

Re: Size of the proposed "new" space vehicle?

Source: <http://sci.tech-archive.net/Archive/sci.space.shuttle/2005-10/msg00122.html>

- *From:* "tomcat" <jlavine@xxxxxxxxxxxxxx>
 - *Date:* 7 Oct 2005 15:29:53 -0700
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Jeff Findley wrote:

- > You're horribly delusional. Try looking at the X-33 program and tell us
- > again how quick and easy it would be to build a "triangle spaceplane". Part
- > of the problem with such a design is the shape of the fuel tanks, which is
- > exactly where X-33 had some serious problems. More time and money might
- > have fixed those issues, but the program was cancelled because of the
- > reluctance to throw good money after bad.
- >
- > Jeff

Delta Clipper had a problem with the fuel tanks, one that could easily have been solved if NASA had tried.

Let's not make building a spaceplane out to be more than what it is. The hard R&D work has been done with the Space Shuttle.

The Shuttle proved the waverider concept, the H₂/lox SSME, glideslope technology, crew adaptability to space, and general space engineering.

When SSTO HTOL's were first being designed, during the 70's, everything was up in the air. So, financial backing was lacking. These SSTO HTOL designs didn't fail -- they were never built.

Was hypersonic plasma really hot? Will waveriders really ride the wave? Can rocket engines be relied on? Should jets, scram jets, and then rockets be used sequentially? Can pilots really fly hypersonic vehicles? Will there be surprises in Outer Space?

In addition a lot of technology was lacking in the 70's. Titanium could not be easily worked or machined. Computers were crude by today's standard. (In fact, the Apollo capsules used coded paper tape instead of computers to save weight.) Composite was unheard of outside classroom speculation. Fly by wire technology didn't exist until the F-16.

Today, we can build everything except the surface skin using tried and

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true off-the-shelf technology. Not a small advantage over the 70's!
And, with regard to surface skin, we can always fall back on ballistic nose cone technology: Corelle on top of reinforced carbon carbon, over metal plate. Add a vacuum bottle design, a little cyrogenic cooling with a nomex interior and the heat problem should be solved.

There are several things going on at NASA and elsewhere in the government that muddies up the water. The 'rocket people' are fighting the 'aircraft people'. The 'military people' are fighting the 'NASA civilians'. And, everyone wants to keep their jobs.

Some view NASA as a spectator sport like baseball and football. They believe people want to watch the roman candles lift off from gantrys, not take off from runways. Most influential people don't see interplanetary voyages, or even Moon missions, as practical. Just so much showmanship to be kept at a slow, economical pace.

Then you have the 'Deep Black' Generals hidden deep within mountain bunkers, separating America's 'real' technology from the . . . NASA circus acts.

Controlling technology so great that even Aliens shake and shiver, these 'shadow czars' rule with an iron fist, slowly turning America into a double country: the Eloi, and the Morlocks. The Eloi dance around in innocence while morlocks lurk beneath the surface making all manner of . . . deals.

Heaven forbid you ever meet these shadows. You might offend one and burst into flames, leaving only a stain on the concrete. Note: See "Men In Black" by Steven Spielberg.

What is true here and what is fiction I don't know. But the performance of the X-33 doesn't mean diddly, or say anything about America's technology. Best to use good common sense.

If you can build something with off-the-shelf tried and true parts — then go ahead and build it because it is bound to work.

tomcat

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• *Follow-Ups:*

◆ *Re: Size of the proposed "new" space vehicle?*

◇ *From: Mike Dennis*

• *References:*

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- Prev by Date: **Re: How many times did space shuttles retrieve satellites from orbit?**
- Next by Date: **Re: NASA Administrator Agrees With What Many Critics Have Been Saying for Years**
- Previous by thread: **Re: Size of the proposed "new" space vehicle?**
- Next by thread: **Re: Size of the proposed "new" space vehicle?**
- Index(es):
 - ◆ **Date**
 - ◆ **Thread**