

Re: Ares V: Launch Industry Game-Changer

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- *From:* kT <cosmic@xxxxxxxxxxxx>
 - *Date:* Wed, 22 Apr 2009 10:24:43 -0500
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spacecrate@xxxxxxxx wrote:

The materiel and labor costs of launching a single, large, unmanned rocket like Ares V, should be less than launching several smaller rockets to get the same amount of payload into orbit. The enormous development cost of Ares V doesn't figure into the equation because that will be borne by U.S. taxpayers.

You don't seem to understand the magnitude of the economic waste of developing an expendable 10 METER CORE STAGE, and this is greatly exacerbated by EXPENDING SIX ENGINES, whether they be RS-68s or SSMEs.

The problem is much worse if you are throwing away the SSMEs, and the RS-68s won't work anyways because of thermal reasons, besides the fact that they are HUGE fluid and gas hogs.

The only way you can make a 10 meter core work is if you power it with SSMEs and take it directly to orbit where it will be incorporated into vast orbiting spaceports and spacecraft a la' Star Trek, and where the expensive reusable engines can be recovered and returned to Earth.

We've gamed this out long ago.

Every launcher in the world, with the exception of those built by SpaceX, was developed with some government's funding. Ironically, the greatest beneficiary of an Ares V fuel depot would probably be SpaceX. Their Falcon I rocket would likely be the cheapest way to launch a commercial comsat.

If you want a reusable heavy lift, your best bet is to use SSTO hydrogen powered cores with reusable engines, and hydrocarbon powered reusable boosters, where those boosters are recovered from the ocean or even better, flown back to the launch site. You can start with the SSMEs that you have, and then replace them with smaller clustered Merlin style hydrogen engines at a later date, some of which can remain in orbit for further use in extraterrestrial applications.

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