

# *Gaiashield Group*



December 2019

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council, Users' Advisory Group, ODNI/IARPA, Administrator NASA, New York Times, Washington Post, Asteroid Day, Space X

President Trump, Sir:

It is said that 'The enemy of my enemy is my friend'. And make no mistake, The Next Large Asteroid on its way to strike Earth is our enemy. It is the enemy of not only We The People but the enemy of every man, woman and child on the planet: We The Species. And defending against this threat is nothing less than a matter of War. And since it includes the prospect of our extinction this is War by any means necessary and at any cost. Extinction: all there is, gone... Forever. Feel free to take this Cosmic threat personally.

With the US Space Force now in the legislative pipeline we can see such an agency as potentially being the sharp pointed tip of our global spear in this War of Falling Stars. The leading example for not only the world's space capable nations but financially, every stakeholder nation on the planet.

Lincoln once said "Do I not destroy my enemies by making them my friends?". Before we ever win any battle in this War, merely becoming globally prepared for achieving such a victory will foster a world much more at peace. With every nation-state on the planet allied in this critical common cause for our survival as a species, how can any enmity with each other be considered advantageous or wise?

Today, the first step on this path would be for our government to be the first to find the Political Will to assume responsibility for responding to this threat and codify a National Policy to endeavor to defend against these objects as they present themselves to be impending Earth impact threats. Then delegate the execution of this responsibility to your nascent US Space Force as our National Planetary Defense Agency: part (b) SEC. 808 of the 2010 Space Act. All within your authority by Executive Order.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>

The Falling Stars War: <http://Gaiashield.com/TFSW>

November 2019

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council, Users' Advisory Group, ODNI/IARPA, Administrator NASA, New York Times, Washington Post, Asteroid Day, Space X

President Trump, Sir:

All asteroid impact events are completely random: without any recursive pattern or periodicity, both in their occasion and magnitude. Consequentially, there is no reason to think that the next asteroid on its way to strike Earth will not do so tomorrow and no reason to think that the next asteroid on its way to strike Earth will not be a 10 km Chicxulub Class human extinction level asteroid. And no reason to think that we are certain to even see it coming. The cause of this dire effect is that any asteroid of any size anywhere in the Solar System can become kinetically or gravitationally perturbed onto an impact trajectory with Earth at any time.

Therefore, since this threat includes the random prospect for our extinction 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. And deflecting the next asteroid on its way to strike Earth will always be the most important thing Mankind can ever do. And being prepared to effectively defend against the next asteroid on its way to strike Earth will always be the most important thing Mankind can be... and we are not remotely prepared.

To become so prepared, is a proverbial “Journey of a Thousand Miles” and its maintenance and evolution a thing Forever. The first step here would be for our government to be the first to find the Political Will to assume the responsibility for defending against this threat and codify a National Policy to endeavor to defend against these objects as they become impending Earth impact threats then delegate a National Planetary Defense Agency to execute such a policy: part (b) SEC. 808 of the 2010 Space Act. All in your authority by Executive Order.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,

R. Dale Brownfield

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The Falling Stars War: <http://Gaiashield.com/TFSW>

October 2019

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council, Users' Advisory Group, ODNI/IARPA, Administrator NASA, New York Times, Washington Post, Asteroid Day, Space X

President Trump, Sir:

This month, with a proposal to Congress for funding NEOSM (NEO Surveillance Mission), NASA has proposed taking the first step that could evolve its Planetary Defense efforts from a cursory Scientific

survey mission to a permanent real-time Strategic surveillance mission. First proposed in 2007 as NEOCam, a space based observatory to only supplement our ground based telescopes in 'counting rocks in Space', it is also potentially the vanguard for a network of such satellites strategically deployed around the Solar System that will effectively ensure that we will always be able to detect the next asteroid on its way to strike Earth as soon as possible.

But don't let the new name fool you. Until they can operationally appreciate the dire Strategic necessity in executing an actual system-wide surveillance mission, they will simply continue to do a very good job doing the wrong thing... and NEOSM will merely help them do it faster.

As a consequence of an unfunded Congressional mandate, apparently NASA has been operating their survey efforts out of discretionary petty-cash left over from other Planetary Science Division missions. However, NEOSM will cost far more than can be afforded in this manner which begs a formal and explicit delegation of annual funding. This will require that our government find the courage to express the political will to assume the responsibility for defending us from this threat through a codified National Policy to endeavor to deflect these objects as they present themselves to be impending Earth impact threats. And better enable the Executive Office to delegate a Federal Agency, ideally a hybrid of NASA and DoD's NSDC, to execute such a policy and comply with part (b) SEC. 808 of the 2010 Space Act.

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A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>

The Falling Stars War: <http://Gaiashield.com/TFSW>

September 2019

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council, Users' Advisory Group, ODNI/IARPA, Administrator NASA, New York Times, Washington Post, Asteroid Day, Space X

President Trump, Sir:

Last month, 4 asteroids passed near Earth. However, it has recently come to light that in the 20 years since this issue has been rigorously scrutinized by Astronomers, there has been no study or even mention of the impact risk posed by near misses. Here, what we need to be concerned with is when an asteroid misses the Earth but passes through Earth's orbital path in front of Earth and the Earth strikes the asteroid. Since Earth is traveling at a higher velocity than most asteroids, the energy on impact will be greater than if the asteroid had struck the Earth. In some cases as much as 9 times greater.

Further, since it can take as much as 20 minutes for an asteroid to cross Earth's orbit the impact area becomes 3 or 4 times greater than that of the Earth alone. Which increases the the general statistical and conditional probability of impact by a factor of 3 to 4 times. Taken with the potential energy increase

this lowers the threshold size for extinction level impact from 10km to 5km or smaller. Then we can see an increase in this most dire aspect of this threat by 25 times... We are closer to our Doom than the Astronomers want us to think. Yet how can we know what the right thing we have to do here is unless we honestly and courageously come to understand the complete nature of this threat? Time to replace the Astronomers with minds better suited and experienced in dealing with fearful things.

First: Government must find the courage to express the political will to assume the responsibility for defending us from this threat through a codified National Policy. Then: delegate a Federal Agency, ideally a hybrid of NASA and DoD's NSDC, to execute this policy: part (b) SEC. 808 of the 2010 Space Act.

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A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>

The Falling Stars War: <http://Gaiashield.com/TFSW>

August 2019

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council, Users' Advisory Group, ODNI/IARPA, Administrator NASA, New York Times, Washington Post, Asteroid Day, Space X

President Trump, Sir:

This month, no less than 4 relatively small asteroids have been detected to be passing perilously close to Earth... AKA Near Misses. But there is no telling how many are doing so that we have not detected or have passed close to Earth and gone completely undetected in months and years past. It would be a mistake to take any of these close calls as simply examples of some never ending continuum of human Good Luck, as the Astronomers are prone to do. Rather, in the direction of a realistic 'strategic' wisdom, we should see these as Cosmic warning shots across our bow... Very small samples of much, much larger things to come... Harbingers of our Doom... Forecasts for Mankind's sooner-or-later random Extinction by Asteroid Impact.

We could become prepared to defend against this random and terminal eventuality. But instead the Astronomers in authority prefer to rely on their optimistic interpretations of statistical probabilistic fabrications and hold irrational expectations of Good Luck and Hope. Consequentially, we are not even thinking of actually becoming so prepared and trained and vigilant.

Time to take the authority for this issue out of the hands and academic minds of the stargazers and place it with those who have learned to actually do things. And to do them well or lose all. Time for our government to find the political will to codify a National Policy to endeavor to deflect or destroy these objects as they present themselves to be impending Earth impact threats and delegate a qualified Federal Agency with the responsibility for executing such a policy: part (b) SEC. 808 of the 2010 Space Act. If we ever expect to do this right, we first need to make the hard Executive Command decisions to do so.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group: <http://Gaiashield.Com>  
The Falling Stars War: <http://Gaiashield.com/TFSW>

July 2019

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council, Users' Advisory Group, ODNI/IARPA, Administrator NASA, New York Times, Washington Post, Asteroid Day

President Trump, Sir:

NEOCam: the first serious step towards building a Cosmic DEW Line in order to always be able to detect the next asteroid on its way to strike Earth in time to be able to defend against its impact. An idea for an infrared Space Based telescope that has been around for over a decade and has been stalled for lack of funding due to an absence of sufficient political justification and support.

NEOCam 1 would be far short of the score of such satellites strategically deployed throughout the Solar System that would ultimately be required to provide us with the 'Real Time full spectrum 24/7/52... Forever Surveillance' required to achieve such a goal but an order of magnitude better than the cursory spot-check recon Survey we are conducting now. Since today, there is no reason to think that the next asteroid on its way to strike Earth will not do so tomorrow and that there is no reason to think it will not be a 10 km Chicxulub Class extinction level event, NEOCam can be seen as the first brick in a wall to preserve Mankind from its extinction by asteroid impact.

The problem with funding any aspect of Planetary Defense begins with the absence of adequate Political Will: A) There is no codified National Policy to endeavor to deflect or destroy these objects as they present themselves to be impending Earth impact threats and B) We have no qualified Federal Agency delegated with the responsibility for executing such a policy to which we can direct the appropriate funding (currently part (b) SEC. 808 of the 2010 Space Act). If we ever expect to do this right, first we need to make the hard Executive Command decisions to do so. Then, until we are prepared to defend against the worst case scenario we are not prepared.

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A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group: <http://Gaiashield.Com>  
The Falling Stars War: <http://Gaiashield.com/TFSW>

June 2019

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council, Users' Advisory Group, ODNI/IARPA, Administrator NASA, New York Times, Washington Post

BCC AD Asteroid Day HQ <[info@asteroidday.org](mailto:info@asteroidday.org)> Grigorij Richters <[g.richters@me.com](mailto:g.richters@me.com)>

President Trump, Sir:

Happy Asteroid Day\*!

Sanctioned by the United Nations, June 30<sup>th</sup> has been recognized as Asteroid Day, appreciating the anniversary of the 1908 impact and explosion of a small asteroid over Tunguska, Russia flattening over 750 square miles of forest. We can celebrate this event because, as a matter of random-chance, we were very lucky that this rock was not some 10,000 meter Chicxulub Class impactor and We The Species did not go extinct 111 years ago... But there is only one thing you can ever count on with Good Luck. Sooner or later it runs out.

Today, as a matter of random-chance, there is no reason to think that the next asteroid on its way to strike Earth will not soon be diverted onto a near-term impact trajectory. And as things stand, no reason to think we should be confident that we will even know it is coming. And no reason to think it will not be that 10,000 meter extinction level bullet we dodged 111 years ago at Tunguska. However, we do know we are not remotely Prepared or Trained or Vigilant enough to effectively defend against it. And given sufficient political will, we could be.

That would begin with codifying a National policy that by any means necessary the United States shall endeavor to deflect or destroy such objects as they present themselves to be impending Earth impact threats. And that to execute such a Planetary Defense Policy, and pursuant to part (b) SEC. 808 of the 2010 Space Act, delegate NASA and DoD to jointly form a National Planetary Defense Agency. Serving as a first step and example for the rest of the world for how Mankind can survive. And leave Good Luck for the unprepared.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>

2017 Strategic Assessment: <http://Gaiashield.com/TFSW>

Comments On JPL/NASA: <http://Gaiashield.Com/10Things>

\*Asteroid Day: <https://asteroidday.org/>

May 2019

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council, Users' Advisory Group, ODNI/IARPA, Administrator NASA, New York Times, Washington Post

Add [james.f.bridenstine@nasa.gov](mailto:james.f.bridenstine@nasa.gov)

President Trump, Sir:

Anyone who has either attended or watched the 2019 Planetary Defense Conference on line: <https://sservi.nasa.gov/event/2019-iaa-planetary-defense-conference-live-stream/>, has seen the evidence for how this community of scientists and assorted academics currently responsible for this issue have managed to make the existential prospect of asteroid impact a man made threat. A product of chronic all too human Optimism: the asteroid will always be small and the warning time large. And in the face of random chance and the vagaries and failings of human endeavor they hold a constant expectation of Good Luck: all our political and technological ad hoc extemporaneous 11<sup>th</sup> hour hasty



efforts will work... good enough.

Clearly there are no professional risk managers here. No master strategic thinkers. No tested executive decision makers. In the light of caution and a rational Pessimism no intention to become prepared or trained or effectively vigilant... to Leave Nothing To Chance here. The wisdom here is to take the risk and gamble.

It is past time to codify a National policy that by any means necessary, the United States shall endeavor to deflect or destroy such objects as they present themselves to be impending Earth impact threats. And that to execute such a Planetary Defense Policy, and pursuant to part (b) SEC. 808 of the 2010 Space Act, delegate NASA and DoD to jointly form a National Planetary Defense Agency and in doing so take a leadership role and set an example for the rest of the world to follow. Because What we have now is nothing more that a formula for our sooner-or-later suicide by asteroid impact.

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A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>

2017 Strategic Assessment: <http://Gaiashield.com/TFSW>

Comments On JPL/NASA: <http://Gaiashield.Com/10Things>

April 2019

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council, Users' Advisory Group, ODNI/IARPA, New York Times, Washington Post

President Trump, Sir:

The International Academy of Astronautics will hold its 6th Planetary Defense\* conference in 9 days. This would actually be the 11<sup>th</sup> such conferences by all sponsors since this issue gained the status of a real and dire threat in the late 90s. A qualified representative of your office should either attend or view online live or after the fact at your convenience.

Among other dubious perspectives, what you should look for is the criminally optimistic expectation that in the face of random chance, the next asteroid in its way to strike Earth will always be small and that the warning time we will have will always be large. And that thinking we need only prepare for the best and should only hope against the worst somehow passes for wisdom. When reality would demand that wisdom would be that we can only ever afford to hope for the best after we have become prepared for the worst. After all, the reality is that there is no reason to think that the next asteroid on its way to strike Earth will not be a 10km extinction asteroid and as things stand we may not see it coming at all. In this community it is as if speaking to the worst case scenario would be heresy\*\*.

Why is it that by default these academics have been left with the authority to shape and inform our perception of the scope and scale of threat and what would constitute a comprehensive and effective response? It is past time to implement part (b) SEC. 808 of the 2010 Space Act and delegate a National Planetary Defense Agency to assume the risk management and strategic decision making responsibilities for addressing this dire threat: a hybrid of the appropriate resources of NASA and DoD's NSDC as a US Space Force.

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A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>

\*Planetary Defense Con: <http://pdc.iaaweb.org/>

\*\*Comments On JPL/NASA: <http://Gaiashield.Com/10Things>

March 2019

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council, Users' Advisory Group, ODNI/IARPA, New York Times

**Note: Delete < michael.rich@rand.org > < buzz@buzzaldrin.com > Add < letters@washpost.com >**

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council, Users' Advisory Group, ODNI/IARPA, New York Times, Washington Post

President Trump, Sir:

Today, there is no reason to think that the next asteroid on its way to strike Earth will not do so tomorrow. Or that it will not be a 10km extinction level asteroid. Or that we can be certain that we would even see it coming or that we could effectively defend against it if we did.

Plan A: Preparation, Training, Vigilance.

To ensure the detection of these threats decades before impact with Earth, strategically deploy a score of full spectrum space based telescopes to provide a Real Time surveillance of every object in an Area of Interest between the orbits of Venus and Mars 24/7/52... Forever.

To ensure a ready capability to deflect or destroy any asteroid as it becomes an impending threat, project power beyond a massive Point Defense in LEO and establish a strategic high ground with a forward deployed picket line of manned Planetary Defense Platforms in Mars orbit at L3, 4 and 5. Each capable of rapidly delivering gigatons of nuclear force.

To ensure the effective execution of any planetary defense effort, maintain a dedicated corps of expert planetary defenders by regularly implementing deflection training missions.

All this can best be done after we have the expressed Global Political Will to defend against such objects as they become impending Earth impact threats and we have formed an international agency. This can be precipitated by complying with part (b) SEC. 808 of the 2010 Space Act and delegate a National Planetary Defense Agency.

Perpetual annual funding for defending against this dire inevitability (0.1% of GWP) and can be found in retasking a portion of the world budget for maintaining its nuclear weapons and delivery systems.

Plan B: Make sure Plan A works. Or think Mankind can go extinct... tomorrow.

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A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group: <http://Gaiashield.Com>  
2017 Strategic Assessment: <http://Gaiashield.com/TFSW>

February 2019

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council,  
Users' Advisory Group, ODNI/IARPA, New York Times

President Trump, Sir:

Executive Order for the Expression of a Codified Planetary Defense Policy and Creation of a  
Responsible Agency to Execute this Policy and Defend the United States from Cosmic Impacts.

Given the existential threat to the welfare and survival of the people of the United States and the world  
from the random impact of Asteroids, and Comets, by the authority vested in me as President by the  
Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1: By any means necessary, the United States shall endeavor to deflect or destroy such objects  
as they present themselves to be impending Earth impact threats.

Section 2: That to execute our Planetary Defense Policy, and pursuant to part (b) SEC. 808 of the 2010  
Space Act, NASA and DoD shall jointly form a National Planetary Defense Agency at the point of  
those unique and common inherent resources and capabilities that would be strategically relevant to  
defending the United States from this dire threat and in doing so take a leadership role and set an  
example for the rest of the world.

...Now, sign this and take the first step in saving Mankind from extinction by asteroid impact.

If we are going to be honest, then there is no reason to think that the next asteroid on its way to strike  
Earth will not do so tomorrow and that there is no reason to think that the next asteroid on its way to  
strike Earth will not be a 10 km extinction level asteroid. In other words, we can not know the 'which'  
or the 'when' or the 'how large' of this threat unless and until we see it coming. And though we could  
be, we are not remotely prepared... We are not even thinking about being so prepared\*. So, tick tock...

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A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group: <http://Gaiashield.Com>  
2017 Strategic Assessment: <http://Gaiashield.com/TFSW>  
\*Planetary Defense Con: <http://pdc.iaaweb.org/>

January 2019

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council,

Users' Advisory Group, ODNI/IARPA, New York Times

President Trump, Sir:

All asteroid impact events are random: without any recursive pattern, both in their occasion and magnitude. Therefore there is no reason to think that the next large asteroid on its way to strike Earth will not result in a human extinction level impact event. Then, because we can, knowing which asteroid is the next large asteroid on its way to strike Earth will always be the most important thing Mankind can ever know. And deflecting the next large asteroid on its way to strike Earth will always be the most important thing Mankind can ever do. And being prepared to respond to the threat of the next large asteroid on its way to strike Earth will always be the most important thing Mankind can ever be...

And despite the fact that We The Species have evolved the potential to develop the technical capability to effectively defend the planet from this perpetual threat, we have yet to find the political will to become even remotely prepared to do so.

At present, there is a lot of bad thinking based on nothing more than hope and expectations of good luck shaping and informing our response to this threat. How is it that the United States does not have a qualified National Planetary Defense Agency dedicated to thinking about this right? If we can not even come to think about this right how can we ever expect to actually do this right?

Since the prospect of our extinction is a concern for every man, woman and child on the planet, this threat is your problem. You and yours are at Ground Zero. Time to take this issue personally... How can anything less be wise? Implement part (b) SEC. 808 of the 2010 Space Act as the primary mission for the US Space Force.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>

The Case for a US Space Force <http://Gaiashield.Com/DAMIEN>

2017 Strategic Assessment: <http://Gaiashield.com/TFSW>

December 2018

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council, Users' Advisory Group, ODNI/IARPA, New York Times

President Trump, Sir:

Astronomers. They appear to be able to block any Fear from their perspectives. It could be a quality of their professional mandate for objectivity however in this issue they appear to exhibit a blatant fear of fear itself. As if a cult with a mantra of "See No Fear, Speak No Fear, Hear No Fear, Think No Fear". Instead of resulting in an unbiased objectivity, in terms of Planetary Defense this has manifest in the opposite direction. Despite the fact that asteroid impact events are completely random: without any recursive pattern both in their occasion and magnitude, as a community they persist in a perspective of optimism, hope and expectations of good luck. So when they think in terms of the next asteroid impact, we will always see it coming and it will always be small and there will always be plenty of warning so

we need only be prepared for this level of threat...

Hope is not method. Luck is for the unprepared.

Such cowardice fostered stupidity compels them to perceive this threat only in terms of their linear single stepped scientific wait-until-we-see-it-coming-before-we-build-anything-to-deflect-it plan and not with a martial foresight guided strategic wisdom of being prepared to effectively respond to a worst case scenario: Survival of the Species. Where, at any cost, by any means... failure is not an option. And if they are left in charge of this issue... we will fail. See their bad thinking live here\*.

We need this issue in the hands of those conditioned to run to the sound of the guns... That understand we can only ever afford to hope for the best after we have prepared for the worst. Implement part (b) SEC. 808 of the 2010 Space Act as a mission for Space Force.

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R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>

Strategic Assessment: <http://Gaiashield.Com/TFSW>

Space Force: <http://Gaiashield.Com/DAMIEN>

\*PDC: <http://pdc.iaaweb.org/>

November 2018

[ideas@forbes.com](mailto:ideas@forbes.com)

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council and the Users' Advisory Group, ODNI/IARPA, New York Times

President Trump, Sir:

Since all Asteroid impact events are completely random: without any recursive pattern or periodicity, in both their occasion and magnitude. And since, at random, any Asteroid of any size anywhere in the Solar System can become kinetically or gravitationally diverted into an impact trajectory with Earth at any time. There is no reason to think that the next Asteroid on its way to strike Earth will not be discovered and to be on an imminent Earth impact trajectory tomorrow or that it will not be a 10 km Chicxulub Class extinction level Asteroid... And we are not remotely prepared.

