

# *Gaiashield Group*

1400 Kra-Nur Drive, Burton, Michigan 48509



## *To Mars... or Die Arguments Towards A Critical Alternate Vision*

### **Open Letter to The Stanford Alternate Vision Workshop:**

It is an old cold red dead ball of rock that will kill you for just being there... Yet, from the perspective of defending the planet from asteroid impact, both tactically and strategically, a strong case can be made for the manned conquest and colonization of Mars.

Tactically, from here and now, it would be the height of technological hubris, if not criminally negligent, to presume we could *successfully* execute a mission to deflect even a small asteroid impact threat autonomously or remotely while we sit safely here on Earth. There will always be some new subsection of Murphy's Law to deal with on the fly and as the man said "*A human being is the best computer available to place in a spacecraft...*" Werner von Braun

I'm just sayin', if it's your children and grandchildren at Ground Zero would you want the deflection mission to be Manned or would you trust in some piece of technology designed and build by the lowest bidder? Manned missions to asteroids should not be merely become a thing we have done before but an expertise that has become second-nature... a survival trait.

Strategically, think Worse Case Scenario and Launch Windows... The logic to only address anything less than the worst case scenario here would be founded solely on random chance and the expectation of good luck: a Hope based Planetary Defense. And we can only ever afford to Hope for the best after we have prepared for the worst.

That said, if we use the recent MSFC study used to inform NASA's NEO Workshop report to Congress as a baseline, we can project that under ideal conditions a single Ares V mission with a 7 MT nuclear payload can divert a 500 meter asteroid threat. From that we can extrapolate that at 8 times the mass and all else being equal, it would require 8 such missions for any 1,000 meter threat. A 10,000 meter Chicxulub Class impact threat, at 8,000 times the mass, would require 8,000 such Ares V missions. If we set aside the obvious myriad of first-order political, economic and industrial challenges in building such an effort in whatever time we will have between detection and impact, the existential question will still be whether or not we will be able to get them all off the ground *effectively*? Will we have suitable launch windows available for 8,000 simultaneous Ares V asteroid interception missions? Hell, there is no way to know if we will even have the *one* we will need when the time comes to deflect some 500 meter impact threat let alone windows enough for 8,000? And what if it rains on the day we have to save the world? Game Over, No Joy, Restart Darwin's Clock... again.

Consider the Orbit of Mars: specifically, Sun/Mars L3, L4 and L5, as the only strategically rational point - the NEO high ground if you will - for Earth to pre-position and implement an asteroid deflection mission and have any reasonable expectation of success. Planetary Defense space stations in circumstellar orbit serviced from a dedicated forward base on Mars...

From the perspective of defending the planet from asteroid impact, both tactically and strategically, the Moon is nothing. And in going back to the Moon we can learn nothing about going to Mars that we cannot better learn by going directly to Mars. If colonizing Mars and manned asteroid missions are essential to dealing with the threat of asteroid impact then going back to the Moon only serves to retard the development of capabilities and expertise we need to develop *Now!* The distraction of going back to the Moon effectively becomes a threat in itself.

All things considered there is no way to know just how the next administration will see the present administration's Moon/Mars Initiative. They may choose to abandon all of its goals or even NASA itself. So if Mars is the prize here, do you want to continue along that dusty old discretionary pork-barrel path, preaching enervated blue-sky justifications and painfully hollow rhetorics that although may still sound good to the choir, have lost whatever public appeal they ever had decades ago? Or would you rather rely on the primal compulsion of Survival of The Species to get the policy and funding to get Man to Mars?

Even though there may be nothing there worth going there to get, when you understand that Mars is nothing less than the path and means to saving Mankind from the Cosmic Promise of Extinction by NEO all budget appropriations and mission priority concerns become irrelevant. After all, how much should We The Species be willing to spend to preserve all-there-is-forever?

Unfortunately, between the statistical sophistries, academic slights-of-mind and uninformed executive decisions the prospect of asteroid impact is rapidly becoming a man-made threat. So at least keep in mind that no matter what we do or do not do, no matter what we want or do not want - no matter what we think... The Next Large Asteroid on its way to strike Earth is coming.

A Million Miles A Day

R. Dale Brownfield  
Gaiashield Group

PS: If you do only one thing at this workshop... find a Champion. No one wants to hear what the consensus has to say... not even Presidents.

Cosmic Promise: Logic and Arguments Justifying a National Planetary Defense Policy  
<<http://Gaiashield.Com/CosProm/>>

To Whom This Should Concern: Arguments Towards a National Planetary Defense Authority: NASA vs. DoD  
<<http://Gaiashield.Com/NPDA/>>

NEONet: To Catch a Falling Star  
<<http://Gaiashield.Com/NEONet/>>

Waging War on TNLA: The Next Large Asteroid on its way to strike Earth  
<<http://Gaiashield.Com/TNLA/>>

NEOShiva: Unacceptable Risk/Detection/Interdiction/USS Chicxulub/Mars: Tunguska Base  
<<http://Gaiashield.Com/NEOShiva/>>

GaiaShield: The Sky Is Falling Now!  
<<http://Gaiashield.Com/>>