

## Re: How Rockets Differ From Jets

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*Source:* <http://sci.tech-archive.net/Archive/sci.space.shuttle/2005-10/msg00435.html>

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- *From:* "tomcat" <[jlavine@xxxxxxxxxxxxxx](mailto:jlavine@xxxxxxxxxxxxxx)>
  - *Date:* 24 Oct 2005 14:27:36 -0700
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Fred J. McCall wrote:

- > :Nothing magical about a SSME. Rocketdyne makes them. They work. They
- > :produce 450,000 pounds of thrust each at sea level, 500,000 pounds of
- > :thrust each in Space.
- >
- > I don't see any spaceplanes using 11 of them flying to Venus today.
- > Perhaps you do?

Such a spaceplane is getting discussed here precisely because it hasn't been built yet. It is the future of Space Engineering.

A spaceplane with 11 SSME's would have 5.5 million pounds of thrust at full throttle in space. That is a lot of thrust. Combined with a very light dry weight it just about could work 'magic'.

- > :A good spaceplane would be a combination of extremely light materials,
- > :like carbon nanotube fabric, and . . . vacuum. It just might float.
- >
- > In which case it is not acting as a spaceplane and will be in pieces
- > from forces hitting it from the wrong directions.
- >
- > Engineering ain't magic, Tomcat.

We are not talking about 'bailing wire and bubble gum' here.

Both basalt fabric and nanotube fabric have enormous toughness and strength. Nanotube fabric -- recently developed at the University of Texas -- is not only 600 times stronger than steel for a given amount of weight, but can take many thousands of degrees of heat.

tomcat

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Re: How Rockets Differ From Jets

• **Follow-Ups:**

- ◆ **Re: How Rockets Differ From Jets**  
◇ From: Fred J . McCall
- ◆ **Re: How Rockets Differ From Jets**  
◇ From: George Evans

• **References:**

- ◆ **Re: How Rockets Differ From Jets**  
◇ From: tomcat
- ◆ **Re: How Rockets Differ From Jets**  
◇ From: Brad Guth
- ◆ **Re: How Rockets Differ From Jets**  
◇ From: tomcat
- ◆ **Re: How Rockets Differ From Jets**  
◇ From: Glenn Shaw
- ◆ **Re: How Rockets Differ From Jets**  
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- ◆ **Re: How Rockets Differ From Jets**  
◇ From: Fred J . McCall
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