Make no mistake. This is War! No Prisoners! Not some super sized science fair project. As such, an effective response requires the mindset of those accustomed to dealing with dire threats by standing in Harm's Way to defend and protect the well-being of others. Not just for the fun of it. Although the boys and girls at NASA have a tactical role, the overall strategic responsibility for successfully waging this War requires the far more martial mindset of our DoD and a US Space Force.

At any cost, being prepared to defend mankind from extinction by Asteroid impact by any means necessary is the most important thing Mankind can ever be. Yet if you send a representative to the next Planetary Defense Conference\* you can see just how the academics and scientists have developed a strategy based entirely on expectations of good luck.

Then, by Executive Order codify a National Policy to endeavor to deflect these objects as they present

themselves to be impending Earth impact threats and delegate a National Planetary Defense Agency by executing part (b) SEC. 808 of the 2010 Space Act. A mission justifying a US Space Force.

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Leave Nothing To Chance,  
R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>  
2017 Strategic Assessment: <http://Gaiashield.Com/TFSW>  
\*PDC <http://pdc.iaaweb.org/>

October 2018

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council and the Users' Advisory Group, ODNI/IARPA, New York Times

President Trump, Sir:

All Asteroid and Comet impact events are completely random: without any recursive pattern or periodicity, in both their occasion and magnitude. Therefore:

We were very lucky. Very lucky that 108 years ago when that small asteroid exploded over the forests of Tunguska Russia it was not a 10 km Chicxulub Class asteroid and its impact did not bring Mankind to its extinction. And we have been lucky now for 65 million years since the Chicxulub impact event.

But there is only one thing you can ever count on with a run of good luck... sooner or later it runs out. So on Asteroid Day\* we can only pray for our continued good luck. Because so far Mankind has not become smart enough to even begin to become prepared to deal with any bad luck. Which will likely be clear at the next Planetary Defense Conference\*\* where they only chose to believe that the next asteroid on its way to strike Earth will always be small and our response window will always be large.

Despite the fact that we have the potential technical ability to effectively defend against this threat in its worst case event, we have yet to find the wisdom to manifest the political will to do the hard work required to build it. Then, you know the first rule of The Real: The smarter we work the luckier we get.

This is where you take the lead. Show Mankind the first step in saving itself from extinction by Cosmic Impact: Codify a National Policy to endeavor to deflect these objects as they present themselves to be impending Earth impact threats and delegate a National Planetary Defense Agency by executing part (b) SEC. 808 of the 2010 Space Act. A role justifying a US Space Force.

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Leave Nothing To Chance,  
R. Dale Brownfield

Gaiashield Group: <<http://Gaiashield.Com>>  
2017 Strategic Assessment: <<http://Gaiashield.Com/TFSW>>  
\*UN Sanctioned Asteroid Day <<https://asteroidday.org/>>

\*\*PDC <<http://pdc.iaaweb.org/>>

September 2018

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council and the Users' Advisory Group, ODNI/IARPA, New York Times

President Trump, Sir:

On April 29, 2019 the International Academy of Astronautics will be holding their 6th Planetary Defense Conference in Washington DC <<http://pdc.iaaweb.org/>>. Scores of scientists from all over the world will be gathering to present their research and discuss the aspects of defending the planet from Cosmic Impact. A security minded representative from your office should be there to observe, ask questions and learn.

Not everything they will be talking about will actually be strategically relevant and they seldom think comprehensively. But keep in mind that they are only scientists and generally don't have the strategic sense God gave a bucket of frogs or the courage to see fearful things as they are. It's just not what they do. That is what you can bring to the game.

At this conference you will at least be able to clearly understand that this threat is real. That it is clear and present. That it is credible and potentially imminent. That it warrants your urgent and critical attention. However, that the full scale of this threat includes the prospect of our random extinction by large asteroid impact at any time will likely be a conclusion you will need to come to on your own.

If you want to learn about the most important thing Mankind will always need to know and always need to do and always need to be... Start Here: 2017 Strategic Assessment: <<http://Gaiashield.com/TFSW>> ...then go to this conference.

Then back in the Oval Office, evolve this issue and execute part (b) SEC. 808 of the 2010 Space Act by delegating the US Space Force as our National Planetary Defense Agency and ensure Mankind has an expert strategically sound assessment and ultimately, an effective and comprehensive response to this dire threat.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group: <<http://Gaiashield.Com>>

2017 Strategic Assessment: <<http://Gaiashield.Com/TFSW>>

August 2018

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council and the Users' Advisory Group, ODNI/IARPA, New York Times

President Trump, Sir:

Once upon a time there was a Big Bang: Cause/Effect, Cause/Effect, Cause/Effect and 13.8 billion years later our Solar System contains billions of rocks left over from the formation of the planets... 10,000 of which, if they strike Earth, are large enough to bring us to extinction. 65 million years ago one of these struck Earth with a force of 50 million megatons of energy. Today that would equate to nearly one Hiroshima bomb for every man, woman and child on the planet. Given the random distribution and behavior of these objects, it follows that at random, sooner-or-later this will happen again. Somewhere out there the next one is closing in to impact Earth at a million miles a day...

Yet after 20 years, scientists, employing a simplistic, cheap-and-easy Survey approach, have failed to identify which one it is or develop some form of vigilance that reliably can, and evolve from the Astronomers' traditional Survey approach to a US Military Grade real time Surveillance of the relevant Area of Interest. Further, being the only formally delegated responsible agent in this issue, they have failed to appreciate and encourage the strategic necessity to prepare by having a standing, tested means to respond to this threat and a trained, expert corps of Planetary Defenders to execute such a mission.

What better mission for a US Space Force. Look Up! Beyond the assets we need to defend our security on Battlefield Earth, there is a never-ending Cosmic War for us to wage and win. The business of soldiers, not scientists: <<http://Gaiashield.Com/DAMIEN>>. Execute part (b) SEC. 808 of the 2010 Space Act and by delegating the US Space Force as our National Planetary Defense Agency give your directive the weight of prior legislation.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group: <<http://Gaiashield.Com>>  
2017 Strategic Assessment: <<http://Gaiashield.Com/TFSW>>

July 2018

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council and the Users' Advisory Group, ODNI/IARPA, New York Times

President Trump, Sir:

We really need a responsible Director of the OSTP. On page 5 of their recent National Near-Earth Object Preparedness Strategy and Action Plan\* they claim: "The Trump Administration's 2018 National Strategy for Space\*\* recognizes the NEO hazard, and directs agencies to undertake multilateral efforts that promote U.S. scientific, economic, and security interests, including mitigation of space environmental hazards such as near-Earth objects."

\*<<https://www.whitehouse.gov/wp-content/uploads/2018/06/National-Near-Earth-Object-Preparedness-Strategy-and-Action-Plan-23-pages-1MB.pdf>>

\*\*<<https://www.whitehouse.gov/briefings-statements/president-donald-j-trump-unveiling-america-first-national-space-strategy/>>

What kind of mental defect or total failure of rational logic is this? Or does someone need to be

schooled in the art of telling a lie? Rule One: Do not provide an active URL to incontrovertible evidence that you are lying! This specific 'Executive Office of the President of the United States' is in dire need of some competent adult supervision.

However, in contrast, the greater case for developing a US Space Force from this can be seen at <<http://Gaiashield.Com/DAMIEN>>. If we can not even begin to think about this right how can we expect to ever do this right? Put us on the path to getting this right and delegate a responsible National Planetary Defense Agency by implementing part (b) SEC. 808 of the 2010 Space Act.

Make no mistake. This is not some super sized science fair project. This is War: Defend the Planet! At any cost. By any means. Failure is not an option. We get this right... or sooner-or-later we go extinct. This is the business of soldiers, not scientists.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group: <<http://Gaiashield.Com>>  
2017 Strategic Assessment: <<http://Gaiashield.Com/TFSW>>

June 2018

President Trump, Sir:

Happy Asteroid Day!

Recently endorsed by the United Nations, July 30th is Asteroid Day and is held each year on the anniversary of the 1908 Tunguska event in Siberia.

We can be grateful for our long run of good luck on this day because Tunguska was only a small 30 meter air burst event. When, as a matter of random-chance, it could have been a 10,000 meter Chicxulub Class world killer and we can celebrate that Mankind did not go extinct 110 years ago. Unfortunately, in the face of random-chance there is only one thing we can ever count on with a run of good luck: sooner-or-later it runs out. And here, it has been 65 million years since the last extinction level impact event... Tick Tock.

And since all asteroid impact events are completely random: without any recursive pattern or periodicity, both in their occasion and magnitude. And that any asteroid, discovered or undiscovered, of any size anywhere in the Solar System can be naturally diverted into an impact trajectory at any time... There is no rational logic that can lead us to think that the next asteroid on its way to strike Earth will not do so tomorrow or that it will not be a 10,000 meter extinction level asteroid.

So we should be investing all our hope and expectations of good luck in the chance that if we can find the wisdom to start now we will have the 100 years it might take to develop, build and deploy an effective response to this worst case expression of this threat.

It is past time to take the first serious step here and formally delegate a responsible and fundable National Planetary Defense Agency and implement part (b) SEC. 808 of the 2010 Space Act. Time to



load the dice in this Cosmic crapshoot.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>

2017 Strategic Assessment: <http://Gaiashield.com/TFSW>

June 2018

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council and the Users' Advisory Group, ODNI/IARPA, New York Times

President Trump, Sir:

With Planetary Defense, the 'expert' Planetary Defense community constantly misuses statistical probability theory to mischaracterize and dismiss high magnitude threats. And despite being a product of corrupted empirical information, present such assessments as portraying impact events as roughly periodic and they can somehow forecast when events would not occur. Paramount here is when they employ their optimism based rationalizations to portray the Chicxulub Class extinction level events as only a problem for the far distant future. Given the actual random occurring state of these events in general, rationally it can only be seen as a problem for Now! Therefore the wisdom here would be that we can only ever afford to hope for the best after we have become prepared for the worst.

Regardless of any dismissive low statistical probabilistic rationalizations, when at random one in every one hundred asteroids large enough to do some degree of global harm on impact is going to be a human extinction level asteroid, how can this statistic be one we can ever afford to ignore? Extinction: All there is, gone... Forever. No do-overs. No second tries. Game Over/No Joy. Restart Darwin's clock again... and maybe better luck next time? An abject failure of our species to attend to its primal instinct for survival. Perhaps the cockroaches will do better. Therefore, at any cost and by any means necessary failure is not an option. After all what is the value of Mankind if not... priceless.

If we can not even think about this right how can we ever expect to do this right? Put us on the path to getting this right and delegate a responsible National Planetary Defense Agency by implementing part (b) SEC. 808 of the 2010 Space Act.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>

2017 Strategic Assessment: <http://Gaiashield.com/TFSW>

May 2018

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council and the Users' Advisory Group, New York Times

President Trump, Sir:

Asteroids exist and they strike Earth and potentially we can defend against this existential condition. However it takes more than a common perception to understand that what causes asteroids to come to strike our planet is that at random any asteroid of any size anywhere in the Solar System can become diverted into a direct impact trajectory with Earth at any time...

Consequentially there is no rational threat assessment that could conclude that the next asteroid to strike Earth will not do so tomorrow or that it will not be an extinction level event. Therefore, since this dire existential threat will always include the prospect for our extinction and because we can: Knowing which asteroid is The Next Large Asteroid on its way to strike Earth will always be the most important thing mankind can ever know. And deflecting it will always be the most important thing mankind can ever do. And being prepared to effectively respond to this threat will always be the most important thing mankind can ever be. And we are not remotely prepared...

If humanity is to survive this threat, its first act must be to find the primal courage to manifest the evolved Political Will required to do so. Yet, no nation has found the executive wisdom to codify a national policy to endeavor to deflect these objects as they become impending Earth impact threats, or to delegate a qualified national agency to become prepared and ultimately responsible for successfully executing such a policy.

Realities dictate that the US should ultimately take the physical lead here but we should be first to take the political lead here as well and find the wisdom to set the political example for the world to follow: Implement part (b) SEC. 808 of the 2010 Space Act.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,  
R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>

2017 Strategic Assessment: <http://Gaiashield.com/TFSW>

April 2018

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council and the Users' Advisory Group, New York Times

President Trump, Sir:

A US Space Force... good idea.

"A human being is the best computer available to place in a spacecraft." Werner von Braun. When the day comes that We have finally become wise enough to begin to develop a comprehensive and effective response to the clear and ever present danger of catastrophic asteroid impact, we would want to have our Right Stuff in the best place possible to ensure mission success.

Strategically, given the limitations of Earth's escape velocity on mission mass and therefore the magnitude of the response, a Point Defense to defend against short warning times would need to be

predeployed as a manned close outpost to either Low Earth Orbit or the Moon. And given the compounding problem of having any suitable launch/transit windows when we need them, for our front/picket line main defense we would need to take the high ground and Project Power to the orbit of Mars in the form of a number of manned mobile Planetary Defense Observatory/Launch platforms and as carriers for piloted high speed Recon/Targeting/Interceptor craft (good for the Space business).

The first step on this journey of a thousand miles begins with a codified National Policy to defend the planet from these objects as they become impending Earth impact threats and then delegating a qualified National Planetary Defense Agency to become expert in executing it: part (b) SEC. 808 of the 2010 Space Act. A unified NASA and US Space Command at the point of their relevant resources would be the most effective response to this dire and perpetual existential natural condition.

Be the President to take the first step in leading Mankind on the path to save itself from its random and inevitable sooner-or-later extinction by asteroid impact.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group: <http://Gaiashield.Com>  
2017 Strategic Assessment: <http://Gaiashield.com/TFSW>

March 2018

<[Marc.Canellas@mail.house.gov](mailto:Marc.Canellas@mail.house.gov)> <[Corey.Inglee@mail.house.gov](mailto:Corey.Inglee@mail.house.gov)>

Copy to: Committee on Science, Space and Technology, Executive Secretary National Space Council and the Users' Advisory Group, Planetary Science Caucus, New York Times

President Trump, Sir:

It has been 3,443 days since Bush signed the 2008 Space Act and first codified the Congressional mandate for the Executive Office to delegate a federal agency to address the threat of asteroid impact. Even though it was reiterated in Obama's 2010 Space Act, to date... No Joy. In that time, at A Million Miles A Day, The Next Large Asteroid on its way to strike Earth has closed 3,443 million miles closer to impact. Time is not on our side here... Tick Tock.

Fact: Asteroids exist.

Fact: At random, asteroids strike Earth.

Fact: We have the potential capability to defend against this threat.

Fact: In order to develop our capability from the potential to a standing strategically comprehensive reality - and not some facade affording us a false sense of security - we first need an Executive Order to codify a National Policy to endeavor to destroy or deflect these objects as they present themselves to be impending Earth impact threats and to delegate a National Planetary Defense Agency to become an expert and responsible Space Force for executing such a policy (currently a mandate to be implemented by the Executive Office: part (b) SEC. 808 of the 2010 Space Act). Let history show you to have taken the first step in saving the world.

This is a common global enemy requiring a global agency of all stakeholder nations. Such an agency

can best be seen as a coalition of national agencies... space capable or not. In forming such an agency, we can set the example by merging NASA and DoD's JFCC Space at the point of their unique relevant strategic and tactical capabilities and resources into a hybrid agency with one mission: Defend Mankind from the threat of its sooner-or-later extinction by asteroid impact. Begin to be prepared... Now!

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>

2017 Strategic Assessment: <http://Gaiashield.com/TFSW>

February 2018 <[Marc.Canellas@mail.house.gov](mailto:Marc.Canellas@mail.house.gov)> <[Corey.Inglee@mail.house.gov](mailto:Corey.Inglee@mail.house.gov)>

Copy to: Planetary Science Caucus, New York Times, Executive Secretary National Space Council

Copy to: Honorable Members of the Committee on Science, Space and Technology,

President Trump, Sir:

It has been 3,415 days since Bush signed the 2008 Space Act and first codified the Congressional mandate for the Executive Office to delegate a federal agency to address the threat of asteroid impact. Even though it was reiterated in Obama's 2010 Space Act, to date... No Joy. In that time, at A Million Miles A Day, The Next Large Asteroid on its way to strike Earth has closed 3,415 million miles closer to impact. Time is not on our side here... Tick Tock.

On Super Bowl Sunday, the 1,200 m Asteroid 2002 AJ129 passed within 2.6 million miles of Earth. However, if only 3 years ago it had randomly collided with some 130 m asteroid it could have been randomly diverted into an impact with Earth. Even if we knew about it, as things stand there would be nothing we could do to prevent it. At 34 km/sec if it had struck Kansas - with the force of over 250,000 Mega Tons of TNT/50 times the world nuclear arsenal/25 million Hiroshima bombs - it would have flattened this country from sea to sea. We were lucky... again. But with Good Luck there is only one thing you can ever be sure of. Sooner-or-later it runs out. And with the survival of our species at stake we have been playing this game for tens of millions of years.

*“For the want of a nail the shoe was lost,  
For the want of a shoe the horse was lost,  
For the want of a horse the rider was lost,  
For the want of a rider the battle was lost,  
For the want of a battle the kingdom was lost,  
And all for the want of a horseshoe-nail.” - Benjamin Franklin*

*A National Planetary Defense Agency is a horseshoe-nail for the survival of the Kingdom of Mankind.*

Since the threat of Asteroid impact will always include the prospect for our random extinction and because, potentially, we can: Knowing which Asteroid is The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever know. And Deflecting it will always be the most important thing Mankind can ever do. And Being prepared to effectively respond to this threat will always be the most important thing Mankind can ever be. And we are not prepared.

It is time for Mankind to punctuate this equilibrium and take responsibility for its own survival. Execute 'part (b) SEC. 808 of the 2010 Space Act'.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

*A Million Miles A Day,*

R. Dale Brownfield

*Gaiashield Group:* <http://Gaiashield.Com>

*2017 Strategic Assessment:* <http://Gaiashield.com/TFSW>

January 2018 <oped@nytimes.com>

Copy to: New York Times

Copy to: Executive Secretary of the National Space Council

Copy to: Honorable Members of the Committee on Science, Space and Technology,

President Trump, Sir:

It has been 3,384 days since Bush signed the 2008 Space Act and first codified the Congressional mandate for the Executive Office to delegate a federal agency to address the threat of asteroid impact. Even though it was reiterated in Obama's 2010 Space Act, to date... No Joy. In that time, at A Million Miles A Day, The Next Large Asteroid on its way to strike Earth has closed 3,384 million miles closer to impact. Time is not on our side here... Tick Tock.

We understand that at random any Asteroid or Centaur or Comet or Interstellar Object of any size anywhere in the Solar System or Galaxy can become perturbed into an impact trajectory with Earth at any time. Therefore, since this threat will always include the prospect for our random extinction by some large Cosmic impact event, and because we can: Knowing which object is The Next Large Object on its way to strike Earth will always be the most important thing Mankind can ever know. And Deflecting The Next Large Object way to strike Earth will always be the most important thing Mankind can ever do. And Being prepared to effectively respond to the threat of The Next Large Object on its way to strike Earth will always be the most important thing Mankind can ever be. Sooner-or-later this will happen. Greater than anything else we can know or even imagine, this threat is nothing less than The Mother of all human challenges.

The first step on this journey of a thousand miles begins with a codified National Policy to defend the planet from this Cosmic Threat and then delegating a qualified National Planetary Defense Agency to execute it: part (b) SEC. 808 of the 2010 Space Act. Until then, all the responsibility for knowing and doing and being prepared is on your plate alone. Today is the first anniversary of your inauguration. In that time The Next Large Asteroid on its way to strike Earth has come 365.2 million miles closer to its impact. And in that time we have not become one step closer to being prepared. The first single step on this journey needs to be taken... Now! Defending our planet from Cosmic impact must become a skill Mankind is very, very good at. Become expert before we have to do it right or die trying.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

*A Million Miles A Day,*

R. Dale Brownfield

Gaiashield Group:

<http://Gaiashield.Com>

2017 Strategic Assessment:

<http://Gaiashield.com/TFSW>

December 2017

Copy to: Executive Secretary of the National Space Council

Copy to: Honorable Members of the Committee on Science, Space and Technology,

President Trump, Sir:

It has been 3,353 days since Bush signed the 2008 Space Act and first codified the Congressional mandate for the Executive Office to delegate a federal agency to address the threat of asteroid impact. Even though it was reiterated in Obama's 2010 Space Act, to date... No Joy. In that time, at A Million Miles A Day, The Next Large Asteroid on its way to strike Earth has closed 3,353 million miles closer to impact. Time is not on our side here... Tick Tock.

So now we are going to the Moon... Smart move.

The Comets are coming... And the next one may be the one that kills us all.

Between the Oort Cloud and the Inner Solar System there are estimated to be unknown thousands of large, rogue 'Long Period' Comets. Sooner-or-later, at random: at any time and from any direction, we will see and only then discover one of them crossing the ~5 AU sublimation threshold at about the orbit of Jupiter, on a 9 month collision course with Earth at 60 km/sec. And with Comets 6 km in diameter or larger... Game Over. No Joy. We The Species go extinct. Start Darwin's Clock again.

It gets worse. We are under the same level of random terminal threat from large Centaurs perturbed from the Kuiper Belt and Main Belt and large rogue Asteroids that have been perturbed onto short-term Earth impact trajectories. In short, we may not have decades or even years of warning to respond and forestall our extinction by Cosmic Impact. Even though we do have the potential capability to do so, we simply do not have the Political Will to actually become prepared to do it. Which effectively serves to make this a man-made threat.

At the core and first line of any comprehensive Planetary Defense would be building a Point Defense predeployed to the Moon. Only from such a prepared position could we expect to successfully respond to such large short-term Cosmic threats.

