



Open Letter to President Barack Obama

Re: National Planetary Defense Agency

President Obama: Sir,

Once upon a time there was a Big Bang... Cause/Effect, Cause/Effect, Cause/Effect and now, 13.7 billion years later, we have a Solar System with billions of asteroids. Of these as many as 50,000 are large enough to be of dire concern and over the course of the next billion years we can expect that at random: without any recursive pattern, they will go on to strike our planet.

Fortunately, most of these will only be large enough to be large city or small nation state killers... impact events we can easily recover from. Unfortunately we can expect that as many as 2,000 will be sufficiently large enough to impact with the energy to level this nation from sea to sea. Call them continental killers. Worse, as many as 20 of these will be massive enough that their impact will bring our species to its extinction. Of course these numbers are offered only as generally accurate and illustrative. Nature will randomly do what Nature will randomly do. But clearly, given our empirical understanding of the geometry and dynamics of the Solar System, we do know that Earth will be struck by a large asteroid again... and again... and again... forever. We can be as rationally certain of this as we are that the Sun will come up tomorrow. If you fear anything more than the prospect of our extinction by the next asteroid on its way to strike Earth then you are simply not trying to understand the threat of asteroid impact hard enough...

To be clear, all asteroid impact events are random both in their occasion and magnitude. As such, the next asteroid to strike Earth can be expected to do so at any time and be of any size. So the singularly most relevant question we can draw from the above portrait of our future would be 'Will the next one kill us all?'. And how many extinction level asteroid impact events can We The Species afford? Fortunately, we have at least a theoretical potential capability to respond and can imaginably deal with this threat even to this worst case scenario. Unfortunately, even with early detection, any such response could easily require the launching of thousands of nuclear pay-loaded Discovery Class missions to ensure a successful outcome.

Unfortunately, we do not know which asteroid is the next asteroid on its way to strike Earth. Therefore we do not know when it will impact or how large it is. Worse, we do not know when we will know which, when and how large. However, we can easily understand that when the day comes that we see the next one coming then after-the-fact, every politician every businessman every soldier every scientist every rice paddy farmer - every man, woman and child on the planet, will expect the powers-that-be to deal with it. Which leaves only one rational strategic option before-the-fact that does not look like a very, very bad gamble: preparation, training and vigilance to a level in response to the worst case scenario... Forever. And Forever begins Now!

In addressing threats we have long understood we can only ever afford to hope for the best once we have prepared against the worst. Here, to prepare for the best while we only hope against the worst is little more than our sooner-or-later suicide by asteroid impact. How is this wise?

The only National Policy for this issue (NASA Authorization Act of 2005 - Public Law 109-155) mandates that NASA “detect, track, catalogue, and characterize” these objects. Sooner-or-later they will see the next one coming... then what? Some slapdash hasty response kludged together from whatever remains of our Space Program and leftovers from the Cold War? Hardly the act of a highly evolved and rational species supposedly endowed with foresight...

If we would begin this journey of a thousand miles, then before-the-fact the very least we can do now would be to resolve the politics and delegate responsibilities for deflecting this inevitability. As a first single step we need to delegate a specific qualified agency. However, before we can take such a step, to give any such agency its direction we must have a clear, definitive, enabling and fundable National Policy: a codified expression of our political will and intent that **'We will endeavor to deflect or destroy these objects as they present themselves to be impending impact threats.'** How can we leave this much to be tacit and only implied before-the-fact?

Within this context, such an agency would quickly evolve to become comprehensively expert and professional in understanding the principles of implementing this mission. Then, in the direction of leaving nothing to chance and affording us a reasonable expectation of success, what more can and must be done in terms of preparation, training and vigilance before-the-fact will be found in the strategic and tactical recommendations of the agency that will be responsible for responding to this threat after-the-fact. Then we can be rid of all the starry-eyed academic 'experts' and assorted dilettantes that have so poorly informed and shaped the perception of this threat so far. Leave their hope based appeal-to-random-chance-with-an-expectation-of-good-luck logics to the bad gamblers in Vegas.

