Re: Space exploration for the rest of us

Source: http://sci.tech−archive.net/Archive/sci.space.policy/2006−10/msg00022.html

- *From*: jacob navia <jacob@xxxxxxxxxxxxxxx>
- *Date*: Fri, 29 Sep 2006 09:59:37 +0200

Fred J. McCall wrote:

> jacob navia <jacob@xxxxxxxxxxxxxxxx> wrote:
>
> :Jeff Findley wrote:
>
> :3) Even a small "moon base" project requires an enormous expense.
> : You have to send HEAVY equipment to excavate the moon base
> : and bury it underground. If not, you have to evacuate the
> : moon base at each solar flare, and if you are unlucky, the
> : astronauts are killed when trying to reach earth.
>
> Ever been to Kansas? They have these things called tornado cellars.
> You see, everyone knows that Kansas is uninhabitable because it is so
> hard to build a house that will withstand a tornado. And yet, oddly
> enough, people manage to survive in Kansas just fine.
>
> The same approach works just fine on the moon. You just need enough
> heavily shielded space for people to take shelter in during solar
> storms. The rest of the time they can go live in their houses and
> grow wheat ... uh, go live in the main base and do their jobs.

That was what I am saying. You have to bury yourself to
protect from radiation. This is (of course) VERY easy to do.

You have to transport heavy machinery to the moon to do the
holes in the ground, then transport the housing equipment
and there you are, you have your moon base.

This means that you must design a earth−moon transporter, i.e.
a vehicle for transporting heavy equipment to the moon,
you have to design the equipment, you have to test it, package it,
transport it to the moon, send big crews to unpack it,
work with it, etc etc. Those crews will not have any
shelter so better they avoid solar storms if not they
get fried.

I am not saying that this is impossible. Just that the
current plans provide not the slightest HINT that something
like this (building of a space infrastructure) is at all
in the works.

> :4) Space radiation is deadly without adequate shielding. A moon
> : base project needs to get completely underground.
>
> Poppycock! This is the same as your 3) and the same answer applies.

Yes, and the same problems that I explained apply here too!

> :5) Since artificial gravity is impossible in the moon, we
> : are assuming that bone loss does NOT happen in moon gravity
> : what is probably FALSE.
>
> Who told you artificial gravity was impossible on the moon? Hell, you
> can generate artificial gravity here on Earth. Just build a track
> banked for a 2−g turn, hop in your car, and voila − 2 g artificial
> gravity.

Nice. Well, nothing is impossible, it is just that to do that
in the moon that track must be underground, and the hole must be big
enough to hold a track + associated equipment. This is as (3) above
not impossible but absolutely not planned and at the moment just
a sheer phantasy.

> :6) Any serious planetary exploration is impossible since humans
> : are unfit for the trip, not to mention to withstand the
> : harsh conditions in the target planet. All known planets are
> : utterly hostile to human life. Yes, this can be solved by
> : artifical gravity+shielding but the mass of the spaceship becomes
> : staggering. Thousands of tons at least.
>
> Ridiculous assertion. And if things are as bad as you say, cancel
> space science. If we're not going we don't need it.

Well, I have a different view of science and exploration. I am
not the "gee whiz" type of person, I do not like TV shows, but

I do like the sheer beauty of exploration, of discovery that only
science can give.

> :No one, neither NASA nor anyone else has any solution for this problems
> :yet. Those are REAL showstoppers.
>
> Hogwash! Again, anyone willing to apply a little thought can start
> down the road to solutions to your "REAL showstoppers".
>
> If they're indeed "REAL showstoppers", then let's stop the show. Shut
> down NASA and the entire space science budget. It will never be
> useful because going is impossible.

Who cares about going "in person". We have our machines, that can
transport our eyes and hands.

Instead of sending all this TONS of equipment to the moon, we
can send a rover that will gather the same data, discover the SAME
things as a human, and do it for 1/1000 of the cost. The distance
to the moon is so small, that you can drive a vehicle in real
time from earth. The time−lag is just 2 seconds. So you would be able
to control that vehicle very finely, without any risks to you.

The moon base could be setup NOW at costs approx 1 billion.
True Lockheed Martin would earn much less, (probably nothing)
since there is no need to develop anything. Just use some
rocket already built, JPL to build the rover, and you are all
set. Energy is plenty in the moon, solar panels would give
much more than in Mars, no wind or dust in the atmosphere to
cope with, no seasons, a robot could be operational for
a decade without any problems. You put a dozen of those
and you can explore the moon without any problems.

WHY DO WE NEED TO SEND HUMANS?
.