

# Re: Cult spacecraft Part One: The Little Spaceplane That Couldn't

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  - *Date:* Sun, 14 Dec 2008 12:25:35 -0700
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Pat Flannery <[flanner@xxxxxxxxxx](mailto:flanner@xxxxxxxxxx)> wrote:

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:Fred J. McCall wrote:

:>

:> Think about it. Why would they precisely reverse course? What would

:> most likely happen is they'd scatter in all directions and not stay

:> together at all (nor would they precisely reverse course, which is a

:> fairly stupid tactic, come to that).

:>

:Assuming the concept is to get as far away from the blast point as

:possible then the way to do it is to reverse course; any course other

:than that is going to leave you closer to the detonation point.

:

No, because that assumes the guy shooting at you is both stupid and has weapons that are guaranteed to go exactly where he aims them. Neither of those tends to be true.

:> :For airbursts, the carrier is probably pretty survivable; the aircraft

:> :on deck will probably be rendered unflyable if not swept clean off of

:> :the deck by the blast effects and radar gear and such on the island will

:> :probable be rendered at least temporarily inoperable. But the water

:> :spray system is designed to wash fallout off of the ship, so it at least

:> :will be able to stay afloat and probably operate any aircraft that were

:> :in the hanger deck when the detonation occurred.

:> :

:>

:> Which would probably be most of them. There probably wouldn't be more

:> than a handful of aircraft on deck, if that.

:>

:

:Are you sure about that? If this happens in that timeframe then you

:might well be a target for Badger, Blinder, or Backfire attacks via AS-4

: "Kitchen" or AS-6 "Kingfish" cruise missiles, so you are going to want

: your Hawkeyes and Tomcats up to intercept any bombers that are in the

: vicinity while they are still out of missile attack range.

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I'm positive of that. There are no Tomcats anymore and there would be one Hawkeye airborne. But the issue isn't what's airborne. The issue is what's on deck that you can't either cat or strike below given warning of a nuclear strike.

:> Do you have a cite for that? SUBROC flew supersonic in air, but I  
:> find nothing to indicate that it remained supersonic until it hit the  
:> water. In point of fact, it blew the engine off and flew ballistic,  
:> so I would expect it to slow back down before it hit the water.

:>

:

:"Rockets and Missiles" by Bill Gunston, 1979, page 259:  
:"Clear of the water, the SUBROC quickly accelerates to supersonic speed,  
:whilst continuously guided by the SD-510 inertial system and jetevator  
:nozzles. At the required cutoff speed to give the correct range the  
:propulsion is arrested; in 60 milliseconds explosive bolts separate the  
:warhead, forward-facing ports reverse the thrust of the rocket motor,  
:and the inertial system begins to control the trajectory of the warhead  
:by means of small aerodynamic fins. Unlike ballistic missiles, the  
:guidance continues on the downward trajectory, which again posed new  
:problems. Yet another new hurdle to be overcome was reentry to the water  
:at supersonic speed, still under guidance and without affecting the  
:complex safe/arm system for the nuclear warhead. The device sinks to  
:optimum depth and is there triggered, with lethal radius of 3-5 miles  
:(5-8 km)."

:

Thanks. I don't know that I'd want to try that at reentry speeds, though.

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:> :  
:> :Even a airburst close to the sea's surface of a large yield nuclear  
:> :weapon is going to transmit a lot of its shockwave into the water and  
:> :blow radioactive water all over the place in the form of a giant cloud  
:> :of radioactive steam.

:> :

:>

:> In general this is a "don't care" for USN ships. It's what the water  
:> washdown system is for.

:>

:> :> Given the preceding, calculate how many weapons you have to lay down  
:> :> in a grid within that circle the carrier MIGHT be in. Keep in mind  
:> :> the (in)accuracy of the weapons you're firing, as that will  
:> :> necessitate putting them closer together than your original  
:> :> calculation says you need.

:> :>

:> :> Once you've done all that, calculate the total cost of all the  
:> :> warheads and delivery systems required in order to try to kill a  
:> :> carrier with ICBMs. See if it meets the threshold to be a worthwhile  
:> :> way to try to kill carriers.

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:> :

:> : This of course relies on the fact that the warhead can't self-home  
:> :after reentry. From around fifty miles up it will be able to see a lot  
:> :of the sea's surface under it easily including any carrier force trying  
:> :to escape it, and like our Pershing II, it might be able to use a  
:> :nose-mounted radar to home on its target.

:> :

:>

:> Pershing II attacked STATIONARY targets with lots of well-mapped radar  
:> features to navigate by. You're not talking about the same thing at  
:> all here.

:>

:

:No, you are talking about a multi-acre plate of steel facing straight up  
:in a sea that has a different radar return from the carrier flight deck,  
:and also has waves changing the radar return from the sea's surface from  
:second to second.

:

Except that deck is moving about, as well. These things aren't  
buildings, you know.

:

:Just like the way that Doppler radar allows a aircraft's AAM to  
:differentiate a moving aircraft from non-moving background clutter  
:caused by the Earth's terrain under it, this radar would look for the  
:reverse...a solid radar return surrounded by a variable radar return  
:from the sea's surface. Also, radar frequency selection could easily  
:differentiate between water and the metal making up the carrier's structure.

:

Pat, you should get into my line of work, since you seem to find a lot  
of things can be done "easily" that a lot of very smart folks spent a  
lot of time and money trying to do.

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"The reasonable man adapts himself to the world; the unreasonable  
man persists in trying to adapt the world to himself. Therefore,  
all progress depends on the unreasonable man."

—George Bernard Shaw

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