

Re: Asteroids or bust!

Source: <http://sci.tech-archive.net/Archive/sci.space.policy/2004-06/0115.html>

From: Hop David (hospaceHATESSPAaMmM_at_tabletoptelephone.com)

Date: 06/02/04

Date: Wed, 02 Jun 2004 12:37:22 -0700

Alex Terrell wrote:

> *Sander Vesik* <sander@haldjas.folklore.ee> wrote in message
news:<1085752782.723641@haldjas.folklore.ee>...

>

>>> *It isn't uncommon for NEOs to pass within 10 lunar distances of earth.*

>>> *Sometimes the relative velocity is less than Lunar escape velocity.*

>>

>> *But AFAIK*

>

>

> *which isn't very far, like the rest of us*

This is why I'd like a series of Discovery class missions to the lunar poles and NEOs before we ramp up manned space flight missions. I believe manned space exploration/colonization will be far more doable when we have a better inventory of resources within easy reach.

>

>

>> *NEO-s don't really contain that much nitrogen.*

>

>

> *Some though were recently comets, and should still have Ammonia.*

>

>

>> *Plants (and animals,*

>> *inc humans) need nitrogen-based compounds to live.*

>>

>>

>>> *If the goal is bring organic compounds and volatiles to colonies in*

>>> *orbit or on the moon, I remain unconvinced Earth is the cheapest source.*

>>>

>>

> *NEOs certainly have carbon, perhaps with nitrogen added.*

Presence of carbon maybe important both as a life sustaining resource and for making rocket fuel.

sci.space.policy: Re: Asteroids or bust!

Henry Spencer has noted that watery NEOs may not be much good for supplying LEO fuel depots. It takes a lot of energy to split water into H₂ and O₂. Plus H₂ is hard to store.

Presence of carbon in watery asteroids may make it possible to store the hydrogen as methane.

If the NEO is a former comet, there may already be CH₄ and other useful hydrocarbons in its core.

>

>

>> *The alternative known to be abundant resource of nitrogen compounds is Titan.*

>

You'd need to escape Titan's gravity well plus Hohmann entry from a 1,221,830 km Saturn parking orbit and a Hohmann exit to (say) a 300 km earth parking orbit.

My BOTE: 11.6 km/sec delta vee.

I believe Titan has a thicker atmosphere than earth's which would be a pain to launch through.

Earth would be a better nitrogen source than Titan -- at least for near Earth space.

--

Hop David

<http://clowder.net/hop/index.html>