When your administration took office the law was:

H.R. 6063 2008 NASA Authorization Act: SEC. 804. ESTABLISHMENT OF POLICY.

Not later than 2 years after the date of enactment of this Act, the Director of OSTP shall--

(2) recommend a Federal agency or agencies to be responsible for protecting the Nation from a near-Earth object that is anticipated to collide with Earth and implementing a deflection campaign, in consultation with international bodies, should one be required.

Then after nearly two years, your administration's political side-stepping reply to Congress obfuscating any rational urgency with clumsy probabilistic sophistries and trying to sweep the issue under a rug of science was:

October 15, 2010 - OSTP Response to Congress on Near-Earth Objects:

<<http://www.whitehouse.gov/administration/eop/ostp/library/docsreports>>*

and your administration's 'kicking the can - of averting our sooner-or-later extinction by asteroid impact - down the road' yet two more years:

S. 3729: 2010 NASA Authorization Act: SEC. 808. NEAR-EARTH OBJECT SURVEY AND POLICY WITH RESPECT TO THREATS POSED.

(b) IMPLEMENTATION.—The Director of the OSTP shall implement, before September 30, 2012, a policy for notifying Federal agencies and relevant emergency response institutions of an impending near-Earth object threat if near-term public safety is at risk, and assign a Federal agency or agencies to be responsible for protecting the United States and working with the international community on such threats

It is not enough to merely reply to this Congressional request when compliance here is a matter of our survival. The Next Large Asteroid on its way to strike Earth is closing at A Million Miles A Day. Time is simply *not* on our side here... Tic Toc!

It may be understandable, if not expected, to dodge and disregard and pay only lip service to some Administrative Law that has been codified and left for you to deal with at the tail end of a previous administration. However, since this mandate has been reiterated and confirmed over your signature in the 2010 NASA Authorization Act, to 'kick this can down the road' once again would be quite something else. Particularly, when you consider the timing of the new deadline for complying with this act. To dodge or disregard or pay lip service to your own law can easily become an embarrassing 11th hour Election Issue. So instead... expedite this. Steal a march on Congress and declare a National Policy and delegate a qualified Agency to implement it by National Security Directive... be Presidential. Go beyond the letter of this law and own this.

Managing any risk effectively will always be subject to considerations of cost. However, how much would it cost to codify a basic Policy expressing an obvious sociopolitical will to deflect these objects and delegate an Agency to think this through strategically and become a qualified first responder? And since, in your response to the question posed by Congress, your choice can only be seen to be between NASA and DoD, the better question would be how could we possibly consider ever actually going into this Harm's Way without the organic capabilities and resources and potential world saving synergy of *both* and ever call it wise? A hybrid of NASA and DoD at relevant strategic and tactical points of this issue as our National Planetary Defense Agency in response to this perpetual terminal threat is clearly warranted. How is this much difficult?

Then, no new taxes! Since the budget of DoD, and by extension the militaries of the world, is generally appropriate to this issue and fungible to a specific threat, once the responsible Agency has evolved and organized to the point of taking tangible precautionary action, we need only retask a fraction of the world's standing military budget pro rata: maintaining a relative balance of military power, to begin implementing an effective strategy. Incidentally reducing our ability to kill each other over economic, political or religious principles in the process: Win/Win. The budget for our nuclear capabilities alone would multiply this benefit by orders of magnitude.

With our emergent awareness of the terminal threat of asteroid impact we find that in the context of a corresponding emergent capability to potentially respond to this threat, we are compelled to be responsible not only for our survival as individuals and families and communities and as nations, but now we must become responsible for our survival as a species as well. This is new. We have yet to adopt a perspective that We The Species should deny Nature its acts. So far we have settled for only mitigating the consequences of those acts... as victims. It is time to punctuate the equilibrium of our intellectual evolution here. Time for a Policy of Soldier Up!