However, the first step on this journey of a thousand miles begins with a codified National Policy to defend the planet from this Cosmic Threat and delegating a qualified US National Planetary Defense Agency to execute it: part (b) SEC. 808 of the 2010 Space Act. Until then, all the knowing and doing and being prepared is on your plate alone.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,  
R. Dale Brownfield

Gaiashield Group:

<http://Gaiashield.Com>

2017 Strategic Assessment:

<http://Gaiashield.com/TFSW>

November 2017

Copy to: Executive Secretary of the National Space Council

Copy to: Honorable Members of the Committee on Science, Space and Technology,

President Trump, Sir:

It has been 3,323 days since Bush signed the 2008 Space Act and first codified the Congressional mandate for the Executive Office to delegate a federal agency to address the threat of asteroid impact. Even though it was reiterated in Obama's 2010 Space Act, to date... No Joy. In that time, at A Million Miles A Day, The Next Large Asteroid on its way to strike Earth has closed 3,323 million miles closer to impact. Time is not on our side here... Tick Tock.

From a letter to the National Space Council: Why Space? Because it's There, Science for Science, Manifest Destiny, Lebensraum, Natural Resources, Life Boat, Entertainment, National Vanity, Extraterrestrial Life, Tourism, Tang 2.0, Ideological Freedom, Religion, Because it's Hard, Battlefield Earth, Planetary Defense... are, to some degree, all popular motives.

Most of these reasons seem to range from romantic delusions and pipe dreams to gross misconceptions, scams and short-term self interests with many having their origins in science fiction as far back as Wells and Asimov to Robinson and Corey in the present and in between, Star Trek. However they often have little rational real world value beyond something fun to think about... nothing more than entertainment. That's fine. Bread and Circuses. (Just not exactly why societies form and tolerate governments.)

But, the last two are matters of life and death and survival addressing National and Global security. With watching Battlefield Earth, Space capable Nations and their allies benefit from military intelligence and communications. With Planetary Defense we preserve all of Mankind from its inevitable sooner-or-later extinction by some random large Cosmic Impact event.

All these compulsions and problems come from Earth... except for Planetary Defense. And here, the problem and dire urgent compulsion comes from Space and can not be ignored or solved or sated on Earth. Here, we can only master Space and become prepared or suffer the dire terminal consequences.

So in terms of priorities, the question to this council would be: why is Planetary Defense not the most important thing about Space and the first thing on your list of things to do both in Space and on Earth?

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group:

<<http://Gaiashield.Com>>

2017 Strategic Assessment:

<<http://Gaiashield.com/TFSW>>



October 2017

Copy to: Executive Secretary of the National Space Council  
Copy to: Honorable Members of the Committee on Science, Space and Technology,

President Trump, Sir:

It has been 3,292 days since Bush signed the 2008 Space Act and first codified the Congressional mandate for the Executive Office to delegate a federal agency to address the threat of asteroid impact. Even though it was reiterated in Obama's 2010 Space Act, to date... No Joy. In that time, at A Million Miles A Day, The Next Large Asteroid on its way to strike Earth has closed 3,292 million miles closer to impact. Time is not on our side here... Tick Tock.

Since this threat will always include the prospect for our extinction by some random large asteroid impact event, and because we can: Knowing which asteroid is The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever know. And Deflecting The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever do. And Being prepared to effectively respond to the threat of The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever be. And we are not prepared.

The problem here is that all that is required for one large asteroid impact event is the behavior of just one large asteroid. And until we know which large asteroid is the next asteroid on its way to strike Earth we can not know when it will strike or just how large it will be. Worse, we can *never* know when we are going to know which, when and how large until we see it coming... until it has become Now!

Sooner or later Mankind will face the threat of its extinction by Cosmic Impact: the ultimate common enemy. This threat will be best, perhaps 'only' well met by all of Mankind and a united Earth. And in at least this, united sooner rather than later. Now is the best we can do. And Now may be soon enough. The first step on this journey of a thousand miles begins with the delegating of a qualified US National Planetary Defense Agency: part (b) SEC. 808 of the 2010 Space Act, to lead the way. Until then, all the knowing and doing and being is on your plate alone.

At the 1<sup>st</sup> NSC meeting, VP Pence was right. Mastering Space is a Race. Just not against any nation or Earth bound threat. Its a race against Time and The Next Large Asteroid on its way to strike Earth... Tick Tock.

A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group:  
<http://Gaiashield.Com>  
2017 Strategic Assessment:  
<http://Gaiashield.com/TFSW>

September 2017

Copy to: Executive Secretary of the National Space Council  
Copy to: Honorable Members of the Committee on Science, Space and Technology,

President Trump, Sir:

It has been 3,261 days since Bush signed the 2008 Space Act and first codified the Congressional mandate for the Executive Office to delegate a federal agency to address the threat of asteroid impact. Even though it was reiterated in Obama's 2010 Space Act, to date... No Joy. In that time, at A Million Miles A Day, The Next Large Asteroid on its way to strike Earth has closed 3,261 million miles closer to impact. Time is not on our side here... Tick Tock.

Recent Warning Shots: Charlottesville for racial unrest. Harvey/Irma as harbingers of Climate Change. And in the DPRK a possible fusion nuclear weapon test and the reemerging threat of nuclear war. Then, nearly across our bow, there was Florence. On September 1<sup>st</sup> this 2.4 mile asteroid passed within 4.4 million miles of Earth. Since its discovery in 1981, if this rock collided with a much smaller asteroid, its orbit could have been changed to bring it to strike Earth. Then, on impact: at 43,000 mph and 64 billion tons, it would have the kinetic energy equivalence of 3 trillion tons of TNT... 640 times the current world nuclear arsenal. If it had hit in Kansas it would have flattened this country from sea to sea. Although not an extinction level event, impact anywhere on Earth would be a civilization killer causing a dramatic change in Earth's climate: Impact Winter, with Global dystopian consequences that could result in the eventual death of billions... A very bad day on Earth.

With billions of asteroids out there, at random, sooner-or-later, this scenario and worse will be real. The good news is that We The Species have evolved our technology to theoretically respond to and deflect this threat. The bad news is that We have not yet evolved the wisdom to actually become prepared to do so. As things stand, it's like we are waiting for our house to catch fire before we build a fire department.

Building a comprehensive Planetary Defense will be a journey of a thousand miles. The first step will be delegating a qualified National Planetary Defense Agency: part (b) SEC. 808 of the 2010 Space Act. Delegate this dire and urgent responsibility to a hybrid of NASA and US Space Command ASAP. After all, all these dice have long ago been cast. The Sky Is Falling... Now!

Heads Up!

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group:

<http://Gaiashield.Com>

2017 Strategic Assessment:

<http://Gaiashield.com/TFSW>

August 2017

Copy to: Executive Secretary of the National Space Council

Copy to: Honorable Members of the Committee on Science, Space and Technology,

President Trump, Sir:

It has been 3,230 days since Bush signed the 2008 Space Act and first codified the Congressional mandate for the Executive Office to delegate a federal agency to address the threat of asteroid impact. Even though it was reiterated in Obama's 2010 Space Act, to date... No Joy. In that time, at A Million

Miles A Day, The Next Large Asteroid on its way to strike Earth has closed 3,230 million miles closer to impact. Time is not on our side here... Tick Tock.

Fake News for a Fake Agency... Some recent Planetary Defense headlines:

*"This October, NASA will conduct a drill to test its planetary defense systems in the case an asteroid might hit Earth."*

*"At NASA, the Planetary Defense Coordination Office supports the search programs, while also planning and coordinating any response to possible asteroid impacts."*

*"NASA's Planetary Defense Coordination Office, or PDCO, the federal entity in charge of coordinating efforts to protect Earth from hazardous asteroids,"*

In January of 2016 NASA's Near Earth-orbit Object Observation Program (NEO-OP), with the unfunded Congressional mandate to survey the NEO population, apparently on its own initiative, changed its name to the Planetary Defense Coordination Office. However, the PDCO has not been duly authorized or funded to be prepared and trained, or become prepared and trained, or even think about becoming prepared and trained, to deflect or destroy the next asteroid on its way to strike Earth.

The PDCO is not a 'federal agency' nor is it authorized by either Congress or the President to be responsible for or coordinate anything more than the 3 or 4 person staff it has in order to facilitate a cursory survey of the Near Earth-orbit Object (NEO) population.

In this regard, the PDCO is little more than a facade and a governmental slight of hand. A thing in name only. A placebo. A Fake Agency. A first step in our suicide by NEO.

It is past time to make some Real News and make a Real Agency. Comply with "part (b) SEC. 808 of the 2010 Space Act" and delegate this dire and urgent responsibility to a hybrid of NASA and DoD's US Space Command ASAP. After all, The Sky Is Falling... Now!

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group:

<http://Gaiashield.Com>

2017 Strategic Assessment:

<http://Gaiashield.com/TFSW>

July 2017

Copy to: Executive Secretary of the National Space Council

Copy to: Honorable Members of the Committee on Science, Space and Technology,

President Trump, Sir:

It has been 3,199 days since Bush signed the 2008 Space Act and first codified the Congressional

mandate for the Executive Office to delegate a federal agency to address the threat of asteroid impact. Even though it was reiterated in Obama's 2010 Space Act, to date... No Joy. In that time, at A Million Miles A Day, The Next Large Asteroid on its way to strike Earth has closed 3,199 million miles closer to impact. Time is not on our side here... Tick Tock.

Congratulations on the National Space Council and getting that band back together. Soldiers and statesmen and businessmen and even an accountant and a scientist (to be named) enough to give you the best possible National and Global security based Policy and Agency recommendation for taking the first step in saving the world from asteroid impact.

In that direction, given the scope and scale of this threat, we can find an example of wisdom reflected in the constitution of the National Space Council. As a critical National Security issue, the formation of a hybrid agency comprised of the appropriate resources of both NASA and The US Space Command as our dedicated National Planetary Defense Agency, with DoD in an over all strategic role and NASA with more tactical operational responsibilities, would give us our most effective approach to survival.

If we can find the Executive courage, then building a comprehensive Planetary Defense becomes the most important thing Mankind can ever do. 'This' is what the next 'Giant Leap for Mankind' should be.

After all, at random, any asteroid of any size anywhere in the Solar System can become perturbed into an impact trajectory with Earth at any time. There is no reason to think that the next asteroid on its way to strike Earth will not do so tomorrow or that it will not be an extinction level impact event... Time is not on our side here and we have not even begun to become prepared to adequately respond to this threat. Today we can only pray for 100 years of continued good luck to become so.

Hard copy of a 2017 Strategic Assessment: <http://Gaiashield.com/TFSW>, has been delivered to yourself and selected VIPs to-whom-this-should-concern under the cover: <http://DearPOTUS.Com>.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group:  
<http://Gaiashield.Com>

June 2017

Copy to: Honorable Members of the Committee on Science, Space and Technology,

President Trump, Sir:

It has been 3,169 days since Bush signed the 2008 Space Act and first codified the Congressional mandate for the Executive Office to delegate a federal agency to address the threat of asteroid impact. Even though it was reiterated in Obama's 2010 Space Act, to date... No Joy. In that time, at A Million Miles A Day, The Next Large Asteroid on its way to strike Earth has closed 3,169 million miles closer to impact. Time is not on our side here... Tick Tock.

Happy Asteroid Day! (June 30th) <https://asteroidday.org/>

Asteroid Day has been recently recognized by the United Nations as a recognition of the 1908 40 meter

Tunguska impact event as representative of the existential threat of asteroid impact. The celebration of this particular event would be in appreciating that it was only a matter of random chance that it was not a 10,000 meter extinction level impact and that We The Species is still here... for now.

After all, at random, any asteroid of any size anywhere in the Solar System can become perturbed into an impact trajectory with Earth at any time. There is no reason to think that the next asteroid on its way to strike Earth will not do so tomorrow or that it will not be an extinction level impact event... Time is not on our side here and we have not even begun to become prepared to adequately respond to this threat. Today we can only pray for 100 years of continued good luck to become so.

Step One: execute part (b) SEC. 808 of the 2010 Space Act and delegate a responsible Federal Agency in support of an Executive Policy Order codifying our sociopolitical will and enabling the funding of our survival.

Then, since the most qualified thinking for *what* to do will always come from those who have become responsible for actually *doing* it, let our duly delegated National Planetary Defense Agency tell us just what we need to do and what it will cost to preserve us from our extinction by asteroid impact. Not having such a standing, tested expert agency and capability constitutes a threat even greater than the threat of asteroid impact itself.

2017 Strategic Assessment: <http://Gaiashield.com/TFSW>. Hard copy has been delivered to you and selected VIPs to-whom-this-should-concern under the cover: <http://DearPOTUS.Com>.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group:  
<http://Gaiashield.Com>

May 2017

Copy to: Honorable Members of the Committee on Science, Space and Technology,

President Trump, Sir:

It has been 3,138 days since Bush signed the 2008 Space Act and first codified the Congressional mandate for the Executive Office to delegate a federal agency to address the threat of asteroid impact. Even though it was reiterated in Obama's 2010 Space Act, to date... No Joy. In that time, at A Million Miles A Day, The Next Large Asteroid on its way to strike Earth has closed 3,138 million miles closer to impact. Time is not on our side here... Tick Tock.

At random, any asteroid of any size anywhere in the Solar System can become perturbed into an impact trajectory with Earth at any time. There is no reason to think that the next asteroid on its way to strike Earth will not do so tomorrow or that it will not be an extinction level impact event... Time is not on our side here and we have not even begun to become prepared to adequately respond to this threat. Today we can only pray for 100 years of continued good luck to become so.

Since this threat includes the prospect of our random, sooner-or-later extinction by asteroid impact, building a Planetary Defense will always be the most important thing Mankind can ever do. If you want America to be Greater, Save the World. To Make America First, take the first leading step and show the planet how to save itself. And where President Obama failed to find the courage to comply with his own law, execute part (b) SEC. 808 of the 2010 Space Act and delegate a responsible Federal Agency in support of an Executive Order codifying our sociopolitical will and enabling the funding our survival.

Then, since the most qualified thinking for *what* to do will always come from those who have become responsible for actually *doing* it, let our duly delegated NPDA tell us just what we need to do and what it will cost to preserve us from our extinction by asteroid impact. Not having such a standing, tested expert agency and capability constitutes a threat even greater than the threat of asteroid impact itself.

2017 Strategic Assessment: <http://Gaiashield.com/TFSW>. Hard copy delivered to you and selected VIPs to-whom-this-should-concern under the cover: <http://DearPOTUS.Com>.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group:  
<http://Gaiashield.Com>

April 2017

Copy to: Honorable Members of the Committee on Science, Space and Technology,

President Trump, Sir:

It has been 3,108 days since Bush signed the 2008 Space Act and first codified the Congressional mandate for the Executive Office to delegate a federal agency to address the threat of asteroid impact. Even though it was reiterated in Obama's 2010 Space Act, to date... No Joy. In that time, at A Million Miles A Day, The Next Large Asteroid on its way to strike Earth has closed 3,108 million miles closer to impact. Time is not on our side here... Tick Tock.

"The history of failure in war, or in any other human endeavor, can be summed up in two words... too late." - General Douglas MacArthur

The existential condition here is that any asteroid of any size anywhere in the Solar System, discovered or undiscovered, can become perturbed into an Earth-orbit crossing orbit and its inevitable or even immediate impact with Earth at any time. Due to the fact that there is no agency yet tasked with the funded mission and responsibility to fully address this threat, we are not even thinking about becoming prepared or trained or vigilant for this inevitability. Waiting until we see it coming before we decide to actually do what may need to be done in response is only likely to beg MacArthur's Too Late as Mankind's epitaph and famous last words.

Anything we can do before we see it coming we should do. And before we see it coming begins...  
Now!

Since this threat includes the prospect of our random, sooner-or-later extinction by asteroid impact, building and maintaining a comprehensive Planetary Defense will always be the most important thing Mankind can ever do. If you want America to be Great, Save the World. For America to be First, take the first leading stem and show the planet how to save itself. And where Obama failed to find the courage to comply with his own law, execute part (b) SEC. 808 of the 2010 Space Act and delegate a responsible Federal Agency as the consequence of an Executive Order codifying our political will to deflect these objects as they become impending Earth impact threats and enabling the funding for our survival.

You can get up to speed here: 2017 Strategic White Paper at DearPOTUS.Com.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group  
Gaiashield.Com

March 2017

Copy to: Honorable Members of the Committee on Science, Space and Technology,

President Trump, Sir:

It has been 3,077 days, since President Bush signed the 2008 Space Act and first codified the Congressional mandate for the Executive Office to delegate a federal agency to address the threat of asteroid impact. Even though it was reiterated in President Obama's 2010 Space Act, to date: No Joy. In that time, at A Million Miles A Day, The Next Large Asteroid on its way to strike Earth has closed 3,077 million miles closer to impact. Time is not on our side here... Tick Tock.

Once upon a time there was a Big Bang... Cause/Effect, Cause/Effect, Cause/Effect and 15 billion years later, at A Million Miles A Day, at random we have some rock; hair-on-fire, screaming around our Solar System on course to the subjective center of the universe. On impact it will generate the equivalence of 1.2 Hiroshima bombs for every man woman and child on the planet: Game Over. No Joy. All there is, gone... Forever. Restart Darwin's Clock, again.

We have neither the standing tested capability to deflect even the smallest of these threats nor any reliable means to even see them coming. We need to either build an effective Planetary Defense or expect to sooner-or-later go extinct by asteroid impact. This existential condition will never change or go a way. What we decide to do in order to effectively deal with this Cosmic Threat today we need to do Forever. And what we can foresee we will need to do tomorrow we need to begin doing today!

You are the Commander and Chief. And like it or not, as such it is your inherent duty to defend this Nation from all threats foreign and domestic... and now Cosmic. To respond to this responsibility, begin by codifying a National Policy that We The People shall endeavor to deflect or destroy these objects as



they present themselves to be impending Earth impact threats. Then, pursuant to part (b) SEC. 808 of the 2010 Space Act, delegate a National Planetary Defense Agency (a hybrid of NASA and DoD's US Space Command) to become responsible and prepared and expert in executing this policy.

You can school yourself here:

The Falling Stars War, 2017 Strategic White Paper - <http://DearPOTUS.Com>

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

At your disposal and convenience:

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group:

<http://Gaiashield.Com>

February 2017

Copy to: Honorable Members of the Committee on Science, Space and Technology,

President Trump, Sir:

It has been 3,049 days, since Bush signed the 2008 Space Act and first codified the Congressional mandate for the Executive Office to delegate a federal agency to address the threat of asteroid impact. Even though it was reiterated in Obama's 2010 Space Act, to date: No Joy. In that time, at A Million Miles A Day, The Next Large Asteroid on its way to strike Earth has closed 3,049 million miles closer to impact. Time is not on our side here... Tick Tock.

It is not enough that you have become the President of the United States when you have the opportunity today to become The Best President Ever. You can literally Save the World by taking the lead and showing the world the first step in saving itself from the threat of extinction by asteroid impact.

The Precautionary Principle: 'Governments should take action to prevent harm even when it is uncertain if, when and where the harm will occur.' It is past time to evolve this business out of the hands and minds of scientists. Science teaches, it does not do. Place it into the hands of expert security minds, tactical and strategic Risk Managers, engineers of technology and method, and do something.

By Executive Order you can codify a National Policy that We The People shall endeavor to deflect or destroy these objects as they present themselves to be impending Earth impact threats. Then, pursuant to part (b) SEC. 808 of the 2010 Space Act, you can delegate a National Planetary Defense Agency (a hybrid of NASA and DoD's US Space Command) to become responsible and prepared and expert in executing this policy.

Apparently Bush was not smart enough and Obama did not have the courage to do this. Pull the trigger. Since this threat is Forever, the name of the man who builds Mankind's Planetary Defense will be remembered for as long as there are asteroids.

The scope of your problems is no longer limited to only Domestic and Global venues. It has become Cosmic as well. Like it or not, know it or not, this business is on your plate. Failure is not an option. If

you would look for War... look up. You can school yourself here: The Falling Stars War, 2017 Strategic White Paper - <http://DearPOTUS.Com>

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

At your disposal and convenience:

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group:

<http://Gaiashield.Com>

January 2017

Copy to: Honorable Members of the Committee on Science, Space and Technology,

President Trump, Sir:

It has been 3,018 days, since Bush signed the 2008 Space Act and first codified the Congressional mandate for the Executive Office to delegate a federal agency to address the threat of asteroid impact. Even though it was reiterated in Obama's 2010 Space Act, to date: No Joy. In that time, at A Million Miles A Day, The Next Large Asteroid on its way to strike Earth has closed 3,018 million miles closer to impact. Time is not on our side here... Tick Tock.

Since this threat will always include the prospect for our extinction by some random large asteroid impact event, and because we can: Knowing which asteroid is The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever know. Deflecting The Next Large 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 Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever be.

**AND WE ARE NOT PREPARED.**

We have had the potential to develop the capability to respond to this threat for 50 years, since Apollo, and we knew of this threat even then. We had developed the capability to go to the Moon and Nukes enough turn the surface of the planet into a radioactive sheet of glass yet we lacked the wisdom to direct this ability to addressing this threat.

Tomorrow, astronomers could discover the next 10 km extinction level asteroid on its way to strike Earth. On that day, the world will look to the US to take the lead in our response. By default, as its President, the responsibility will fall to you to know everything Mankind needs to know to save itself. On that day you will appreciate that we should have had some National Planetary Defense Agency becoming trained and experienced and expert in deflecting asteroids for 50 years. So before we see it coming would be the time to delegate such an agency to begin learning how to save the world. And 'before' begins... NOW! Implement part (b) SEC. 808 of the 2010 Space Act.

This your chance to not just become President but to become The Best President Ever...

The Falling Stars War: 2017 Strategic White Paper - <http://DearPOTUS.Com>

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group:  
<http://Gaiashield.Com>

So far we have done nothing more than count rocks in Space. This is War... and War is good for business: jobs and profits and taxes. Except here, without all the dead soldiers and collateral damage. An economic stimulus.

