



Improvisation 'A Return to the Moon'

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Now I am no space scientist, nor do I claim to understand any of the physics involved in getting anything animal, vegetable or mineral into earth orbit and beyond. What I do claim to be is a rational thinker and a natural (by necessity) solver of problems.

I dare say there are millions of individuals out there who have during the course of their lives had to make on the spot decisions that directly effect what the individual is doing either for the good or for the bad.

The scenario I am referring to is one that involves using the resources in front of you to enable you to carry on with what you are doing even though your hardware/equipment has broken down and no manufacturers spares are available. (Improvisation).

Imaging trying to repair a broken electronic cable on a television camera with two minutes to go before live broadcast having found yourself with no wire-cutters or soldering iron. How do you do it, how do you trim the cable back, well you use your teeth, mains unplugged of course, you twist the

cables together and insulate them with tape but hey you have no tape. You do have a video-cassette with a sticky label, use the label.

These problem solvers were exactly the type of thing that faced the crew of Apollo 13 when they found themselves in a very serious life-threatening situation after a fuel cell almost blew their spaceship to pieces. I am sure we have all seen the movie (*Apollo 13 with Tom Hanks*) and probably seen the documentaries telling the tale in all its detail.

Well the crew didn't have me working on their problems but they did have thousands of engineers and contractors working round the clock to re-design the electronic workings, power supply and life support systems of the stricken craft with only the contents of a small seriously damaged and overcrowded spacecraft to work with.

They succeeded and went down into the history books as heroes of the American Space programme.

So where is all this going?

Only recently NASA proclaimed to the world that by 2018 it intended to put man back onto the surface of the moon. Now that is still some 13 years away and if NASA guesstimates are anything to go by it will more likely be 20 years from now before we get anywhere near lunar orbit.

The reasons for this delay?

The hardware has to be developed, a new four man landing vehicle is required and an updated multi-stage rocket needs building.

Why?

Surely if we are going to use updated technology we would expect to see improvements, speed, re-usability etc. None of this is mentioned in the mission plans, in fact NASA state that the journey will take the same amount of time as the original Apollo trips and a three stage rocket will be required to achieve orbit.

Let's get this right.

NASA need 13 years to prepare for a return to the Moon. Forty odd years ago President Kennedy gave NASA the green light in 1961, by 1969 they had safely put two men on the surface of the moon and brought them home, by 1972 they had successfully launched Lunar missions seven times with six completed trips and the miraculous return of the safely aborted Apollo 13 trip making up the number.

Throughout the duration of Apollo NASA had made technological leaps and bounds with communications, the first mission sent grainy hardly watchable VHF B/W television pictures back to earth by the next trip full colour sorry

color broadcasts from the moon was the norm. NASA went on to develop a Lunar buggy that was present on the later trips and all within a ten year mission span, they also managed to develop non-stick frying pans and a pen that could write upside down.

So why now with forty years experience gained in space technology can't we simply get back to the Apollo drawing board and make it happen?

Using my problem solving grey matter I wonder if it would be possible to develop the following idea.

Using the 'what you have in front of you' idea to try and fix the problem lets take a look at what NASA have readily available.

! Space station

1 Fleet of Shuttles (apx 2 in service)

1 squad of fully trained astronauts used to longer duration spaceflights

1,000's of engineers, mission specialists, ground crews itching to make things happen.

Mission basics:

NASA can safely launch a shuttle and crew into orbit and that crew could then occupy the ISS (International Space Station) where preparations for the onward Lunar missions could continue.

An external fuel tank could be fitted to the shuttle, this could have been sent up on an earlier unmanned mission and stored at the ISS, likewise unmanned trips could be used to supply fuel for the forthcoming trip.

Comfortable living quarters could be fitted inside the payload bay of an adapted shuttle leaving ample space for a Lunar Excursion Vehicle to be safely carried aboard the craft.

The Lander mission could be controlled from the Lunar orbiting shuttle and with the ample space available in the shuttles payload bay many more samples of rock etc could be returned to earth than retrieved throughout the entire Apollo era.

Whatsmore the LEV (Lunar Excursion Vehicle) could also be returned to earth and reused on future missions.

Is this idea just too simple to be plausible or is it too simple for the Einstein like minds of the engineers and specialists challenged with NASAs latest goal to comprehend?

I am sure there are scientists and physicists out there who will have a million reasons for suggesting this proposed idea is ludicrous, but when they give their reasons for the impossibility of such a project I wonder how much

they will differ from the problems faced by NASA right now with their proposed return the moon.

I would like to hear your thoughts.

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