

Dear Dr. Edward Crawley et al

Answers:

1/ Spiral

a/ (ISS maintain and expand.)

b/ International Low Lunar Orbit Station as envisaged by ESA/RSK Prop Depot (Hypergolics) 4 Reusable Lander

c/ International Lunar Surface (Radiation) Shelter and initial toehold. Evolving (hopefully) to a Mass Driver largely constructed utilising ISRU.

d/ L1 International Gateway (OASIS RASC study) PD Hypergols and eventually LUNOX; Deep Space Vessel service station; Space Based Solar Power aggregator utilising castoff SEP tug solar arrays that can't go through the Van Allen Belts any more!

e/ L2 (QUIET PLEASE) RadioAstronomy Platform (human tended). Mass Catcher.

f/ ESL2 Deep Space Base (longterm ECLSS test platform spin habitat) PD/ DSV service station; repair shop for astronomical sats. Evolving to a Mars Cyclus.

g/ ESL1 SPS /sunshade!

h/ Phobos/ Deimos

i/ NEOs various targets of opportunity

j/ Main Belt (Ceres)

k -L3 L4, L5 points all over the solar system ... Oort Cometary Halo!

2,3/ (TeleRobotic both Moon and Mars) (See comments here:

<http://brobof.wordpress.com/2009/06/18/the-third-way/>)

4/ Go DIRECT it really is a no brainer!

(Although encouraging us Brits to fully fund Skylon would be a Good!)

As to the rest I would suggest an extension and internationalisation of the OASIS RASC study to produce a robust and reusable cis/trans lunar HSF architecture with compatibility and diversity. Thus: Hypergols a known known **and** LOX/CH4 (evolving to LH?) **and** Argon/Xenon. IBDM (ESA); standard fuel transfer mechanisms; etc. Plenty of space stuff for all partners to contribute.

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OASIS the Images

http://spacecraft.ssl.umd.edu/old_site/academics/484S03/oasis_docs/oasis_pics/

OTHER FUNKY STUFF

http://spacecraft.ssl.umd.edu/old_site/academics/484S03/oasis_docs/oasis_docs.html

OASIS the PDF

http://malsp.larc.nasa.gov/malsp_website/documents/library/OASIS_FY01_Final.pdf

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Synthesis and summary

If I had to go for one scenario/option it's the Flexible Path for this Space Cadet!

Why, after spending so much energy in getting out of one Cradle, do people want to crawl back down

into another one?

If we want 'Gravity' we can build it in space: Collier's style Space Stations to O'Neillian Colonies. The only real base we need on the Moon is one supporting a Mass Driver unless we discover HUGE quantities of water (I wish!) otherwise the NEOs will provide all that we need and Ceres beckons...

Addendum: Another HSF goal not mentioned would be to tidy up LEO (and recycle the useful bits) ditto GEO. Commercial entities may need incentivisation. (Polluter pays?) Useful role for the UN and a much needed revisiting of OST, Moon Treaty and the legalities of utilising space junk and raw materials.

Thank you for your attention. Please note that any and all ideas herein may be used publically.

Yours sincerely

David G. Lermitt