President Obama, Sir:

There are only 6 days left for you to comply with your own law and implement part (b) SEC. 808 of the 2010 Space Act and begin to defend the planet from the threat of asteroid impact. It is past time to evolve this issue out of the academic domain of scientists and into the hands and minds of those qualified and accustomed to going into Harm's Way. The Next Large Asteroid on its way to strike Earth is closing at A Million Miles A Day... Tick Tock.

Last chance to save the world on your watch:

Once upon a time there was a Big Bang: Cause/Effect, Cause/Effect, Cause/Effect, and today the Universe is a dangerous place. It does not suffer dilettantes or fools gladly. We The Species must either do this right or go extinct thinking about this wrong. If we look for some purpose in the evolution of humanity's industry and genius and power and courage, it can be seen in doing this.

But make no mistake, this is War, and it will last Forever. We did not start it, We were born to it. We did not start it but We must wage it, and wage it well and win or go extinct as a consequence.

*Si vis pacem inTerra, para bellum et Stellae.*

Since it is possible to reliably see it coming, although we may be able to know when the next extinction level asteroid impact has become imminent, it will always be imposible to know when it is not. The absence of evidence is never evidence of absence here. Therefore, how can building a Planetary Defense *Now* not be the most important thing Mankind can ever do?

A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group:  
<http://Gaiashield.Com>  
The Falling Stars War:  
<https://youtu.be/9qmuQCFDjyc>

President Obama, Sir:

There are only 13 days left for you to comply with your own law and implement part (b) SEC. 808 of the 2010 Space Act and begin to defend the planet from the threat of asteroid impact. It is past time to evolve this issue out of the academic domain of scientists and into the hands and minds of those qualified and accustomed to going into Harm's Way. The Next Large Asteroid on its way to strike Earth

is closing at A Million Miles A Day... Tick Tock.

Your OSTP has come up with a “National Near-Earth Object Preparedness Strategy”. However, since a 'strategy' would be defined as what is essential to the conduct of implementing a response, this product presents itself as simply a precursor outline of what needs to be known in order to formulate an actual strategy. To be generous, at least it is a clumsy expression of intent to plan to have a plan. But being so poorly informed, just not a very good one. Of course, the first thing on the list would have to be selecting what tactic we should employ in responding to this threat before we can determine just what would actually be essential to the conduct of implementing it.

Further, this effort is taking place A) in the absence of any National Codified Policy that 'we will endeavor to defend against these objects as they become impending Earth impact threats', justifying such a strategy and the funding necessary to enable its development and B) without any delegated National Planetary Defense Agency to direct such funding to that can become trained and expert and fictionally responsible in executing such a National Policy. And by far the best qualified source for generating any real working strategy.

So what we have here is a 'somebody has to do something' with no money... plan. Trusting scientists, academics and bureaucrats to do your critical strategic thinking... “Come on, man”!

Perhaps the expression of Political Will and a NPDA delegation will be in the forthcoming “National Near-Earth Object Preparedness Action Plan”?

The survival of Mankind is at stake. This is War! Not some super-sized science fair project. Soldier up! Implement part (b) SEC. 808 of the 2010 Space Act then task the NPDA with developing a strategy.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group:

<http://Gaiashield.Com>

The Falling Stars War:

<https://youtu.be/9qmuQCFDjyc>

December 2016

President Obama, Sir:

There are only 20 days left for you to comply with your own law and implement part (b) SEC. 808 of the 2010 Space Act and begin to defend the planet from the threat of asteroid impact. It is past time to evolve this issue out of the academic domain of scientists and into the hands and minds of those qualified and accustomed to going into Harm's Way. The Next Large Asteroid on its way to strike Earth is closing at A Million Miles A Day... Tick Tock.

Happy New Year... let's Hope it is not Mankind's last. There is no reason to think that the next asteroid on its way to strike Earth will not do so tomorrow and that it will not be a 10 km extinction level event. And as things stand, Hope is the only thing we have standing between Mankind and such an event.

However, we have had the potential to develop the capability to effectively respond to this threat for 50 years, since Apollo, and even then, we knew of this threat. We had developed the capability to go to the Moon and Nukes enough turn the surface of the Earth into a radioactive sheet of glass yet we lacked the wisdom to direct this ability to defending ourselves from this threat. So far we have done nothing more than count rocks in Space.

You seem to hold to the notion of someday colonizing Mars. However, since the incidence of asteroid impact in general would be far greater on Mars than on Earth and the threshold for the extinction of humans on Mars would be far lower than it is on Earth. How can we responsibly consider ever going to Mars before we have first mastered the art of Planetary Defense? Planetary Defense: Don't leave home without it.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly. Implement part (b) SEC. 808 of the 2010 Space Act

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group:

<http://Gaiashield.Com>

The Falling Stars War:

<https://youtu.be/9qmuQCFDjyc>

President Obama, Sir:

There are only 27 days left for you to comply with your own law and implement part (b) SEC. 808 of the 2010 Space Act and begin to defend the planet from the threat of asteroid impact. It is past time to evolve this issue out of the academic domain of scientists and into the hands and minds of those qualified and accustomed to going into Harm's Way. The Next Large Asteroid on its way to strike Earth is closing at A Million Miles A Day... Tick Tock.

As things stand, Policy and Agency delegation is just another thing we have put off until we see one coming. If in a hundred years NEOPucker Time comes, then every man, woman and child... every scientist, soldier, businessman, politician and rice paddy farmer on the planet, will all expect The-Powers-That-Be to save and hold us all harmless from its impact. And on that day *they* will all wish their predecessors had the foresight and wisdom to codify a policy and delegate an agency to become prepared and expert in dealing with this dire threat... a hundred years ago. Then, for the want of a nail... the Kingdom of Mankind may be lost.

Defending the planet and our species from our extinction by asteroid impact will be a journey of a thousand miles and for the United States to codify a National Policy and delegate a National Planetary Defense Agency, a single and giant evolutionary first step for Mankind.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group:

<http://Gaiashield.Com>

The Falling Stars War:

<https://youtu.be/9qmuQCFDjyc>

President Obama, Sir:

There are only 34 days left for you to comply with your own law and implement part (b) SEC. 808 of the 2010 Space Act and begin to defend the planet from the threat of asteroid impact. It is past time to evolve this issue out of the academic domain of scientists and into the hands and minds of those qualified and accustomed to going into Harm's Way. The Next Large Asteroid on its way to strike Earth is closing at A Million Miles A Day... Tick Tock.

In the realm of Space and asteroid news this week, the dominant headlines have been 'NASA is not prepared to respond to the threat of asteroid impact.' Of course the first and primary reason that this is so is that NASA has not been tasked with the responsibility to deal with this threat. It does not have the legal and fundable orders to do anymore than count rocks in Space.

The political will to cure this condition could be expressed in an Executive Order codifying a National Policy decision that 'We will endeavor to deflect these objects as they become impending Earth impact threats' as a necessary precedent to complying with the current Congressional mandate. Then, from the relevant strategic and tactical elements of both NASA and the US Space Command, delegate a National Planetary Defense Agency and implement part (b) SEC. 808 of the 2010 Space Act.

Greater than any Great Wall 2.0. And greater than any draining of the swamp in DC would be making America even greater than it is by taking the global lead in building a Planetary Defense and saving Mankind from harm to the point of our extinction by asteroid impact. So, on your way out the door... trump the Trump (mic drop).

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group:

<http://Gaiashield.Com>

The Falling Stars War:

<https://youtu.be/9qmuQCFDjyc>

President Obama, Sir:

There are only 41 days left for you to comply with your own law and implement part (b) SEC. 808 of the 2010 Space Act and begin to defend the planet from the threat of asteroid impact. It is past time to evolve this issue out of the academic domain of scientists and into the hands and minds of those qualified and accustomed to going into Harm's Way. The Next Large Asteroid on its way to strike Earth is closing at A Million Miles A Day... Tick Tock.

This week the United Nations "declares 30 June International Asteroid Day to observe each year at the international level the anniversary of the Tunguska impact over Siberia, Russia, on 30 June 1908 and to raise public awareness about the asteroid impact hazard."

Psychologists would tell us that the first step in addressing a problem is being aware that there is a problem. However, Strategists would tell us that the first step in addressing a problem is having the will to decide to do something about it. Therefore, the political will here would be embodied in a codified National Policy decision that 'We will endeavor to deflect these objects as they present themselves to be impending Earth impact threats' as a necessary precedent in complying with your own law, and from

the relevant strategic and tactical elements of both NASA and the US Space Command, delegating a National Planetary Defense Agency.

This single, first step on a journey of a thousand miles is a can that cannot be kicked down the road any longer. Given the absence of any reiteration of the current asteroid survey program or any mandate to assign a federal agency to be responsible for dealing with this threat in the proffered 2017 Space Act. And the absence of any viable future asteroid mission of any kind on the drawing boards of NASA or any of the space agencies in the world. This road will likely end where the next administration begins.

Courage in the face of understanding here. The dereliction of this duty would constitute a threat greater than The Next Large Asteroid on its way to strike Earth itself. Time to be more than just an American. So, before you go... save the world, please.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group:

<http://Gaiashield.Com>

The Falling Stars War:

<https://youtu.be/9qmuQCFDjyc>

Honorable Members of the Committee on Science, Space and Technology,

Closing at a million miles a day, The Next Large Asteroid on its way to strike Earth is still coming. And still, we do not have a codified National Policy or delegated a Federal Agency to respond to this threat.

Worse, the draft of the 2017 Space Act fails to reiterate the enabling legislation necessary to maintain even the NEO Survey. And in the event the current administration fails to comply with its own law before it retires, this new act also fails to restate “part (b) SEC. 808 of the 2010 Space Act” compelling the Executive Office to appoint a Federal Agency with the authority and responsibility for defending us from this threat.

The absence of these mandates - this gross negligence - constitutes nothing less than the death knell for Mankind's nascent Planetary Defense effort... And as a consequence, sooner-or-later the death of Mankind itself. Fix this!

Once upon a time there was a Big Bang: Cause/Effect, Cause/Effect, Cause/Effect, and today the Universe is a dangerous place. It does not suffer dilettantes or fools gladly. We The Species must either do this right or go extinct thinking about this wrong... or not at all. If we want to look for some purpose in the evolution of humanity's industry and genius and power and courage, it can be seen in building an effective Planetary Defense. How can doing this not be the most important thing Mankind can ever do?

A Million Miles A Day

R. Dale Brownfield

Gaiashield Group

[<http://Gaiashield.Com>](http://Gaiashield.Com)



The Falling Stars War:

<https://youtu.be/9qmuQCFDjyc>

Agency Delegation:

<http://DearPOTUS.Com>

November 2016

President Obama, Sir:

There are 71 days left for you to comply with your own law and implement part (b) SEC. 808 of the 2010 Space Act and begin to defend the planet from the threat of asteroid impact: DearPOTUS.Com. It is past time to evolve this issue out of the academic domain of scientists and into the hands and minds of those qualified and accustomed to going into Harm's Way. The Next Large Asteroid on its way to strike Earth is closing at A Million Miles A Day... Tick Tock.

On 9/14/16 in reference to building a Planetary Defense, your Director of OSTP Holdren was quoted as saying "We are not fully prepared, but we are on a trajectory to get much more so." He says this after 8 years of having failed to manage to do his part and comply with a Congressional mandate endorsed by two Presidents to take the first critical strategic step on this journey of a thousand miles.

Planetary Defense: Preparation - Training - Vigilance, to defend Mankind from extinction by large asteroid impact. And as things stand, we have not yet even begun to think about becoming actually prepared or expertly trained or sufficiently vigilant. To get there, we start here: Executive compliance with 'part (b) SEC. 808 of the 2010 Space Act'. Delegate a qualified U.S. federal agency to become responsible for taking the international lead in defending the planet from asteroid impact events - as a consequence of the globally evolving precedent of a codified National Policy to endeavor to deflect these objects as they present themselves to be impending Earth impact threats.

Then again, Dr. Holdren does only 'Serve At The Pleasure of The President'... so actually, your plate. This is War. We The Species did not start it, We were born to it. You did not start this war but it falls to you to wage it... Give the order.

A Million Miles A Day

R. Dale Brownfield

Gaiashield Group:

<http://Gaiashield.Com>

The Falling Stars War:

<https://youtu.be/9qmuQCFDjyc>

October 2016:

President Obama, Sir:

There are 102 days left for you to comply with your own law and implement part (b) SEC. 808 of the 2010 Space Act and begin to defend the planet from the threat of asteroid impact: DearPOTUS.Com. It is past time to evolve this issue out of the academic domain of scientists and into the hands and minds of those qualified and accustomed to going into Harm's Way. The Next Large Asteroid on its way to strike Earth is closing at A Million Miles A Day... Tick Tock.

Reportedly, at a gala you recently joked 'that the only crises his administration hasn't faced in the last

eight years are an 'asteroid or aliens.' True. You have so far failed to face the existential threat of asteroid impact. Even though the formal responsibility to do so, to take the first critical step, has been on the desk of the Oval Office since the day you became President.

NASA has the heliocentric orbital and manned spaceflight tactical experience, and more launch and mission control facilities. While US Space Command has the strategic mindset, the authority for the disposition of our nuclear arsenal, a far greater and more fungible budget and a 200 year history of defending this country from all threats foreign and domestic. Would it not be far easier to train a soldier for a mission in Space than it would be to train a scientist to be a soldier?

In many ways this is like the Cold War. A war which was waged and we became prepared and trained and vigilant for, but never actually fought. Except here, sooner-or-later and occasionally and at random, we will. And sooner-or-later and occasionally and at random, it will be for the very survival of our species. Not just our ways of life. And if we expect to win this war we must become extremely vigilant, trained to to a level of expertise and prepared to best respond with thermonuclear payloaded delivery systems... Forever. This Is War! Not some super-sized science fair project...

Therefore, the command and control and authority for going in Harm's Way and addressing this Threat should be in the hands and minds of those with aptitudes and training and experience and expertise... those accustomed to dealing with fearful things and dire threats. Then, Fear focuses the mind. Reminds us there are dire consequences if we fail. Fear is our friend. Then, Only Fear Defines Necessity. Not really part of any credo or culture or mindset at NASA.

A Million Miles A Day  
R. Dale Brownfield  
Gaiashield Group  
<http://Gaiashield.Com>

“We are not fully prepared, but we are on a trajectory to get much more so,” Holdren said Wednesday at NASA’s Goddard Space Flight Center, during a discussion of the agency’s planned Asteroid Redirect Mission (ARM). 9/14/16

September 2016

President Obama, Sir:

There are 132 days left for you to comply with your own law and implement part (b) SEC. 808 of the 2010 Space Act and begin to defend the planet from the threat of asteroid impact: DearPOTUS.Com. It is past time to evolve this issue out of the academic domain of scientists and into the hands and minds of those qualified and accustomed to going into Harm's Way. The Next Large Asteroid on its way to strike Earth is closing at A Million Miles A Day... Tick Tock.

Before you go: You will not be able to defeat ISIS or eliminate Terrorism; Or fix all the problems with our Health Care system; Or stimulate our economy back to the level of the Dot Com Bubble days; Or bring us World Peace in our time; Or cure Cancer or eliminate Racism or solve the Drug Problem or make everybody Highly Intelligent, Well Educated, Wise and Beautiful... But you can Save The World.

By Executive Order: Declare a National Policy that the United States will endeavor to deflect these objects as they present themselves to be impending Earth impact threats. Then by the Congressionally

mandated 2010 Space Act: comply with part (b) SEC. 808 and delegate a National Planetary Defense Agency in order implement and execute that policy... And the rest of the world will follow.

Once upon a time there was a Big Bang: Cause/Effect, Cause/Effect, Cause/Effect, and today the Universe is a dangerous place. It does not suffer dilettantes or fools gladly. We The Species must either do this right or go extinct thinking about this wrong. If we look for some purpose in the evolution of humanity's industry and genius and power and courage, it can be seen in doing this.

*Si Vis Pacem, Para Bellum.*

How can building a Planetary Defense not be the most important thing Mankind can ever do? How can you think it wise to leave this most critical of Mankind's first steps to whatever intellectual vacuum may come to fill The Oval Office when you leave?

A Million Miles A Day  
R. Dale Brownfield  
Gaiashield Group  
<http://Gaiashield.Com>

August 2016

President Obama, Sir:

There are 163 days left for you to comply with your own law and implement part (b) SEC. 808 of the 2010 Space Act and begin to defend the planet from the threat of asteroid impact: DearPOTUS.Com. It is past time to evolve this issue out of the academic domain of scientists and into the hands and minds of those qualified and accustomed to going into Harm's Way. The Next Large Asteroid on its way to strike Earth is closing at A Million Miles A Day... Tick Tock.

The current 'scientific' approach to Planetary Defense is a Hope based approach. Not managing the risk but taking it... Gambling. Leaving everything to chance and Good Luck.

We Hope:

- That with the Scientific Survey approach we will discover the next asteroid impact threat.
- That it will have been perturbed into an apparent Earth impact trajectory before we discover it.
- That it will be small in order to accommodate our extemporaneous deflection capability.
- That the Detection-to-Impact Window will be large to accommodate our extemporaneous plan.
- That there will be a Launch/Transit Window we can execute a response through.
- That the Launch/Transit Window is early enough to afford a suitable Displacement Window.
- That the Launch/Transit Window is late enough to afford us the time to select, design, develop, build, test, train personnel, deploy and execute an effective response.
- That such a hasty 11th Hour mission will not be stalled by political indecision and ignorance, or delayed in production, or blow up on the launch pad, or fail to achieve heliocentric orbital insertion, or get lost in Space, or miss the target, or not be big enough, or any otherwise fail to perform as advertised... or hoped.

A Goldilocks approach: everything has to be just right. A naive linear strategy that is only a formula for our sooner-or-later suicide by asteroid impact. Hope is not method. Leave Nothing To Chance.

Once upon a time there was a Big Bang: Cause/Effect, Cause/Effect, Cause/Effect, and today the Universe is a dangerous place. It does not suffer dilettantes or fools gladly. We The Species must either do this right or go extinct thinking about this wrong. If we look for some purpose in the evolution of humanity's industry and genius and power and courage, it can be seen in doing this.

How can building a Planetary Defense not be the most important thing Mankind can ever do?

A Million Miles A Day  
R. Dale Brownfield  
Gaiashield Group  
<http://Gaiashield.Com>

Notes: *For engineers of method: professional strategic thinkers and executive decision makers, Risk Management is the art of applied rational pessimism... We stack the deck, fix the race, load the dice... game the system... Cheat. We Leave Nothing To Chance. No Optimism Allowed! No expectations of Good Luck.*

*The Hope Based Ex Post Foresight-Free Planetary Defense (wait until we see the next one coming before we actually do anything strategy, aka: the Blah/Blah/Blah/Blah... BANG! Plan): like planning to wait until your house catches fire before you build a fire department.*

Abandon all Hope, ye who enter here.

July 2016

President Obama, Sir:

There are 194 days left for you to comply with your own law and implement part (b) SEC. 808 of the 2010 Space Act (due October 2012) and begin the saving of the world from the threat of asteroid impact: <http://DearPOTUS.Com>. It is past time to evolve this issue out of the academic domain of scientists and into the hands and minds of those qualified and accustomed to going into Harm's Way. 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... Tick Tock.

Once upon a time there was a Big Bang... Cause/Effect, Cause/Effect, Cause/Effect and 15 billion years later we have some rock; hair-on-fire, screaming around our Solar System on course to the subjective center of the universe. On impact it will generate the equivalence of 1.2 Hiroshima bombs for every man woman and child on the planet: Game Over. No Joy. All there is, gone... Forever. Restart Darwin's Clock, again.

This would only be the threshold for the worst case scenarios. However, we have neither the standing tested capability to deflect even the smallest manifestation of this threat nor any reliable means to even see them coming. What is required is a network of space based full spectrum surveillance observatories strategically deployed throughout the Solar System informing a squadron of nuclear armed BattleStar Class interceptor craft stationed to the orbit of Mars manned and operated by planetary defenders trained and experienced to the point of expertise.

We need to either build an effective Planetary Defense or expect to sooner-or-later, at random, go extinct by asteroid impact. This existential condition will never change or go away. What we decide to do in order to effectively deal with this Cosmic Threat today we need to do forever. And what we can

foresee we will need to do tomorrow we need to begin doing today! Neither Gods or Odds will defend us from this threat. We must do this for ourselves. The Sky Is Falling... *Now!*

Part (b) SEC. 808 of the 2010 Space Act is the first step on a never ending journey to defend Mankind from the prospect of our extinction by asteroid impact.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day  
R. Dale Brownfield  
Gaiashield Group  
<http://Gaiashield.Com>

June 30 2016

Honorable Members of the Committee on Science, Space and Technology,/Mr. President, Sir:

Happy Asteroid Day! <<http://asteroidday.org/>>

A celebration that 108 years ago We The Species were lucky when the rock that exploded over Tunguska was not 10km in diameter and that Mankind did not go extinct before all of us here today were even born.

24 hour Free screening if the indie film 51 Degrees North.

The sky is falling all over the world...

<<https://vimeo.com/170546202>>

Since this threat will always include the prospect for our extinction by some random large asteroid impact event, and because we can, knowing which asteroid is The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever know. And deflecting The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever do. And being prepared to effectively respond to the threat of The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever be.

And we are not prepared.

Enforce/Implement part (b) SEC. 808 of the 2010 Space Act.

