar System. Where, at random, some collide with Earth. But orbital disruption and change is not limited to the Main Belt. Rogue asteroids continuously collide with other asteroids and comets and are even affected by close passages with these objects and with the planets often dramatically so. In short, we can not expect discovered asteroids to stay in the orbits we first find them in. This is also an existential condition that will be with us Forever.

In the direction of quantifying the scale of this condition, if we extrapolate from current impact Frequency Probabilities we can project that at random, over the next billion years Earth will be struck by millions of asteroids capable of doing some level of harm. Fortunately, Most of these will be only 10 m Window Busters. And 100 to 200 thousand will be only 100 m City Killers. And 1,000 to 2,000 will be only 1,000 m Global Catastrophes. Unfortunately, at random, 20 to 40 of these will be 10,000 m Extinction Level Impact Events.

Therefore, since it will always include the prospect for our extinction by asteroid impact, all there is... gone, forever... and because we can: Knowing which asteroid is the next asteroid on its way to strike Earth will always be the most important thing Mankind can ever know. Deflecting the next asteroid on its way to strike Earth will always be the most important thing Mankind can ever do. Being prepared to effectively respond to the threat of the next asteroid on its way to strike Earth will always be the most important thing Mankind can ever be.

Theoretically, subject to funding, the notion of IAWN: International Asteroid Warning Network, will address the most important thing Mankind can ever know. It assumes the inadequacy of the current Survey approach and should be seen as the next stage in its evolution. Evolution from Survey to Surveillance. Unlike the Survey, IAWN presumes to be a early warning system and as such, strategically relevant. To have this we must watch all the asteroids all the time... Forever.

We do not know which of the billions of asteroids out there is The Next Asteroid on its way to strike Earth. And can not know until we see it coming. Therefore, until we do, we do not/can not know when it will strike or how large it is. Worse, strategically speaking, we do not/can *never* know when we are going to know which, when or how large... until it is *Now!* It would be the role of IAWN to see it coming and to tell us when *Now* is.

Since all that is required for one asteroid impact event is the behavior of just one asteroid, the near-term risk and threat of one asteroid impact event of any magnitude must be considered to be complete and unmitigated with the mere possibility of:

- a) One undiscovered asteroid or
- b) One asteroid/asteroid collision by a discovered/safe NEO
- c) One close passage perturbation by a discovered/safe NEO with another gravitational object or
- d) One new NEO generated from the Main Asteroid Belt by kinetic or gravitational effects.

In short, any asteroid in the Solar System: discovered or undiscovered; Earth-orbit Crossing, Potentially Hazardous, Near Earth-orbit, Main Belt or even Trojan Asteroid, of any size, can be the the next asteroid on its way to strike Earth and be a near-term impact threat.

The current Survey approach fails to address these potentialities which would be a requirement in any early warning system. Strategically speaking, finding only a percentage of the asteroid population is nothing and finding a percentage of an estimate is less. Show us the Last Asteroid in the Solar System in Fact! Then, with Survey, once an asteroid has been discovered and its orbital elements defined we move on to find another. No monitoring for any potential changes over time has been afforded. Further, once the current NASA survey effort is complete, (around 2020), and we have detected, tracked, cataloged and characterized 90% of the estimated NEO population over 140 meters, victory can be declared, telescopes will be turned off and everybody will go home... because at that point the current funding appropriated by the US Congress for this mission will stop. Yet the threat of asteroid impact will persist... Forever.

Then, the free service provided by NASA's JPL with their Asteroid Watch website and twitter alerts, which makes the work product proposed by IAWN seem redundant, will not only become unfunded but when the telescopes go dark they will have nothing to post. Enter IAWN.

The Ground Truth here is, you don't get what you don't pay for. So if the nations of the Earth expect to have some warning for when the next asteroid on its way to strike Earth will do so in their country and in one of their cities, they are going to have to pay for it... Forever. And not just for some preliminary Survey/census counting-rocks-in-space mission (call it reconnaissance to be generous). We need to watch all the asteroids all the time... Forever. A Cosmic Cost of Living.

If IAWN is going to work, We The Species will have to maintain a network of space-based full spectrum telescopes strategically deployed throughout the Solar System and monitor the entire asteroid population in Real Time 24/7/52... Forever. For something like this, IAWN will need at least a billion dollar annual budget... About 0.00125% of everyone's Gross Domestic Product... Forever. Just keep it in mind that the World's military budget is 1,750 times that. And the World currently spends 500 times more on heroin and cocaine. And 100 times more on maintaining its nuclear arsenal and delivery systems. And about 50 times more chasing the assorted pipe dreams of man in space. But it is 25 times more than the US is currently paying for the Survey effort.

So... Nations of The World Unite! Sign Up and Pay Up... Or Die! Just contact IAWN and don't forget to bring your check books.

What we will need to do to be prepared to defend against the next asteroid on its way to strike Earth once we see it coming is a separate issue... and makes the cost of IAWN look like petty cash... so buckle up. The responsibility for our own survival has just begun (arguments available on request) and we are unlikely to survive this business on-the-cheap and on Good Luck alone. You don't get what you don't pay for.

The Next Large Asteroid on its way to strike Earth is closing a A Million Miles A Day. If we don't at least get this much right, for us, Forever may not actually be a very long time. After all, the Universe is a dangerous place and does not suffer dilettantes or fools gladly.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group:

<http://Gaiashield.Com>

1400 Kra-Nur Drive, Burton, Michigan 48509 <rbrown98@comcast.net> (810) 742-8830