

Re: Striking a Lunar target in the near future...

Source: <http://sci.tech-archive.net/Archive/sci.space.policy/2004-08/1759.html>

From: Henry Spencer (henry_at_spsystems.net)

Date: 08/18/04

Date: Wed, 18 Aug 2004 14:15:34 GMT

In article <4126e2e5.3539314@supernews.seanet.com>,

Derek Lyons <fairwater@gmail.com> wrote:

>There are two practical methods at launch time, with nothing obvious
>(that I can see) to choose between them. The first is to launch into
>a parking orbit and then depart for the moon, or to launch directly
>for the moon.

In practice, direct launch tends to involve narrow and infrequent launch windows (and sometimes none at all). The extra degrees of freedom added by an intermediate parking orbit make the situation **much** more tractable, which is why parking orbits are fairly standard practice. You do pay a small price in complexity and payload mass, but it's usually worth it.

>For impact, I'd think a drop straight in would be the simplest.

Quite so. Stopping in lunar orbit, etc, would be costly and would have no benefits for this. Even the Surveyors, heading for soft landings, went straight in.

>Given that current nukes end up in free fall while in a ballistic
>trajectory, and encounter some frightful G's at the start and end of
>that trajectory, I cannot see a problem with the basic space
>environment.

Some of the materials may not be rated for **prolonged** vacuum exposure, and similarly, temperature control may be an issue for several days of cruise in open space (which is generally a colder environment than near-Earth space). If you were in a hurry and didn't want to fiddle with requalification procedures, the obvious thing to do is to put the warhead in a pressurized outer can with whatever insulation and surface coatings seem appropriate. (You might or might not need to open the can up just before arrival, depending on fuzing issues.)

--

"Think outside the box -- the box isn't our friend."
-- George Herbert

| Henry Spencer
| henry@spsystems.net