A Million Miles A Day  
R. Dale Brownfield  
Gaiashield Group  
<<http://Gaiashield.Com>>  
<<http://Gaiashield.Com/SBAG/>>  
<<http://DearPOTUS.Com>>  
The Falling Stars War:  
<<https://youtu.be/9qmuQCFDjyc>>

June 2016

Honorable Members of the Committee on Science, Space and Technology,

It has been 1,155 days since this committee has considered the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 1,155 million miles closer to impact. And still, we do not have a codified National Policy or delegated a Federal Agency to respond to this threat. Tic Toc...

Submitted to the NAE in response to their call for ideas for Mega Engineering Projects:  
The Falling Stars War:  
<<https://youtu.be/9qmuQCFDjyc>> or PDF <<http://gaiashield.com/TFSW/TFSW.pdf>>  
(Note the written commentary below the video.)

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group: <http://Gaiashield.Com>

### *The Falling Stars War*

Once upon a time there was a Big Bang...  
Cause/Effect, Cause/Effect, Cause/Effect  
and 15 billion years later, at A Million Miles A Day,  
we have some rock; hair-on-fire,  
screaming around our Solar System  
on course to the subjective center of the universe.

On impact it will generate the equivalence of 1.2 Hiroshima  
bombs for every man woman and child on the planet:  
Game Over. No Joy. All there is, gone... Forever.  
Restart Darwin's Clock, again.

Since this threat will always include the prospect for our  
extinction by some random large asteroid impact event,  
and because we can, knowing which asteroid is  
The Next Large Asteroid on its way to strike Earth  
will always be the most important thing Mankind can ever know.  
And deflecting The Next Large Asteroid on its way to strike Earth  
will always be the most important thing Mankind can ever do.  
And being prepared to effectively respond to the threat of  
The Next Large Asteroid on its way to strike Earth  
will always be the most important thing Mankind can ever be.

And we are not prepared.

And this knowing, this doing and this being will always be

the most important thing Mankind can ever understand.  
And with the survival of the species in the balance:  
At any cost. By any means necessary...  
Failure is not an option.

We have neither the standing tested capability  
to deflect even the smallest of these threats  
nor any reliable means to even see them coming.

What is required is a network of space based  
full spectrum surveillance observatories  
strategically deployed throughout the Solar System  
informing a squadron of nuclear armed BattleStar  
Class interceptor craft stationed to the orbit of Mars  
manned and operated by planetary defenders  
trained and experienced to the point of expertise.

We need to either build an effective Planetary Defense or  
expect to sooner-or-later go extinct by asteroid impact.  
This existential condition will never change or go a way.  
What we decide to do in order to effectively deal  
with this Cosmic Threat today we need to do forever.  
And what we can foresee we will need to do tomorrow  
we need to begin doing today!

Time is simply not on our side...  
The Sky Is Falling... *Now!*

And we start The Falling Stars War...  
here: <DearPOTUS.Com>

The Universe is a dangerous place.  
It does not suffer dilettantes or fools gladly.

Gaiashield Group: <Gaiashield.Com>

June 2016

President Obama, Sir:

There are 224 days left for you to comply with your own law and implement part (b) SEC. 808 of the 2010 Space Act (due October 2012) and begin the saving of the world from the threat of asteroid impact: <http://DearPOTUS.Com>. It is past time to evolve this issue out of the academic domain of scientists and into the hands and minds of those qualified and accustomed to going into Harm's Way. 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... Tick Tock.

Five strategically relevant and fearful core existential conditions the academic experts have been afraid to account for in shaping and informing their assessment of this Cosmic threat:

- A) The prospect and threat of asteroids striking Earth is an existential condition that will never change and will persist... Forever.
- B) Since there is no imaginable response we can direct against the general threat of asteroid impact the only responsible definition of this threat would be: The Next Large Asteroid on its way to strike Earth.
- C) The proximate cause of all asteroid impact events would be some random and dramatic kinetic or gravitational perturbation. Therefore no asteroid in the Solar System can ever be considered 'safe'.
- D) There is no Cosmic mechanism to cause asteroids to strike Earth periodically. Asteroid impact events are completely random: without any recursive pattern, both in their occasion and magnitude.
- E) Our rational expectation for the next asteroid impact event should Forever include the existential condition of a 10km extinction level event and that such an event can occur... tomorrow.

Expanded logics:

The Falling Stars War:

<http://gaiashield.com/TFSW/TFSW.pdf>

or <https://youtu.be/9qmuQCFDjyc>

Will you allow the opportunity for the legacy of 'the President of the United States who saved the world from asteroid impact' to default to your successor? Worse, your legacy may be of the man who failed to act, take the first crucial step, and left Mankind to go extinct by asteroid impact. Comply with your own law and delegate the operational responsibility for dealing with this threat from the Executive Office to a qualified agency and let them become prepared and trained and expert before they must save the world in fact.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>

May 2016

President Obama, Sir:

There are 255 days left for you to comply with your own law and implement part (b) SEC. 808 of the 2010 Space Act (due October 2012) and begin the saving of the world from the threat of asteroid impact: <http://DearPOTUS.Com>. It's past time to evolve this issue out of the academic domain of scientists and into the hands and minds of those qualified and accustomed to going into Harm's Way and effectively responding to fearful things. And since 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... Tick Tock.

How can we ever consider ourselves smart and wise until we understand that since it will always



include the prospect for our extinction by some random large asteroid impact event, and because we can, knowing which asteroid is The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever know. And deflecting The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever do. And being prepared to effectively respond to the threat of The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever be. And only when we have a codified National Policy and Delegated National Agency under the onus of a dire responsibility to respond to this threat can we ever expect these most important things to be done right and done well.

This existential condition will never change or ever go away. What we decide to do in order to effectively deal with this Cosmic Threat today we need to do Forever. And what we can foresee we need to do in the future we need to begin doing Now!

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>

Comments on NASA's assessment of the risk: <http://Gaiashield.Com/SBAG/>

PS: June 30 2016 is Asteroid Day: AsteroidDay.Org.

Apr 2016

Mr. President,

June 30 2016 is Asteroid Day AsteroidDay.Org. Spread the word: The Sky Is Falling... Now!

And perhaps a good day for you to comply with your own law and implement part (b) SEC. 808 of the 2010 Space Act: DearPOTUS.Com... take the first step on a never ending journey to defend Mankind from the prospect of our extinction by asteroid impact.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: Gaiashield.Com

Apr 2016 (cced to POTUS)

Honorable Members of the Committee on Science, Space and Technology,

It has been 1,095 days since this committee has considered the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 1,095 million miles closer to impact. And still, we do not have a codified National Policy or delegated a Federal Agency to respond to this threat. Tic Toc...

I understand that you are all about to head home to focus on your end of the democratic process and will endeavor to do what you do best. However, try to keep in mind that since it will always include the prospect for our extinction by some random large asteroid impact event, and because we can, knowing

which asteroid is The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever know. And deflecting The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever do. And being prepared to effectively respond to the threat of The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever be.

AND WE ARE NOT PREPARED!

This threat will never change or go away. What we decide to do to effectively deal with this Cosmic Threat today we need to do Forever. And what we can foresee we need to do in the future we need to begin doing Now! The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

So before you go forth to court the approval of your respective electorates, do something to remind POTUS to comply with his own law and implement part (b) SEC. 808 of the 2010 Space Act: <<http://DearPOTUS.Com>>. Make a single and first step on a never ending journey of a thousand miles to defend We The Species from the prospect of extinction by asteroid impact.

A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group: <<http://Gaiashield.Com>>

PS: Asteroid Day is coming, 6/30/16 <<http://asteroidday.org/>>. Spread the word: The Sky Is Falling... Now!

Mar 2016

Honorable Members of the Committee on Science, Space and Technology,

It has been 1,063 days since this committee has considered the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 1,063 million miles closer to impact. And still, we do not have a codified National Policy or delegated a Federal Agency to respond to this threat. Tic Toc...

Executive Summary of the Fundamental Existential Conditions:

- A) The prospect of asteroids striking Earth is an existential condition that will persist... Forever.
- B) There is no imaginable strategic response we can direct against the existential condition and threat of asteroid impact systemically: we can not change the laws of physics and affect the condition of impending Earth impact threats or beam these asteroids to a Galaxy far, far away. We can only respond to this threat tactically, as asteroids become manifest as impending impact threats individually, one rock at a time. Therefore, the only strategically responsible definition of the threat would be in its tactical definition: 'the next asteroid on its way to strike Earth'. And within that, given the greater magnitude of loss, the best definition of the threat would Forever be 'The Next Large Asteroid on its way to strike Earth'.
- C) The proximate cause of all asteroid impact events would be some random and dramatic kinetic or gravitational perturbation. The proximity of an asteroid's orbit to Earth's orbit is generally irrelevant. As such, any asteroid in the Solar System: PHA, NEO, NMO, Main Belt or Trojan, of any size; discovered

or undiscovered, can become perturbed into an Earth-orbit crossing orbit and its inevitable impact with Earth, at any time. Therefore, the only rational expectation we can hold is that The Next Large Asteroid on its way to strike Earth has already been or will eventually be generated by some random and dramatic kinetic or gravitational perturbation. And no asteroid in the Solar System can ever be considered 'safe' unless it has been completely destroyed.

D) Since there is no imaginable Cosmic mechanism that could periodically generate asteroid impact events, nor is there any empirical dated Earth impact crater evidence that suggests that such events are periodic. And since, relative to each other, at any given moment the distribution, speed and direction of asteroids in our Solar System is random: without any recursive pattern. And further, that these variables are dynamic, we can only conclude that their perturbation into Earth-orbit crossing orbits or direct Earth impact threats will occur at random. Therefore, we can understand and characterize asteroid impact events as completely random: without any recursive pattern, both in their occasion and magnitude. Therefore, a rational expectation for The Next Large Asteroid on its way to strike Earth to become manifest at random/at any time would include the prospect for the next 10km Chicxulub Class extinction level threat... Forever.

#### Fundamental Strategic Conditions:

All that is required for one asteroid impact event is the behavior of just one asteroid. The behavior of all the rest and how many asteroids there are is strategically irrelevant. Further, until we know which asteroid is the next asteroid on its way to strike Earth we can not know when it will strike or how large it will be. Worse, we can *never* know when we are going to know which, when and how large until it is... Now!

Then, with the mere possibility of:

- a) just one undiscovered NEO. Or
- b) the dramatic perturbation of just one discovered NEO. Or
- c) the diversion of just one Main Belt asteroid into a new NEO/ECA orbit.

The near-term risk of one asteroid impact event stands complete and unmitigated.

Comments on NASA's assessment of the risk: <http://Gaiashield.Com/SBAG/>.

Since it will always include the prospect for our extinction by some random large asteroid impact event, and because we can, knowing which asteroid is The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever know. And deflecting The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever do. And being prepared to effectively respond to the threat of The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever be.

**AND WE ARE NOT PREPARED!**

This threat will never change or go away. What we decide to do to effectively deal with this Cosmic Threat today we need to do Forever. And what we can foresee we need to do in the future we need to begin doing Now! The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

Enforce part (b) SEC. 808 of the 2010 Space Act.

A Million Miles A Day,  
R. Dale Brownfield

Gaiashield Group: <<http://Gaiashield.Com>>

Feb 2016

Honorable Members of the Committee on Science, Space and Technology,

It has been 1,035 days since this committee has considered the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 1,035 million miles closer to impact. And still, we do not have a codified National Policy or delegated a Federal Agency to respond to this threat. Tic Toc...

False Alarm... or that would actually be False All Clear. NASA's new Planetary Defense Coordination Office is only an internal administrative facade in response to the latest asteroid survey budget increase and subsequent recommendations of NASA's Office of Inspector General. No new responsibilities for defending the planet from asteroid impact have been assigned or taken here. This is only addressing the bureaucratic pro forma accounting for the cost of counting rocks in Space. No one is any safer as a consequence of either this Cosmic census or the creation of the PDCO.

However, this could at least be taken as the troops leaning to the sound of the guns. What they still need are the formal marching orders: the legal authority and responsibility, in order to secure the resources they need to win this war. And make no mistake, we are at war. We are just not fighting back... yet.

We The Species need to declare war here. And the United States needs to take the lead with a codified National Policy to endeavor to deflect these objects as they present themselves as impending Earth impact threats. Which would justify the delegation of a National Planetary Defense Agency to become capable and expert in executing such a policy.

We already have the law for the second step: part (b) SEC. 808 of the 2010 Space Act\*. And this POTUS has one more year to comply with his own law <<http://DearPOTUS.Com>>. Perhaps we need to take the first step first: Policy before Agency, in order to make the second step possible so. Your plate? Or does POTUS make National Policy and formal declarations of war?

Since it will always include the prospect for our extinction by some random large asteroid impact event, and because we can, knowing which asteroid is The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever know. And deflecting The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever do. And being prepared to effectively respond to the threat of The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever be.

**AND WE ARE NOT PREPARED!**

This threat will never go away. What we decide to do to effectively deal with this Cosmic Threat today we need to do Forever. The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <<http://Gaiashield.Com>>

\*(b) Implementation.--The <<NOTE: Deadline.>> 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'."

(Draft)

Jan 2016

Honorable Members of the Committee on Science, Space and Technology,

It has been 1,004 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 1,004 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat. Tic Toc...

Although, as of a couple days ago, in approaching this issue backwards, we do now seem to have the beginnings of a delegated Federal Agency to become competent and expert in implementing that response: NASA's new Planetary Defense Coordination Office. To any of you who may have been instrumental in lobbying the Executive Office to comply with its own law, Mankind thanks you. For the rest, you have a second chance to help Save the World. As is, this PDCO is little more than a baby step on a journey of a thousand miles. Not the journey complete. Creating the PDCO is a bare minimum response to the letter of the law: part (b) SEC. 808 of the 2010 Space Act. Not the 40 acre thousand man international complex with a multi billion dollar annual budget that will ultimately be required (justifications available on request), but it is, nonetheless, a seed. It can be evolved and grown into what we need... Just add more money. A lot more. Then make sure it is spent in the right places. You don't get what you don't pay for. Unless this is only a facade and just another unfunded mandate leaving this first small step to become nothing more than that.

Funding is your plate. Perhaps it would help if you took one more step backwards here and codified a National Security Policy to endeavor to deflect these objects as they presented themselves to be impending Earth impact threats... declare War on The Next Large Asteroid on its way to strike Earth. Or is policy the exclusive purview of POTUS?

And who is this Lindley Johnson\*? Today, with the creation of the Planetary Defense Coordination Office and as Planetary Defense Officer he is now the first and only person on Earth formally charged with the responsibility to defend the planet from asteroid impact. So what is his understanding of the threat and what is his plan? After all, this threat will always include the credible and imminent potential for our random extinction by asteroid impact. We The Species are entitled to a public position paper with a clear and comprehensive detailed statement of his understanding of the threat and his long term objectives and strategy. Exactly how does he plan to spend our money? It's not like we need to keep any state secrets from the enemy here. Is PDO Johnson just another astronomer or does he have the risk management, strategic thinking and decision making abilities to do this job right?

Since it will always include the prospect for our extinction by some random large asteroid impact

event, and because we can, knowing which asteroid is The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever know. And deflecting The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever do. And being prepared to effectively respond to the threat of The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever be. And we are not even remotely prepared. Which would make PDO Johnson's job the most important job in the World... no pressure.

This threat will never go away. What we decide to do to effectively deal with this Cosmic Threat today we need to do Forever. The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>

\* Preparing for Planetary Defense (USAF Spacecast 2020) 1995

<http://fas.org/spp/military/docops/usaf/2020/app-r.htm>

(Draft)

Honorable Members of the Committee on Science, Space and Technology,

It has been 912 days since this committee has considered the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 912 million miles closer to impact. And still, we do not have a codified National Policy or delegated a Federal Agency to respond to this threat. Tic Toc...

If you do not want to actually defend the planet and Mankind from extinction by asteroid impact:

Astronomers

Probability

Perturbation

Optimism/Hope

Survey

Preparation

Training

Deployment

Nukes

Budget

Agency/DoD

If you like the feeling of being safe behind a cheap-and-easy facade of probabilistic sophistry and academic slights-of-mind and ignorance, simply follow the above recommendations.

A Million Miles A Day,  
R. Dale Brownfield

Gaiashield Group: <<http://Gaiashield.Com>>

Agency Delegation: <<http://Gaiashield.Com/NEOHearing>>

Jan. 2016 (unsent, PDCO created... success)

Honorable Members of the Committee on Science, Space and Technology,

It has been 1,004 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 1,004 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

In December 2015, a team of scientists revealed another aspect of the Cosmic impact threat... Centaurs. Unlike their namesake, these beasts are not mythological. With a composition of half Asteroid half Comet they are likely rogue Kuiper Belt objects that orbit between the orbits of Jupiter and Neptune. And if they can be randomly perturbed from the Kuiper Belt they can, and likely have been, randomly perturbed into orbits taking them into the inner Solar System and Earth-orbit crossing orbits and even direct Earth impact. Further, the ~60 known members of this population have all so far ranged in size well above the threshold of generating an extinction level impact event on their impact with Earth... Merry Christmas!

Keeping in mind that all that is required to generate the next impact event is the random perturbation of just one object, the question is will our next extinction impact event be due to an Asteroid or Comet or now a Centaur striking Earth?

We have been taking the threat of Cosmic Impact seriously for going on 20 years... and this dire aspect is just coming out now! The first Centaur was discovered by JPL nearly 100 years ago and they have been recognized as a distinct population for 40 years. What were these astronomers thinking: wait until the next Centaur, hair-on-fire crosses the orbit of Jupiter 9 months away from Earth impact before they tell us to 'watch out for Centaurs'? More proof that scientists make poor risk managers and that these people desperately need adult supervision. They not only fail to see all the dots in the big picture but absent any inherent subjective perspective, fail to connect them into a coherent picture as a threat. In short, scientists don't have the strategic sense God gave a bucket of frogs.

It is past time to evolve this business into the hands and minds of those qualified and experienced with managing risks. Past time to have someone that can become explicitly responsible and expert in responding to this threat.

Enforce part (b) SEC. 808 of the 2010 Space Act.

A Million Miles A Day,  
R. Dale Brownfield



Gaiashield Group: <<http://Gaiashield.Com>>  
Agency Delegation: <<http://Gaiashield.Com/NEOHearing>>

Dec. 2015

Honorable Members of the Committee on Science, Space and Technology,

It has been 973 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 973 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

It is one thing, and sad, when our duly elected Government agents can not come together and rise above their partisan interests to codify and pass laws that improve and protect the society it has sworn to serve... but only sad. But what is it when on the rare occasion that Government actually does its job and then fails to comply with its own duly passed law: criminal negligence? Then, when such a failure is in the hands of the President: a misdemeanor or high crime or bribery or treason? And if this law addresses a clear and present existential threat and is strategically relevant to the security and survival of the country, to which you have all sworn to defend against "all threats foreign and domestic", then as Commander In Chief a gross dereliction of duty? Then the question for the President here would be should he be Censored or Impeached or stand Court Martial?

Of course you Democrats may settle for just some little low grade excoriation in the press. But on the other hand, you Republicans... no holds barred.

Is it that you have had second thoughts about facing this truth? Is it like the man said about some truth: "You can't handle the truth!" In case you still do not know or have forgotten what this dire truth is:

We do not know which of the billions of asteroids out there is The Next Large Asteroid on its way to strike Earth. Therefore, until we do, we do not/can not know when it will strike or how large it is. Worse, we can never know when we are going to know which, when or how large... until it is Now.

Since it will always include the prospect for our extinction by some random large asteroid impact event, and because we can, knowing which asteroid is The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever know. And deflecting The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever do. And being prepared to effectively respond to the threat of The Next Large Asteroid on its way to strike Earth will always be the most important thing Mankind can ever be... and the dire and fearful truth is WE ARE NOT PREPARED!

Let's get POTUS to comply with his own law: Enforce part (b) SEC. 808 of the 2010 Space Act.

The Universe is a dangerous place. It does not suffer dilettantes or fools gladly.

A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group: <<http://Gaiashield.Com>>  
Agency Delegation: <<http://Gaiashield.Com/NEOHearing>>

Nov. 2015

Honorable Members of the Committee on Science, Space and Technology,

It has been 942 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 942 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

Trick or Treat! On November 31, Halloween, the asteroid/comet... object 2015 TB145 missed Earth by 300,000 miles. That was the Treat part. The Trick was we only saw it coming 30 days before. If it were traveling only a few cm/sec faster/slower or a fraction of an arcsecond left/right it may have been on course to strike Earth. And at 30 days, as things stand, we would have zero capability to deal with it. Then late last September we had that BloodMoon close passage. And if you have been following this phenomenon, close passages by some asteroid have been observed to be randomly occurring at a rate of about a dozen such events a year for the last few years.

But the scary part here is that the 12,000 asteroids we have discovered is estimated to be only 1% of the population Astronomers consider hazardous. In other words, by extension, there may be 100 times more asteroids passing close to Earth that we do not see. Given the two ground based observatories and the one hand-me-down space telescope working with NASA to discover these things, it would be completely unreasonable to expect their scientific survey to in any way serve as any reliable form of strategic surveillance and early impact detection capability. We have been lucky... so far. But then the more we chose to gamble, the sooner we lose.

The problem here is that NASA is just following orders. Orders shaped and informed by astronomers and assorted academics (who simply don't have the strategic sense God gave a bucket of frogs) to conduct a scientific survey of the Near Earth-orbit Object population, a census... count rocks in Space. And it's doing a good job at that. However, they are bad orders. Due principally to the fact that neither NASA or DoD has ever been made responsible for any level of strategic surveillance and early warning or finding The Next Large Asteroid on its way to strike Earth or doing anything about it when it does.

The solution would be to delegate the responsibility for dealing with this threat in a qualified hierarchy of authority and decision making: Political, Strategic and Tactical. The Tactical can shape and inform the Strategic and the Strategic can shape and inform the Political. And then maybe we can get the right orders. Only orders shaped by the fear and consequences of failure are ever good orders.

