

Re: N-1 "Stabilization Screens" (Wuz: Re: shuttle LOX line vs Saturn V LOX lines)

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Source: <http://sci.tech-archive.net/Archive/sci.space.history/2007-03/msg00806.html>

- *From:* OM <om@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Tue, 27 Mar 2007 13:45:35 -0600
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On Tue, 27 Mar 2007 16:54:10 GMT, henry@xxxxxxxxxxxxxx (Henry Spencer) wrote:

In article <ejlh03t0ocr13tc14n2gu2t0ubkpokk9o5@xxxxxxx>, OM <om@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote:

<http://www.ninfinger.org/~sven/models/realspace/rsm088.html>
...Just exactly *how* did those "stabilization screens" work, aerodynamically speaking? They sort of go against what we'd expect to find on a rocket – read: fins...

Think of a bunch of long narrow fins in parallel. Now cross them with more long narrow fins at right angles to the first batch. This gives you something that looks like a screen at first glance, but is actually a whole lot of fin area in a compact package. My dim recollection is that there's been a bit of use of such "grid fins" (there is some other buzzword for them but it escapes me at the moment) for tube-launched tactical missiles, where fin stowage is always a headache. If I recall correctly, their main virtue is compactness, and their main vice is relatively high drag.

....That's what I thought as well WRT drag effects. Pat's links provided the views I'd never seen before, and to be honest I actually thought they were some sort of flat plates and/or plates with holes drilled through them. My take on the purpose wasn't so much as, say, fins on an S-IC stage, but something that was slightly angled so as to put a slow, mechanical stabilizing spin on the entire stack.

Heh, I wonder if the NARCON guys have ever experimented with replacing their fins with the "finger guards" from small desktop fans :-)

OM

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] Let's face it: Sometimes you *need* [
] an obnoxious opinion in your day! [
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