Since all asteroid impacts are caused by some random and dramatic kinetic or gravitational perturbation event, all asteroid impact events occur at random: without any recursive pattern. Therefore, Tactically, we can never know which asteroid is The Next Large Asteroid on its way to strike Earth until we see it coming. Consequentially, we can not know when it will strike or how large it will be until then. Worse, Strategically, we can not know when we are going to know which, when or how large until it is Now! And as of Now, Tactically, Strategically or Politically, we are not remotely prepared.

Start Here: Enforce part (b) SEC. 808 of the 2010 Space Act.

A Million Miles A Day,  
R. Dale Brownfield  
Gaiashield Group: <<http://Gaiashield.Com>>  
Agency Delegation: <<http://Gaiashield.Com/NEOHearing>>

Oct. 2015

Honorable Members of the Committee on Science, Space and Technology,

It has been 912 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 912 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

Last year NASA contracted with Arizona State University's Consortium for Science, Policy & Outcomes to conduct A Citizen Participatory Technology Assessment for NASA's Asteroid Initiative. An element of which was NASA's Asteroid Grand Challenge: to "find all asteroid threats to human populations and know what to do about them". Since NASA funded the project and provided the background information and understanding, we have ideal conditions for Garbage In - Garbage Out. Last week the final report was posted\* and that's just what we got.

In one scenario, a 5 km asteroid is detected 50 years away from impact. With an understanding shaped and informed only by what they brought with them gleaned from public media and what NASA provided them at the study, 42.6% of the participants chose to respond with a Kinetic Impactor tactic while 39.4% chose a Nuclear option. Clearly, 42.6% were not informed well enough by either media or NASA to appreciate the manifestation of their choice. Since the Kinetic Impactor approach would require 250,000 Atlas Vs to execute while the same mission and effect could be achieved with Nukes and only 25 Atlas Vs. Which would you choose, Congressman?

But first we need to look at that Asteroid Grand Challenge:

A) "find all asteroid threats to human populations" Since the proximate cause for all asteroid impacts is some random and dramatic kinetic or gravitational perturbation event, any asteroid in the Solar System of any size: be it ECA, PHA, NEO, NMO or Main Belt; or 10 m or 100 m or 1,000 m or 10,000 m or greater, is a fair candidate for becoming the next asteroid on its way to strike Earth. Therefore, if we are to "find all asteroid threats to human populations" we need to watch all the asteroids all the time... Forever. And no one at NASA is even thinking about doing something like that.

B) "and know what to do about them" How is knowing what to do remotely the same as being prepared to actually do something? Knowing that if your house catches fire you will need a fire department is not the same as having a fire department at the ready should your house catch fire. We would not think it in any way wise to wait until our house catches on fire before we build a fire department. Here, NASA relies on a Hope based academic approach to the threat. They Hope that the next asteroid will be small and that the Detection-to-Impact window will be large and that hasty extemporaneous capabilities will work as advertised to the degree that they actually 'know' it... A formula for suicide by asteroid impact.

Until we have a codified policy to deflect these objects as they present themselves to be impending Earth impact threats and NASA and/or DoD has been formally charged with the responsibility and authority to implement such a policy, no one at NASA or DoD is going to even think about this any better than they do now. Let alone be prepared to actually do anything effective. So until we have expressed the political will and qualified agents under the onus of Duty, when the time comes to deal with the next asteroid threat expect nothing more than Garbage In - Garbage Out.

Enforce part (b) SEC. 808 of the 2010 Space Act.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <<http://Gaiashield.Com>>

Agency Delegation: <<http://Gaiashield.Com/NEOHearing>>

\* <<http://cspo.org/library/informing-nasas-asteroid-initiative-a-citizens-forum-full-report/>>

Sept. 2015

Honorable Members of the Committee on Science, Space and Technology,

It has been 882 days since this committee has considered the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 882 million miles closer to impact. And still, we do not have a codified National Policy or delegated a Federal Agency to respond to this threat. Tic Toc...

Rev. Rodriguez has written to NASA and extensively online proficizing that on or about 9/24/15, at the forth Blood Moon, a 2.5 mile asteroid will strike and destroy Earth. We know a Blood Moon can not cause or harbinger an impact event. However we should recognize that the random chance for a large asteroid impact event is the same on Sept. 24 as it is on any other day in the life of Earth and the reverend could get lucky and call it. But experts at NASA seem to think we have reason to be confident we are safe...

From a low level NASA spokesman: "Fortunately, I'm happy to report, we know of nothing that is currently headed our way...nothing that we know of is threatening Earth at this time". We could have said the same thing 100 years ago, before we ever even thought to spell asteroid as a threat. Ignorance is still bliss. Unfortunately, in strategic terms: NASA has so far failed to identify The Next Asteroid on its way to strike Earth. Such a comment needs to be qualified with a disclaimer as to the low level of our capability to know when something threatening is currently headed our way.

Then from a JPL spokesman: "If there were any object large enough to do that type of destruction in September, we would have seen something of it by now," You can't see what you're not looking at. Since we never look inside the orbit of Earth, and only at night at the dark of the moon... weather permitting, and seldom more than 15 degrees above or below the ecliptic. And we only look at the tiny area around and track newly discovered asteroids for hours or days, long enough to determine their orbital elements, then move on to find another one. And at random, asteroids collide with each other or pass close to other gravitational objects and become perturbed into new orbits (the proximate cause of asteroid impact events). And we ignore the potential for any impact threats being perturbed out of the Main Belt... How can we consider this comment intelligent?

and "There is no existing evidence that an asteroid or any other celestial object is on a trajectory that will impact Earth, In fact, not a single one of the known objects has any credible chance of hitting our planet over the next century. There is no scientific basis, not one shred of evidence, that an asteroid or any other celestial object will impact Earth on those dates." Conversely, there is no existing evidence that an asteroid or any other celestial object is not. The absence of evidence is not evidence of absence. And here, the absence of the ability to collect Real Time evidence for all the asteroids in the Solar System is virtually complete.

Given the random potential for kinetic or gravitational perturbation, although it is possible to know when an observed asteroid is on an impact trajectory with Earth, it is impossible to know if an observed asteroid will 'become' a near term Earth impact threat. What happens to an asteroid after we take our eyes off it is anybody's guess. So the question to NASA is: Do you know where your asteroids are... now?

Perhaps if NASA, in conjunction with DoD were formally tasked with the responsibility for defending the planet from this threat, the Fear of Failure would get us a lot more truth and a lot less pap and unwarranted comfort-food-for-thought. Fear focuses the mind - reminds us there are dire consequences if we fail. Fear makes us smarter.

Enforce part (b) SEC. 808 of the 2010 Space Act.

A Million Miles A Day,  
R. Dale Brownfield

Gaiashield Group: <<http://Gaiashield.Com>>

Agency Delegation: <<http://Gaiashield.Com/NEOHearing>>

Aug. 2015

Honorable Members of the Committee on Science, Space and Technology,

It has been 851 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 851 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

By now, you would have to have been living in a cave not to be aware of the threat of asteroid impact. So, is it a matter of short term self interest, or cowardice or simple stupidity when we fail to understand that: Since it will always include the prospect for our extinction by random asteroid impact - 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. And Deflecting the next asteroid on its way to strike Earth will always be the most important thing Mankind can ever do. And 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.

At Random: without any recursive pattern, over the next billion years of the life of Earth our planet will be struck by 10 to 20 million asteroids. Fortunately, most of these will be only be 10 meter or greater Chelyabinsk sized window-busters. Still fortunately, 100 to 200 thousand will only be 100 meter or so

city-killers. And still fortunately 1 to 2 thousand will only be 1,000 meter or greater civilization-destroyers. However, *unfortunately*, At Random, over the next billion years of the life of Earth our planet will be struck by 10 to 20 10,000 meter or greater Chicxulub Class extinction level asteroids. And we are not even thinking about being prepared...

Four Strategically Critical Known Unknowns: 1) We do not know which of the billions of asteroids out there is The Next Asteroid on its way to strike Earth. Therefore, until we do, we do not/can not know 2) when it will strike or 3) how large it is. Worse, 4) we do not/can never know when we are going to know which, when or how large. Therefore, if we are to be prepared before the fact of knowing, the time to become prepared is... Now.

Four Strategically Critical Known Knowns: 1) All that is required for one asteroid impact is the behavior of just one asteroid. 2) Asteroid impact events are completely random: without recursive pattern, both in their occasion and magnitude. 3) Asteroid impact events are caused by some dramatic kinetic or gravitational perturbation event. 4) We have been at the mercy of this dire random chance every day for millions of years and the longer we choose to gamble the sooner we will lose... we are not prepared to win or survive losing this bet.

The Universe is a dangerous place. It does not long suffer dilettantes or fools gladly. Building and maintaining an effective Planetary Defense... Forever, is a Cosmic Cost of Living we can no longer afford to ignore and divert. Soldier Up! Enforce: part (b) SEC. 808 of the 2010 Space Act. How can it take nearly 7 years to figure out which agency, NASA or DoD, should be tasked with the national responsibility for defending us from this threat when clearly, to do this well, it will take the dedicated relevant resources of both? We need to start becoming prepared.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <<http://Gaiashield.Com>>

Agency Delegation: <<http://Gaiashield.Com/NEOHearing>>

July 2015

Honorable Members of the Committee on Science, Space and Technology,

It has been 820 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 820 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

In terms of Planetary Defense, what we are doing now is the wrong thing: strategically irrelevant. We Detect new asteroids orbiting close to Earth, Track them for few hours or days, long enough to Characterize their orbital elements, and Catalog them, usually as subjectively safe. Then, thinking we are a little safer, we move on to make the next new discovery.

This program is based on two misconceptions: First, that the closer an asteroid's orbit is to Earth's orbit the greater the potential threat of impact and Second, that we can trust that an asteroid will remain in the subjectively safe orbit we find it in at the time of discovery.



However, since the proximate cause for all asteroid impact events would be an asteroid's last dramatic kinetic or gravitational perturbation event and such perturbations are an existential condition that occur at random, no asteroid - discovered or undiscovered - can ever be considered safe. Therefore the proximity of an asteroid's orbit to Earth's orbit is irrelevant in terms of its potential to become an impending Earth impact threat or an Earth-orbit Crossing Asteroid. The principal condition relevant to an asteroid's striking Earth is in its potential for dramatic perturbation. In fact, it is impossible for an asteroid that has not been perturbed into an Earth-orbit crossing orbit to strike Earth. Then as such, if not directly, at random it will inevitably, sooner-or-later, go on to collide with Earth.

In other words, it is the potential for perturbation events not orbital proximity that should dictate the logics for any strategic surveillance approach. Which puts every asteroid in the Solar System of any size at any time, be it ECA, PHA, NEA, NMA or Main Belt, on the candidate list for The Next Asteroid on its way to strike Earth. If we are ever going to be truly safer, we need to develop the perpetual capability to detect any dramatic Earth threatening perturbation of any asteroid in the Solar System as soon as possible after it occurs. And what we are doing now does not even approximate such a capability. What we are doing now is little more than counting rocks in Space. A consequence of being justified for funding as a scientific survey by NASA's long standing Mission Directive to explore Space. Not any specific mandate to defend the country and the planet from asteroid impact.

It is likely we will continue to fail to do all that we need to do and continue to do what we are doing wrong until we have a codified National Policy and have delegated a National Planetary Defense Agency to be responsible for executing that policy. Which, under the onus of failure, would be compelled to think about this strategically, full time... better. Thinking we are doing the right thing in response to the threat of asteroid impact when we are not is a greater threat than the Next Large Asteroid on its way to strike Earth itself.

When you better understand this threat, and how far away we are from being able to adequately respond, you would understand that if we wait until we see it coming before we act it may be too late. Before we see it coming begins... Now! Now is the time for fear. Only fear defines necessity.

Act One: Enforce part (b) SEC. 808 of the 2010 Space Act.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <<http://Gaiashield.Com>>

Agency Delegation: <<http://Gaiashield.Com/NEOHearing>>

June 2015

Honorable Members of the Committee on Science, Space and Technology,

It has been 790 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 790 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

We understand that asteroid impact events are completely random: without any recursive pattern, in both their occasion and magnitude.



We understand that all that is required for one asteroid impact event is the behavior of just one asteroid: that the proximate cause of asteroid impact events would be when, at random, asteroids in any population are dramatically perturbed and diverted from relatively stable and safe orbits into unsafe Earth-orbit crossing orbits. Then, their random-chance impact with Earth would range from immediate to virtually inevitable.

We understand that The Next Large Asteroid on its way to strike Earth is an existential and potentially imminent threat. Sooner-or-later, it will strike.

We understand that we can not know which asteroid is The Next Large Asteroid on its way to strike Earth until we see it coming. Therefore, until that day, we can not know when it will impact or how large it will be and we must assume it will be a worst case extinction level threat and be prepared to respond accordingly. How could anything less be wise?

We understand that what is worse, strategically, we can never know when we are going to know which, when or how large: and how much time we will have to mount an effective response, before it is Now!

We understand that nonetheless, when the day comes that we do know 'which, when and how large', every man, woman and child on the planet; every businessman, politician, soldier, scientist and rice paddy farmer will expect and demand that The-Powers-That-Be successfully do something about it.

What we do not seem to yet understand is that when that day comes, not all the money in the world, not all the genius Mankind can bring to bear, not all the Road-To-Hell paving good intentions of all the governments on the planet, no amount of Optimism or Hope or Prayer, will buy us more time.

We should understand that it is imposible to know how much time we will have after we see it coming. Therefore, in order to mount an effective response, given all the things determined and defined by random-chance, that we will have to deal with and do after we see it coming, the very least we can do before the fact is formally delegate a fundable National Planetary Defense Agency to become prepared and trained and practiced in the art of implementing an expert response and successfully deal with this threat. How could waiting until after we see it coming to do this much ever be considered wise?

We understand that the easy part is always knowing the right thing to do and that the hard part is always knowing how to do it right... particularly when doing it right is extremely difficult. But here, clearly, the first two right steps would be to codify a national Policy and delegate a national Agency to do this. Trust the responsibility for this business into the capable hands and minds of DoD and NASA and they will figure out how to do the extremely difficult, right... again. It's what they do. Aster all, We do this wrong... We go extinct.

Enforce: part (b) SEC. 808 of the 2010 Space Act.

A Million Miles A Day,  
R. Dale Brownfield

Gaiashield Group: <<http://Gaiashield.Com>>

Agency Delegation: <<http://Gaiashield.Com/NEOHearing>>

Asteroid Day 2015

Honorable Members of the Committee on Science, Space and Technology,

Coming June 30, 2015: Asteroid Day <http://www.asteroidday.org>. A celebration of the reality that it was only a matter of random-chance and good luck that the 35 meter asteroid that exploded over Tunguska in 1908 was not a 10,000 meter Chicxulub Class asteroid, and that We The Species did not go extinct 100 years ago. But keep your fingers crossed. Tomorrow can always be another 'Day'.

So far there are over 40 Asteroid Day events scheduled to take place worldwide designed to better inform and make people aware of this threat. Being the only governmental body on the planet to take some degree of responsibility for dealing with this, it may be a good time to hold a hearing and get a sitrep from the agencies that are or will be involved in any response to defend the planet.

You can call in Administrator Bolden. Ask him what the odds are that NASA will see the next asteroid on its way to strike Earth coming at all and then would it be in time to mount an effective response (keeping in mind that size matters).

You can call in Admiral Haney. Ask him if STRATCOM has any Space Capable Nukes we can use to deflect asteroids and how many it would take to deflect a 10,000 meter Chicxulub Class impact threat.

You can call in Director Holdren. Ask him what the Hell is taking so long to dedicate a Federal Agency to be formally responsible for responding to this threat. The mandate has been on the desk at OSTP since 2008 and he is going on 3 years past his last deadline...

It has been 780 days since this committee last considered the threat of asteroid impact. We have been lucky. So for now, pray that our good luck continues and that all our asteroid impact events will be small and that we can have a Happy Asteroid Day. And that someday, somehow, we can find the political wisdom to get serious about this before we go extinct by asteroid impact.

A Million Miles A Day,

R. Dale Brownfield  
Gaiashield Group:  
<http://Gaiashield.Com>

May 2015

Honorable Members of the Committee on Science, Space and Technology,

It has been 759 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 759 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

From the videos of the 2015 Planetary Defense Conference:

<http://www.esa.int/spaceinvideos/Sets/PDC2015>

These 'experts' don't see it, but as things stand... we are so Doomed.

The Stargazers were engrossed in debating the best way to do the wrong thing. No apparent clue as to

the nearly complete strategic uselessness of a one time glance and scientific cataloging survey. It's like a Pachinko machine out there. We simply can not trust these things to stay where we found them or for them to be safe after we take our eyes off them. We need a full spectrum Real Time surveillance of the entire Area of Interest 25/7/52. We need to watch all the asteroids all the time... Forever.

The Rocket Boys, even the folks from LLNL, seem to have been principally oriented to promoting the Kinetic Impactor approach to deflection. Ostensibly, in support of the current proposed ESA/NASA AIDA (AIM/DART) missions? I guess you don't keep your job long when you go against the company line. And after all, even if Nukes are 10,000 times more effective, Nukes are Evil... right?

Perhaps if the Stargazers and Rocket Boys were in fact formally responsible for defending the planet from this threat, the fear of failure would compel them to think about this better and overlook any moralistic assessments of the technology available to do their duty.

Then there was this young lawyer from The Legal Institute for Public Law who made a strong and compelling case against the common perception that the Outer Space Treaty somehow prohibits the use of thermonuclear explosive devices to deflect asteroids or testing them for this purpose in Space. Add to that the need to design and develop a Space Capable nuclear device that will perform in the rigorous environs of Space and within that, the potential in that redesign to also make them Earth-Friendly... and we should be thinking Nukes in the morning... Nukes at night... Nukes all day long here.

A representative for our OSTP was there. Our Nation's vaunted bastion of the subjective arts of Risk Management and Strategic Thinking and Executive Decision Making concluded that it would somehow be Cost Effective to develop another scientific catalog survey using a Space Based Telescope targeting the 30 to 50 meter air bursting Window Busters. Which would effectively include the remainder of the surface impact threats up to the 140 meter City Killers. The problem here is that in any strategic Planetary Defense sense, a scientific catalog survey is simply not effective at any cost. How many asteroids there are or if they were not near-term impact threats when they were discovered is irrelevant... strategically or tactically speaking. And nothing about the OSTP complying with the far overdue Congressional mandate and Law to formally assign the responsibility for responding to this threat to a qualified Federal agency.

Then the organizers ran a scripted mock impact scenario for addressing a small 300 meter impact threat. 11 hasty, ad hoc extemporaneous space missions in total, 7 of them Kinetic Impactor deflection missions. Net, only 3 successfully achieved their objectives. And despite the fact that politics and the conditions for the asteroid were stacked favoring deflection: all the random chance variables were given as best case assumptions, the response failed. Virtually, millions died. The lesson to be learned: Preparation, Training, Vigilance... and a liberal application of Nukes. We'll see what they do, in fact, learn.

Noticeably absent was any mention of any nation on Earth needing to codify a Policy to endeavor the deflect these objects as they present themselves to be impending Earth impact threats and as a consequence, formally delegate an Agency to become qualified and expert in executing such a policy. If we haven't figured out by now that thinking we can Save the World from asteroid impact through an extemporaneous response and flying by the seat of our pants and on the cheap and by being Green is a very bad idea, then perhaps we deserve to be Doomed.

But it was in Italy, in the spring, so a good time was had by all. And academics doing what academics do... nothing. It is past time to get this business out of the hands of academics and scientists and into the

hands and minds of soldiers. After all, this is War.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <<http://Gaiashield.Com>>

Agency Delegation: <<http://Gaiashield.Com/NEOHearing>>

April 2015

Honorable Members of the Committee on Science, Space and Technology,

It has been 729 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 729 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

Our present efforts to detect, track, catalog and characterize a portion of the NEO population is next to useless... strategically speaking. The reason asteroids of any size strike Earth is that, at any time/at random, they become perturbed from a relatively safe Main Belt or Rogue or NEO or PHA orbit into a Earth-orbit Crossing orbit where, at random, they will inevitably sooner-or-later go on to strike Earth. Think of it like throwing a handful of dice over and over... Sooner-or-later they will all come up 6. So: only asteroids that have become Earth-orbit Crossing Asteroids (ECAs) can actually strike Earth and the proximate cause for any asteroid impact event can be said to be its last dramatic perturbation.

Therefore, if we could take a snapshot of our Solar System that showed all of the billions of asteroids, and in plotting their orbits found that none of them appeared to be on a collision course with Earth in the next 100 years, we would be naive and remiss and wrong to think we could in any way count ourselves to be safe from the threat of any near-term asteroid impact.

Asteroids are bumping into other asteroids all the time and being diverted onto new orbits. Worse, they are constantly being diverted gravitationally just by close passages with other asteroids and comets and moons and planets. It's like a Pachinko Machine out there. Consequentially, to be reliable, an ideal Detection or Early-Warning effort would require a strategic minded never-ending Real Time surveillance of the entire area that all the asteroids are in, all the time. Ideally, we would need to take a new snapshot of the Solar System every day... Forever. We need to be able to detect when any of these objects have become newly perturbed into a potential near-term Earth impact trajectory or Earth-orbit Crossing orbit... and if we are going to deal with it: ASAP.

Although the current scientific Survey/Catalog approach may have some scientific value it will only occasionally ever be strategically effective. And then only as a product of very Good Luck and if the asteroid has been perturbed into an impending impact orbit prior to discovery. And then only until the estimated quota objectives have been reached and the scientifically justified funding stops... then not at all. What is required for this aspect of our response is a permanent strategic Surveillance/Early Warning approach couched in the fundamental assumption that we can never afford to think that we are ever safe.

If the responsibility for deflecting these objects as they present themselves to be impending Earth impact threats were in the hands and minds of a security minded, strategically capable federal agency, operating under the onus of duty and a fear of failure - and not in the hands and minds of an

extemporaneous kludge of assorted scientists and academics driven principally by individual short-term self-interest - the delusion of safety currently promoted by the mere scientific cataloging of these objects would not be tolerated as strategically rational or effective or in any way reliable. Enter SEC. 808 of the 2010 Space Act.\* It has been 2,381 days since the President of the United States signed the first iteration for the delegation of a responsible agency to respond to this threat into law and so far, No Joy!

How do we expect to ever successfully respond to this threat if we can not even trust this to people who can think about it right? And given the potential dire consequences of failure, how can we not choose to assign the applicable resources and potential capabilities of both NASA and DoD here? (see Section 20102(b) of title 51)

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <<http://Gaiashield.Com>>

\*Agency Delegation: <<http://Gaiashield.Com/NEOHearing>>

Mar 2015

Honorable Members of the Committee on Science, Space and Technology,

It has been 698 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 698 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

But it has been 2,350 days since the President of the United States signed the 2008 Space Act mandating the delegation of a responsible agency to respond to this threat\* and so far, No Joy!

Enough! It is time for one of you boys to step out of the Committee on Science, Space and Technology box, slap on a Testosterone Patch and come up with a bill to present to the full House:

"We The People of the United States, in order to Provide For The Common Defense and ensure our well being and existence shall hereby codify a National Policy and expression of our Political Will to respond to the threat of asteroid and comet impact and endeavor to deflect or destroy or otherwise divert these objects as they present themselves to be high probability impending impact threats." kinda thang.

Further: "By this act, comprised of the organic resources relevant to this mission, we shall delegate the responsibility for implementing this policy jointly to the agencies of both DoD and NASA and mandate the immediate creation of a permanent ad hoc independent agency exclusively dedicated to the purpose of effectively responding to this threat in any and all its manifestations, at any cost and by any means necessary."

As things stand, how we have decided to perceive this threat, is wrong. What we have decided to do, is wrong. And most critically, what we have decided *not* to do is wrong. No matter how well we do

everything else or how lucky we are with everything else, no matter how good or noble or just we are... if we fail to take the lead here, if we fail to do this right, we ensure that sooner-or-later We The Species will go extinct by asteroid impact.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <http://Gaiashield.Com>

\*Agency Delegation: <http://Gaiashield.Com/NEOHearing>

Chelyabinsk Day

Honorable Members of the Committee on Science, Space and Technology,

Happy Chelyabinsk Impact Day!

[http://en.wikipedia.org/wiki/Chelyabinsk\\_meteor](http://en.wikipedia.org/wiki/Chelyabinsk_meteor)

<http://www.asteroidday.org/interactive/>

A very, very small example of much, much larger things to come.

Coming soon (06/30/2015): Asteroid Day <http://www.asteroidday.org>. A celebration of the reality that it was only a matter of random-chance and good luck that the 35 meter asteroid that exploded over Tunguska in 1908 was not a 10,000 meter asteroid, and that We The Species did not go extinct 100 years ago. But keep your fingers crossed. Tomorrow can always be another 'Day'.

You can contact me to help arrange for an expert Asteroid (awareness) Day event tailored for a Congressional venue.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group:

<http://Gaiashield.Com>

Feb. 2015

Honorable Members of the Committee on Science, Space and Technology,

It has been 670 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 670 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

Foresight: The ability to see something coming before we actually see it coming... so we can prepare.

Since it will always include the prospect for our random extinction by asteroid impact 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.

We know we *can* do this. The problem is, how do we get us to actually *do* it... Your plate.

It has been six years and two failed deadlines since Congress mandated that the Executive Office assign a Federal Agency to be responsible for responding to the threat of asteroid impact\*... and still, No Joy.

Recently, Congress has been complaining about Executive Orders. In response, the President has countered that they are necessary when Congress fails to pass a law. Yet here, The Executive has failed to comply with a Congressional mandate that the President has already signed into law. How do we get the President comply with his own law? And how is this difficult, there are only two choices: NASA or DoD. And given the potential scope and scale of both this threat and our response, and the dire consequences of failure, we would be fools not to choose both.

If this Congress can not find a way to get the President to comply with his own law, then perhaps this committee should be appealing to a higher power: Lord... grant us the serenity to accept the things we cannot change and the never-ending good luck that The Next Asteroid on its way to strike Earth always be small.

The rest of the world is waiting for some wisdom...

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <<http://Gaiashield.Com>>

\*Agency Delegation: <<http://Gaiashield.Com/NEOHearing>>

<9 month Electoral Break>

April 2014

Honorable Members of the Committee on Science, Space and Technology,

It has been 365 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 365 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

Sponsored by the OSTP, the third round of the Presidential Innovation Fellows initiative <<http://www.whitehouse.gov/innovationfellows/projects>> is open for business (Scroll down to "By the People, for the People..." and consider the "Asteroid Grand Challenge" program).



For decades NASA has been our country's go-to agency for the best answers and solutions to problems in most fields of science, engineering and technology. Certainly as they apply to space. So why then, when it comes to the problem to "find all asteroid threats to human populations and know what to do about them" does the OSTP think the best answers and solutions here can be found in us... the thundering herd?

We already 'know' the first thing we need to do here: delegate a federal agency with the responsibility to, in fact, defend this country (and by extension the World) from the threat of asteroid impact. That mandate and federal law has been on the desk of the Director of the Office of Science and Technology Policy since 2008. Perhaps if we had a duly authorized and adequately funded National Planetary Defense Agency it would find the capability to respond to the problems of the Asteroid Grand Challenge in-house without the need for any more 'crowdsourcing' than NASA and/or DoD already employes with their current networks of expert subcontractors.

In that much of what we pay the rocket boys at NASA to do is think, and that by any stretch of the imagination defending the planet from asteroid impact is not found in any of the directives of NASA's core mission statement or authorization, then NASA should not even be thinking about the objectives of the AGC and are way off the reservation here. In short, the reason NASA has to go outside-the-box for ideas to address the threat of asteroid impact is because technically/legally/officially, the threat of asteroid impact is still completely outside of NASA's box...

Or perhaps, given the true scope and magnitude of this threat, NASA has already discretely determined the best answers and best solutions in order to address the massive scale of the response required to fully meet the stated and implied objectives of the AGC. But without the onus and immunity of being the responsible authority and delegated Agency, fortified with the courage of duty to tell-truth-to-power themselves, they may just be looking for a sacrificial third party messenger and maintain a degree of plausible deniability.

Either way, this looks like a stall by OSTP. And if we are to wait for a final analysis of the results, one that could be good enough to kick the can of agency delegation right out the back end of this administration and beyond this directors term of service. At best, this is nothing more than an extension of the current academic strategy of Blah/Blah/Blah/Blah... BANG!

Apparently, this Congress does not have the political will to enforce its own mandates and laws. And it's nearly Election Time again and you folks are about to be distracted by Job Number One in Congress. Perhaps with the next iteration we will see an evolution of more courage in the political will of government. But we can only cast those electoral dice and hope. So in the mean time, we should take the advice of Charlie Bolden at last year's hearing and pray the sky don't fall.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <<http://Gaiashield.Com>>

Agency Delegation: <<http://Gaiashield.Com/NEOHearing>>

Mar. 2014

Honorable Members of the Committee on Science, Space and Technology,

It has been 330 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 330 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

SMPAG (Space Mission Planning Advisory Group\*). In response to a reported recommendation and resolution (mandate?) by the UN General Assembly, developed and promoted by COPUOS (the UN Committee on the Peaceful Uses of Outer Space), representatives of NASA, ESA, ROSCOSMOS and a dozen other national space agencies came together in Germany on February 6th to form SMPAG. A member funded volunteer forum with the mission to develop strategies and tactics to defend against the threat of asteroid impact... and hopefully, sooner-or-later, help to deflect the next large asteroid on its way to strike Earth and Save the World.

But emphasis on 'Advisory' here. SMPAG should not to be mistaken as an operational agency responsible for ever actually deflecting any asteroids... And although taking this issue to the UN may be like planning to take a knife to a gunfight, the notion of a SMPAG may be helpful... but only if it has the support and participation of duly authorized and well funded dedicated National Planetary Defense Agencies.

So the question here and now would be, by what legitimate and lawful authority do any of these space agencies... specifically NASA, presume to be responsible for their respective country's security and survival... specifically the United States?

If NASA is not the legally delegated responsible authority and agent for addressing this threat for the US how can Congress legally appropriate any of the funding necessary to facilitate NASA's role in this forum? After all, done right, just the theoretical research currently on the table could run in the tens of millions and to research and test anything empirically, space missions to asteroids would run the price tag here into the billions. Even as their pro rata share, not something we can expect to find in NASA's incidental petty cash account or justify and fund through any of NASA's current Mission Directives. All that will get us is the continued academic strategy of Blah/Blah/Blah... BANG!

But perhaps we need to see NASA's actions here not as rogue or beyond the scope of their standing orders but rather as being ahead of the Political curve (as NASA should be) in "working with the international community on such threats". Perhaps they Hope that sooner-or-later the President and Executive Office will somehow catch up with the Real World and comply with the current law:

SEC. 808 of the 2010 Space Act

"(b) Implementation.--The <<NOTE: Deadline.>> 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'."

But Hope is not method. Hope is not a reliable survival tactic. Let's not leave NASA standing in Harm's Way somewhere between our continued survival and Extinction by NEO with nothing more in their hands than Hope. Here, all that is required for Mankind's sooner-or-later extinction by asteroid impact is for this Congress to do nothing. Enforce Your Law!

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <<http://Gaiashield.Com>>

Agency Delegation: <<http://Gaiashield.Com/NEOHearing>>

\* SMPAG: <<http://cosmos.esa.int/web/smpag/home>>

Feb. 2014

Honorable Members of the Committee on Science, Space and Technology,

It has been 300 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 300 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

And Heads Up, only 5 more days to the anniversary of the Chelyabinsk impact event! A very small example of much, much larger things to come.

Given: all that is required for one asteroid impact is the specific behavior of just one asteroid. Therefore, the near-term risk of large asteroid impact (which includes the prospect of the next extinction level event) will remain complete and unmitigated with the mere possibility of A) one undiscovered asteroid, or B) the perturbation of one discovered large asteroid resulting from a direct asteroid/asteroid collision or its close passage with another object, or C) of the generation of one new rogue NEO from the Main Asteroid Belt.

Existentially, since all asteroid impact events are completely random both in their occasion and magnitude, the first thing we need to know is which asteroid is the next large asteroid on its way to strike Earth. Then, Tactically, we can know when it will strike and how large it is. Strategically, the problem is that we can not know when we are going to know which, when and how large. Therefore, if we are going to be prepared to respond to this threat any time before we see it coming, then 'before we see it coming' begins Now!

So Politically, the question here would be, is Congress or the Executive Office going to remain by default the responsible agent for answering these questions and implementing an effective response? Or is it not, in fact, your role, and the First Step, to codify a rational policy, delegate a qualified agency and secure funding sufficient for responding to this threat in its worst case scenario... forever?

Because this threat includes the random prospect for our extinction, knowing which asteroid is the next large asteroid on its way to strike Earth will always be the most important thing Mankind can ever know. And because we theoretically can, deflecting this threat will always be the most important thing Mankind can ever do. Therefore being prepared and trained and vigilant in the face of this threat will always be the most important thing Mankind can ever be.

Time to soldier-up.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <<http://Gaiashield.Com>>

Agency Delegation: <<http://Gaiashield.Com/NEOHearing>>

Jan. 2014

Honorable Members of the Committee on Science, Space and Technology,

It has been 270 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 270 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

But, we do finally have a Federal Budget! Anything in there for deflecting The Next Large Asteroid on its way to strike Earth? ...No. Then how about we at least delegate a National Planetary Defense Agency. Surely you appreciate, and are afraid, that once this responsibility is formally delegated to NASA and/or DoD this conceptually new agency will become entitled and obliged to solicit and expect to receive federal funding sufficient to prepare to sooner-or-later perform their duty with a reasonable expectation of success.

However, consider that once this mission has become formally delegated to NASA, or especially to NASA and DoD jointly, it would take at least 5 years to organize and coordinate a suitable administration and bureaucracy for this new mandate. Even longer if they also elect to take the lead and go on to enlist the participation of the rest of the worlds space agencies.

Then, in order to develop an effective strategy in principles and determine what will be essential to the conduct of implementing a response to this threat, they will need to empirically determine what the best tactical (technological) response would be. This would require at least 3 or 4 billion-dollar Atlas V class test/demonstration of concept missions over the course of 10 to 15 years. Effectively, a re-appropriation of only a fraction of NASA's current annual budget rate and little more than a rounding error for DoD.

Once we delegate a NPDA it could take as much as 20 years before it needs to come back to Congress for any 'new' dedicated funding to implement an effective strategy... In short, a can that kicks itself down the road... and is still on track to save the world.

This will give not only our government but governments of the world decades to find and reallocate the funding necessary to actually build an effective Planetary Defense. One potential and appropriately fungible source of such funding would be half of the world's \$100 billion annual budget for maintaining our nuclear weapons and their delivery systems. Appropriate in that this is a security issue and particularly since nuclear explosive devices are already currently perceived by NASA engineers to theoretically be the best and most effective deflection tactic by orders of magnitude and the delivery systems for such devices as weapons of war are conceptually much the same. Politically, from an

Opportunity Cost perspective, we would gain the ability to defend ourselves from the prospect of extinction by asteroid impact at the expense of losing much of our ability to kill each other over economic, religious and political principles... Win/Win!

The absence of money is not the problem here. The problem here is an absence of political will. Your plate. After all, we only have all the time left in the world here. Doing nothing now, like a deer caught in headlights, will not end well.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: [<http://Gaiashield.Com>](http://Gaiashield.Com)

Agency Delegation: [<http://Gaiashield.Com/NEOHearing>](http://Gaiashield.Com/NEOHearing)

Dec. 2013

Honorable Members of the Committee on Science, Space and Technology,

It has been 240 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 240 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

Heads Up: The Martians are coming... After a recent CBO report suggesting shutting down America's human spaceflight program, in protest The Mars Society is in the process of organizing a "Legislative Blitz" for February 24th and 25th, 2014. The core of their argument appeals to some perceived inherent human compulsion to explore and a pioneering spirit and even hints of Mankind's cosmic manifest destiny, to take us to Mars and Outer Space.

However, there is an argument that appeals to something closer to home: The survival of our species here on Earth.

Even if we are lucky and by random-chance the next asteroid on its way to strike Earth is not an extinction level event but only large enough kill to some portion of Mankind and end civilization as we know it, how can we consider anything short of a manned mission to be a suitably proportional and rigorous and by-any-means-necessary response? With an Earth/Mission signal turnaround time that could easily be 20 or 30 minutes and the closing speed of a problem to a catastrophic effect of as much as 30,000 meters per second, the potential of any real-time drone-like remote control becomes moot. Leaving us with the other unmanned option of anticipating every possible problem stemming from the failure of any one of the millions of moving parts supplied by the lowest bidder and programing an effective solution into the mission's autonomous operating system. Like we did with HealthCare.Gov... The difference here is, no do-overs, no second tries. We do it right... get this in one... or die.

Or, when it's your Nation, your State, your City, your Children and Grandchildren at Ground Zero, don't you want to have "The Right Stuff" just as close to the problem as humanly possible? "A human being is the best computer available to place in a spacecraft." Werner von Braun.

Then there is the loss of any potential Heavy Launch capability such as the SLS which is currently only justified by enabling our Manned Spaceflight program. However in terms of Planetary Defense it is also the capability necessary when we are unlucky and have to respond to larger asteroid threats and even for smaller asteroids affording us the ability to create or force a launch window beyond the optimum.

But don't take my word for any of this. Ask the Director of our National Planetary Defense Agency... Wait a minute, we don't have a National Planetary Defense Agency! Therefore there is no one with a perspective that has been shaped and informed by the burden of having to successfully respond to this threat. By default this leaves the responsibility for Planetary Defense on your desks. You are going to have to think this through for yourselves and the onus for coming up with the right decision (sans any expert and authoritative referred wisdom) is yours alone. Or, if you're feeling lucky, you could just keep it simple/stupid and chose the cheap and easy path and continue to do nothing... gamble: just let those Cosmic dice roll, and Hope.

So... the Martians are coming. And so is The Next Large Asteroid on its way to strike Earth. It's clearly your job to deal with some "Legislative Blitz". But whose job is it to deal with The Next Large Asteroid on its way to strike Earth?

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group: <<http://Gaiashield.Com>>

To Mars... or Die: <<http://Gaiashield.Com/AltVis/>>

Agency Delegation: <<http://Gaiashield.Com/NEOHearing>>

Nov. 2013

Honorable Members of the Committee on Science, Space and Technology,

It has been 210 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 210 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

Good news? ...Enter the United Nations. You may have seen headlines to the effect: "United Nations to Spearhead Asteroid Deflection Plan" or "United Nations to Adopt Asteroid Defense Plan". Well, not so much.

First: there is no evidence that the proposal sponsored by the Association of Space Explorers and passed by the UN Committee Of the Peaceful Use of Outer Space\* has been considered and passed a vote of the UN General Assembly. Despite the ASE press release\*\* and comments by its representatives, there has been no resolution passed for this proposal. However, the issue was better reported as having been only accepted for consideration by the UN 4th Committee and may be on the agenda for this session of the General Assembly.

Then, if/when it is passed by the General Assembly, as a global security issue and one sooner-or-later involving the application of nuclear explosive devices in Space, it will surely need to survive a gauntlet of vetoes by the permanent members of the UN Security Council. The main obstacle to passage here is not whether or not we should manage this risk and defend our planet from asteroid impact, but rather just how far outside the scope of the fundamental UN Charter would this responsibility be... and would this be something that the UN could ever be expected to do well?

Second: although this proposal does bring an awareness of this threat to a global forum and its passage a formal recognition of the problem, it does not aspire to actually detect or deflect any asteroids or even secure any funding to do so. In fact it only presumes to do no more than what can already be done by the 1st world space-capable nations but subjects these capabilities to a consensus of 3rd world lawyers, diplomats and otherwise unemployed academics. In effect, this proposal brings nothing to the table.

So this business is still squarely on your plate. To do this, to defend our Nation, if not the World, from the perpetual threat of asteroid impact... and do it well, will be a journey of a thousand miles. And the first single step here is a codified U.S. National Policy to respond to this threat and delegate a U.S. Federal Agency to become competent and expert in implementing that response. You have already passed this much into law... twice! Enforce it!

'This' is what the head of this spear must be. The first and leading element in an international agency of agencies. Think NEO-NATO not NEO-UN. The UN is a forum where, through compromise and tolerance, member nations can go to wage war by other means. This problem can not be just tolerated or compromised. The UN is not a government. It is not designed or intended to actually do anything... or ever be responsible. The sponsors of this UN proposal have consistently grossly understated the scope and scale of this threat as well as the magnitude of the response required to defend against it. Taking this business to the UN does not even rise to the level of bringing a knife to a gunfight.

So let's soldier up here, take the lead. It's what we do... because only we can do it.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group

<http://Gaiashield.Com>

<http://Gaiashield.Com/NEOHearing>

<http://Gaiashield.Com/RFIARM>

\* Proposal submitted to UN General Assembly by UN/COPUOS:

<http://www.oosa.unvienna.org/pdf/misc/2013/at-14/at14-handoutE.pdf>

\*\* ASE press release:

[http://www.space-explorers.org/committees/NEO/2013/ASE\\_NEO\\_Press\\_Release\\_25October2013.pdf](http://www.space-explorers.org/committees/NEO/2013/ASE_NEO_Press_Release_25October2013.pdf)

Oct. 2013



Honorable Members of the Committee on Science, Space and Technology,

It has been 180 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 180 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

Enter The Asteroid Redirection Mission... Really! This would not even qualify as a good Circus Act let alone a serious approach to deflecting any impending asteroid impact threat.

Then, on October 1st 97% of NASA personnel were furloughed. How 'essential' can NASA possibly be? After all, what dire social or national consequences would we suffer if any of NASA's missions should fail or if NASA should fail in any of its current core mission directives? When the government gets around to opening back up for business again, perhaps we should just leave the doors at NASA closed. Take a \$16.6 billion dollar step in addressing our annual budget problems.

In the absence of a core mission that is 'essential' and in service to the interests of us stakeholders NASA is foundering. Perhaps if they were formally delegated to be a core element in a US National Planetary Defense Agency with a fifth Mission Directorate. Take a first step in saving the world from the threat of asteroid impact instead.

Then, tasked not with merely developing some token hope based one millionth scale model of a Planetary Defense - because no matter how much we try to ignore it and try to forget about it this threat includes the prospect for our extinction - but a rational and realistic full scale Planetary Defense. A means capable of effectively responding to the threat of asteroid impact even when hoping for the best and optimism bias and expectations of good luck inevitably fail. Even when that statistically remote categorically large asteroid sooner-or-later and at random defies the academic's odds and finds its way to strike Earth. Build and deploy a standing, tested technological detection and deflection capability strategically maintained by a rigorous program of Preparation, Training and Vigilance. Something that would demand and justify the fullest attention and abilities and funding of NASA. And because this threat will never go away, make NASA 'essential'... Forever.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group

<<http://Gaiashield.Com>>

<<http://Gaiashield.Com/NEOHearing>>

<<http://Gaiashield.Com/RFIARM>>

PS: NASA alone should not be responsible for this mission. The strategic and tactical resources and capabilities along with the security mindset and culture of DoD should also be seen to be 'essential' here. And eventually, once we have taken the lead, the participation of every nation on the planet in the form of a Global Planetary Defense Agency.

Sept. 2013

Honorable Members of the Committee on Science, Space and Technology,

It has been 150 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 150 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have a codified National Policy to respond to this threat or a delegated Federal Agency to become competent and expert in implementing that response. Tic Toc...

Enter NASA's recent 'Grand Challenge': "find all asteroid threats to human populations and know what to do about them."

[http://www.nasa.gov/mission\\_pages/asteroids/initiative/grand\\_challenge.html#.UiYLIW15G8A](http://www.nasa.gov/mission_pages/asteroids/initiative/grand_challenge.html#.UiYLIW15G8A)

Point 1) "find all asteroid threats to human populations..." Leaning in the right direction, however they go on to refer to the current Congressional mandate as the means to this end when at best it is only a first and small single step in a journey of a thousand miles.

Consider that all asteroid impact events are in fact random: without any recursive pattern, both in their occasion and magnitude and that all that is required for one asteroid impact event, which includes the prospect for our extinction, is the specific behavior of just one asteroid.

Therefore, the near-term threat of one asteroid impact event will persist complete and unmitigated with the mere possibility of A) Just one undiscovered asteroid, and/or B) Just one asteroid/asteroid collision or close planetary keyhole perturbation, and/or C) The generation of just one new NEO from the Main Asteroid Belt on a near-term collision course with Earth. In short, there is no such thing as a 'safe' asteroid.

Consequentially, to achieve the goal to "find all asteroid threats to human populations..." would require us not only to detect, track, catalog and characterize '90%' of the 'estimated' NEO population but to monitor every last one of the billions of asteroids in our Solar System, in fact, in Real-Time 24/7/52... forever. Abandon the current Survey approach of counting rocks in space and adopt a practical space-based Surveillance network approach of the entire 100 trillion, trillion cubic mile Area of Interest these rocks are in.

Point 2) "...and know what to do about them." Only 'knowing' may be enough if we can believe that the next asteroid on its way to strike Earth will always be relatively small and that we will always have a large enough detection-to-impact window to respond with a relatively small extemporaneous ad hoc deflection mission.

But if we understand that sooner-or-later, at random, the asteroid will be large, requiring a mission of hundreds or even thousands of nuclear pay-loaded rockets, and/or the detection-to-impact window may be small, denying us the opportunity to respond at all, then we can see that to merely 'know' what to do will not be enough. We can see that Vigilance in the absence of Preparation and Training and maintaining a standing tested means to effectively respond to this threat to its worst case scenario is a formula for Suicide by Asteroid Impact.

Here, NASA's 'Grand Response' to their 'Grand Challenge' is nothing more than a 'Grand Delusion'... It

would seem that left to its own devices NASA would build a facade of optimism and flawed logics and call it Planetary Defense. A facade that would crumble and collapse at the first failure of good luck.

Defending the planet from asteroid impact is not some super-sized science fair project. There are dire consequences if we fail. So if you boys and girls in Congress ever find the political will to actually delegate a responsible agency to deal with this threat, the wisdom of having the security minded culture and rational courage of our DoD in a strategic command role should be self evident. A hybrid of the skills and resources of both NASA and DoD would afford us the best of both worlds and the best means to defend the world we love from the threat of asteroid impact.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group

<http://Gaiashield.Com>

<http://Gaiashield.Com/NEOHearing>

<http://Gaiashield.Com/RFIARM>

Aug. 2013

Honorable Members of the Committee on Science, Space and Technology,

It has been 120 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 120 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have any codified National Policy to respond to this threat or delegated any Federal Agency to become competent and expert in implementing that response. Tic Toc...

In your haste to rein in NASA's head-long rush to implement the Asteroid Redirect Mission, with HR 2687 you have neglected to reiterate a critical directive that has been an element of both the 2008 and 2010 Space Acts regarding addressing the threat of asteroid impact. Specifically the formal delegation of a Federal Agency to actually do it:

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...

and kicking this can down the road, again with:

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, <SNIP> **assign a Federal agency or agencies to be responsible for protecting the United States...**

Unfortunately, the Executive Office has so far failed to comply with either mandate. Perhaps... third time's a charm?

How can NASA and/or DoD ever justify soliciting new funding or re-appropriate existing funding to execute a mission effectively addressing a responsibility they do not, in fact, have? A responsibility that as things stand is only an unfundable tacit assumption. Success takes preparation and training. Preparation and training takes money. At this point there is not even one person anywhere on the planet, not at NASA not at DoD, that can be said to be responsible for deflecting The Next Asteroid on its way to strike Earth. Not one person we can go to with the security-minded authority and full-time job to defend this planet from asteroid impact... You don't get what you don't pay for. What we have is little more than a formula for our sooner-or-later Suicide by NEO.

Best if there is some independent general legislation in the works that specifically addresses this issue. Which would seem to be necessary if DoD is to be included in this responsibility since tasking DoD is beyond the scope of this Committee and Space Acts and the influence of the Director of the OSTP. Otherwise, if you can at least correct this oversight in the 2013 NASA Authorization Act (perhaps at this point, with the cooperation of your colleges in the Senate) I'm sure the whole world would appreciate it... sooner-or-later.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group

[<http://Gaiashield.Com>](http://Gaiashield.Com)

[<http://Gaiashield.Com/NEOHearing>](http://Gaiashield.Com/NEOHearing)

[<http://Gaiashield.Com/RFIARM>](http://Gaiashield.Com/RFIARM)

PS: Subsection 'e' number (2) of HR-2687 has already been done. Mandated by Congress in the 2005 NASA Authorization Act, in 2006 NASA's PA&E did such an assessment and even presented their conclusions to the public at the 2007 Planetary Defense Conference in DC... Nukes won. By a margin of 100 times.

Near-Earth Object Survey and Deflection Study: Final Report.

[http://www.hq.nasa.gov/office/pao/FOIA/NEO\\_Analysis\\_Doc.pdf](http://www.hq.nasa.gov/office/pao/FOIA/NEO_Analysis_Doc.pdf)

July 2013

Honorable Members of the Committee on Science, Space and Technology,

Now it's been 90 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 90 million miles closer to impact. And still, even though it has been 50 years since we first became aware of this condition, we do not have any codified National Policy to respond to this threat or delegated any Federal Agency to become competent and expert in implementing that response. Tic Toc...

But wait... NASA's on the job now: ARM!

Or is it? This new Asteroid Redirection Mission must be a joke. Not only would it be a clearly stupid way to deflect asteroids (since nuclear ablation has been projected to be at least 5,000 and possibly even 10 million times more effective... faster/cheaper) but even as a run-of-the-mill, make-work,

because-we-can, pork-barrel NASA mission this would be a new low in practical relevance. Worse, as some robotic Rube Goldberg style mission, the smart money here would be on an over all catastrophic mission failure and we would end up with just so much space junk orbiting the Sun. It should never get past NASA's PA&E.

This ARM proposal looks like nothing more than NASA grasping at straws scrambling for a mission to justify its existence. With the loss of the Space Shuttle it went to Man On The Moon 2.0 then to a Manned Asteroid Mission and now let's tow a rock no bigger than your average living room into orbit around the Earth and call it Planetary Defense...

Even as a subsequent Manned Mission objective, what person would go to all the trouble and effort to become an astronaut in order to stand on some rock in space just to end up looking down and see the Moon and looking up to see Mars and know they are not standing on either one... Enough to make the Right Stuff cry. And asteroid mining is a scam. Do the math. What in Space could possibly be worth the \$50,000.00 a pound it would cost to go out there and get it?

NASA is just looking for a job that fits their current mindset and capabilities. NASA is not looking for an effective way to defend the planet from asteroid impact here. If we want a serious and effective approach to Planetary Defense you first need to get serious and effective in government. We need a Codified National Policy and a delegated National Planetary Defense Agency to implement it.

That said, let NASA do this Asteroid Redirection Mission. Give them something to do... another super-sized science fair project. But let's not fool ourselves into thinking this is in any way a step in the right direction to building an effective Planetary Defense. Perhaps if NASA, in cooperation with DoD, were formally charged with the responsibility for defending the planet from asteroid impact they would think about doing it better.

Submitted to NASA RFI: <<http://Gaiashield.Com/RFIARM>>

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group

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June 2013

Honorable Members of the Committee on Science, Space and Technology,

It has now been 60 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has come 60 million miles closer to impact.

Worse, it has been 253 days since the Executive Office ignored the second deadline (its own) since the 2008 Space Act and the Congressional mandate to recommend/delegate a Federal Agency to defend our

nation and planet from this threat. It would seem that after 4 years and 253 days this backdoor approach has failed and it is past time for a Plan B. After all, The Next Large Asteroid on its way to strike Earth has come 1.7 billion miles closer to impact since 2008. How can this be any less a good idea today than it was in 2008? Apparently, if you want something done... you do it yourself.

### Plan B: The Planetary Defense Act

One of you... it's not important who (let's say whoever wants History to see them as the person who initiated the first tangible step in saving Mankind from Extinction by Asteroid Impact), needs to sponsor a piece of legislation in two parts:

A) A Codified National Policy: We The People shall endeavor to deflect these objects as they present themselves to to be impending Earth impact threats (at any cost/by any means necessary would be nice).

So far, our species has evolved enough only to respond to the consequences of dire natural events... Disaster Relief. This is different. Here we can prevent the dire natural event from even happening. This is new. As such it deserves and requires a definitive expression of political will and societal intent. We need to formally decide to do this and express that decision terms of a codified National Policy. We can not afford to leave this much as tacit.

B) A Formal Agency Delegation: That NASA and DoD shall be made the nation's responsible agent for implementing this Planetary Defense Policy (and Failure is Not an Option... would be nice here).

The foresight to appreciate that after we see the next impending impact threat coming we would obviously turn to NASA and DoD to deal with it is easy and clear. However, we need to also appreciate that for them to do so effectively and afford us a reasonable expectation of success, these agencies must become prepared and expert in dealing with this threat 'before' we see it coming. And since from here and now we can not know when we will see it coming then 'before we see it coming' begins... now.

I'm just sayin', if we want to be prepared here, if we are serious and want this to work, then first... there oughta be a law.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group

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May 2013

Honorable Members of the Committee on Science, Space and Technology,

It has been 30 days since this committee has talked or likely even thought about the threat of asteroid impact. Since then, at a million miles a day, The Next Large Asteroid on its way to strike Earth has

come 30 million miles closer to impact.

And as things stand, since we do not know which asteroid it is, we can not know just how large it is or when it will strike. However, we do understand that it is coming. And we do understand that all such events are completely aperiodic and random: without any recursive pattern, both in their occasion and magnitude. Therefore, rationally, the next large asteroid impact event may well occur tomorrow and may well be large enough bring us to our extinction...

Hopefully, we may have more time than 'tomorrow'... perhaps enough to prepare an effective response against such a dire event. The question now is: It's your watch, what are you doing in this direction? At last check, we still have not delegated a qualified Federal Agency to respond to this threat let alone codified an enabling National Policy to actually endeavor to do so. Even though the delegation of a 'Federal Agency' bit has been on the books as law since the 2008 Space Act and two deadlines have been missed... The closer this rock gets the larger the mission and effectively the longer it will take to deal with it.

What is it going to take to rattle the executive cage here? Does someone need to start using words like Censure or even Impeachment? I'm just sayin', time is simply not on our side... Tic Toc.

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group

<[rbrown98@comcast.net](mailto:rbrown98@comcast.net)>

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<Hearings Plus>

Subject: Planetary Defense 101

Date: Fri, 19 Apr 2013 00:58:44 -0400

From: "War-Zone.Com" <[rbrown98@comcast.net](mailto:rbrown98@comcast.net)>

Planetary Defense 101

Honorable Members of the Committee on Science, Space and Technology,

Because the threat of asteroid impact includes the prospect for our extinction, knowing which asteroid is the next asteroid on its way to strike Earth will always be the most important thing Mankind can ever know. And because we can, deflecting this threat will always be the most important thing Mankind can ever do. And because failure will never be an option, being prepared to respond to this threat will always be the most important thing Mankind can ever be.

However, from recent hearings by this committee on this threat it did appear that none of you understood the strategic and tactical elements of this issue well enough to ask the right questions or challenge the bad answers to the questions you did ask.



In the direction of curing this condition, I would offer to work and consult with any of the members of this committee. individually, one at a time. School is in session... Who wants to learn?

To set up a phone interview contact me by email at <[rbrown98@comcast.net](mailto:rbrown98@comcast.net)>.

A Million Miles A Day,

Dale Brownfield  
Gaiashield Group  
<<http://Gaiashield.Com>>

Subject: NEO Hearing Part II: A Budget Perspective

Date: Thu, 11 Apr 2013 14:19:15 -0400

From: "War-Zone.Com" <[rbrown98@comcast.net](mailto:rbrown98@comcast.net)>

Honorable Members of the Committee on Science, Space and Technology,

Make no mistake, this business includes the prospect for our random Extinction by Asteroid Impact. But you might want to sleep at night and therefore choose to find comfort in believing the denialist slight of mind or statistical probabilistic sophistry based risk assessments. There, The Next Asteroid on its way to strike Earth will likely be small: only a city killer. But even then, what is it that NASA or DoD is currently doing, or planning to do, that could possibly be more important than detecting and deflecting The Next Asteroid on its way to strike Earth? Even if it is small... What could be more important than saving New York or Los Angeles, or Chicago, or Houston or Boston or DC or even Detroit from complete annihilation by asteroid impact?

Yet last year we spent only \$20 million on this effort while the nations of the world spend \$100 billion a year on nuclear weapons and their delivery systems to maintain the ability to exterminate ourselves over religious, political and economic principals. Let's beat that sword into a plowshare that will actually save the world: Win/Win!

Planetary Defense can not simply be an option or some discretionary item on our Federal budget. Re-task whatever is necessary from current defense and space funding and do this right! How can anything less be wise?

But then again, sleep at night or not, the Hard Truth here is that no matter how hard you try to see and spin it otherwise, this is in fact about nothing less than the continued survival of our species and our sooner-or-later random Extinction by NEO: All there is, gone... forever. Game Over... No Joy... Restart Darwin's Clock... again. Here, ignorance is not bliss... it is oblivion. Think better! Think braver! Let's get our priorities straight!

If you want to hear the Hard Truth... Step One: Get the Executive Office to comply with its own law and delegate a qualified Federal Agency to be responsible for responding to this threat. Only when someone is actually qualified and has become responsible for doing a thing will they clearly see problem, see what needs to be done and see everything they need to actually do it... or fail. And for some people, the right people, at any cost/by any means, Failure is Not an Option. Let's put that kind of people on this ASAP.

No more NEO academics and dilettantes!

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group

<<http://Gaiashield.Com>>

<[rbrown98@comcast.net](mailto:rbrown98@comcast.net)>

Subject: Hearing 2

Date: Sun, 07 Apr 2013 15:10:03 -0400

From: "War-Zone.Com" <[rbrown98@comcast.net](mailto:rbrown98@comcast.net)>

Honorable Members of the Committee on Science, Space and Technology,

Re: Ed Lu and B612's Sentinel project:

The risk and tragedy posed by the B612 Sentinel project is not that despite its noble purpose it will fail (and it will... ask Lu how much they have raised so far.) but rather that just the process of even trying to do this as a private sector project could serve to divert the onus of responsibility for defending the planet from asteroid impact away from Government.

Make no mistake, this mission should be done, and ASAP. But it is an example of the very thing that defines why societies form and tolerate Governments in the first place: to defend against the common threats. For you, the appropriate response to the notion of B612 doing what Government should be doing should be not one of relief but rather one of failure and shame... After all, if not this, what is Government for?

Re: Don Yeomans and JPL:

In order to better promote the sale of his new book Don Yeomans has claimed:

"We can say with a very good deal of certainty that no asteroid or comet large enough to threaten life as we know it will hit Earth in the next 100 years,"

Even by the NEO community's own dubious estimates there are still 50 to 150 asteroids "large enough to threaten life as we know it" yet to be discovered. How can Yeomans know anything at all about the actual orbital elements or size (let alone "with a very good deal of certainty") of an undiscovered asteroid?

Since all that is required for one asteroid impact in the next 100 years is just one asteroid, then all that is required for the Risk of just one asteroid impact in the next 100 years to persist complete and unmitigated is the mere possibility of just one undiscovered asteroid. Show me the Last Large NEO in fact. Then we can talk about "no asteroid or comet large enough to threaten life as we know it will hit Earth in the next 100 years". Until then: We Do Not Know...

This scientist is a greater threat than The Next Large Asteroid on its way to strike Earth. It is enough to have this dire existential condition in fact. But to attempt to mitigate the perception of this risk without any relevant tangible reason only serves to promote a false sense of security. Consequentially, the development of a rational strategic response is retarded which effectively serves to compound the threat... and we find ourselves bringing a knife to a gunfight.

This instance of flawed thinking is just one of many examples of why it is past time to take this issue out of the hands of scientists and assorted academics and dilettantes and put it into the hands and minds of those who are professionally qualified to effectively assess and manage risks and respond to threats to our security and survival. It is past time for the Executive Office to comply with the damn law and delegate an appropriate Federal Agency to prepare to defend our nation and our planet from this threat!

Supporting arguments and logics:

<<http://Gaiashield.Com/NEOHearing>>

A Million Miles A Day,

R. Dale Brownfield

Gaiashield Group

<<http://Gaiashield.Com>>

<[rbrown98@comcast.net](mailto:rbrown98@comcast.net)>

Subject: NEO Hearings

Date: Fri, 15 Mar 2013 19:52:33 -0500

From: "War-Zone.Com" <[rbrown98@comcast.net](mailto:rbrown98@comcast.net)>

Honorable Members of the Committee on Science, Space and Technology,

It would seem the Russians have set the keystone for political will and taken the first tangible (and fundable) step in building an effective Planetary Defense in response to the threat of asteroid impact:

"According to Vladimir Popovkin, the head of Roskosmos, the national space agency, "an inter-agency task force consisting of experts from the Defense Ministry, Academy of Sciences and national space agency has been formed to create a unified system of space threats prevention.""

Space watch: Joint asteroid guard to be set up in Russia

<<http://rt.com/news/russia-space-threats-program-197/>>

Shades of Sputnik! Time to play catch up in Space... again, da/nyet? Or perhaps we should retire from the field altogether and just hire the Russians to defend our corner of the planet too?

Thing is, Congress not only thought to do this over 5 years ago but Presidents have signed it into Law, twice:

"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, <SNIP> and assign a Federal agency or agencies to be responsible for protecting the United States and working with the international community on such threats."

Problem is, so far, we have simply failed to actually do it.

The witnesses you have called to testify for the March 19th hearing respectively represent the same US agencies we now see delegated to this mission in Russia. So far, NASA and DoD and even the OSTP have been standing by awaiting lawful orders and a formal delegation of authority based on a codified national policy that would allow them to reallocate the resources necessary to effectively engage this threat. You can not continue to leave this much responsibility as tacit or inferred and not be the specific letter of the law and expect a desirable outcome. Time to make this real... Tic Toc.

Supporting arguments and logics:

<<http://Gaiashield.Com/NEOHearing>>

A Million Miles A Day,

Dale Brownfield

Gaiashield Group

<<http://Gaiashield.Com>>

<[rbrown98@comcast.net](mailto:rbrown98@comcast.net)>

Subject: Bolden

Date: Thu, 14 Mar 2013 23:56:33 -0500

From: "War-Zone.Com" <[rbrown98@comcast.net](mailto:rbrown98@comcast.net)>

Gen. Bolden,

It would seem that your Russian counterpart has set the standard for political will and taken the first tangible (and fundable) step in responding to the threat of asteroid impact and building an effective Planetary Defense:

"According to Vladimir Popovkin, the head of Roskosmos, the national space agency, "an inter-agency task force consisting of experts from the Defense Ministry, Academy of Sciences and national space agency has been formed to create a unified system of space threats prevention.""

Space watch: Joint asteroid guard to be set up in Russia

<<http://rt.com/news/russia-space-threats-program-197/>>

Shades of Sputnik. Time to play catch up in Space... again, da/nyet? Or perhaps we should just retire from the field altogether and hire the Russians to defend our corner of the planet too?

Thing is, Congress not only thought to do this over 5 years ago but Presidents have signed it into Law, twice:

"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, <SNIP> and assign a Federal agency or agencies to be responsible for protecting the United States and working with the international community on such threats."

So far, we have simply failed to actually do it. Tic Toc...

Supporting arguments and logics:

<<http://Gaiashield.Com/NEOHearing>>

A Million Miles A Day,

Dale Brownfield

Gaiashield Group

<<http://Gaiashield.Com>>

<[rbrown98@comcast.net](mailto:rbrown98@comcast.net)>

Subject: Hearing

Date: Sun, 03 Mar 2013 15:00:55 -0500

From: "War-Zone.Com" <[rbrown98@comcast.net](mailto:rbrown98@comcast.net)>

Honorable Members of the Committee on Science, Space and Technology,

On March 6th this Committee should be looking for answers and explanations regarding the failure of Executive Office to comply with its own law:

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, <SNIP> and assign a Federal agency or agencies to be responsible for protecting the United States and working with the international community on such threats.

The only Federal Agencies qualified to respond to the threat of asteroid impact would be NASA and DoD. Since this threat includes the prospect of our random Extinction by NEO, we would be fools not to employ the applicable resources, culture and standing budgets of both. After all, neither seem to want the job. Perhaps, if they did not have to go it alone...

Supporting arguments and logics:

<<http://Gaiashield.Com/NEOHearing>>

A Million Miles A Day,

Dale Brownfield

Gaiashield Group

<<http://Gaiashield.Com>>

<[rbrown98@comcast.net](mailto:rbrown98@comcast.net)>

