



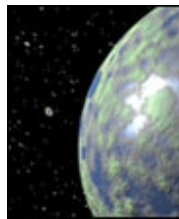
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[Home](#) >>> [News](#) >>> Cyclical visits to Mars via astronaut hotels

Cyclical visits to Mars via astronaut hotels

▶ Source: [Global Aerospace Corporation](#)

We all now what hotels and motels are, but did you ever think of spending some time in an Astrotel? For the generations to come, it will still be a rather breathtaking experience to travel to such a spaceport, and probably the number of people who will stay there on their way to Mars will be limited. But, according to GAC, Global Aerospace Corporation, Astrotels may very well become frequently used hubs when man is serious about travelling to the Red Planet.



Key elements of this innovative, new concept are the use of:

- Five month human flights between Earth and Mars on cyclic orbits,
- Small, highly autonomous human transport vehicles or Astrotels:
 - In cyclic orbits between Earth and Mars
 - Solar electric propulsion for orbit corrections
 - Untended for more than 20 out of 26 months
 - No artificial gravity
- Fast-transfer, aeroassist vehicles, or Taxis, between Spaceports and the cycling Astrotels,
- Low energy, long flight-time orbits and unmanned vehicles for the transport of cargo,
- *In situ* resources for propulsion and life support, and
- Environmentally safe, propulsion/power technology.

Global Aerospace Corporation is developing a revolutionary concept for an overall interplanetary rapid transit system architecture for human transportation between Earth and Mars which supports a sustained Mars base of 20 people circa 2035.


Astrotels operating in cyclic orbits between Earth, Mars and the Moon and Taxis operating on rendez-vous trajectories between Astrotels and transport hubs or Spaceports will enable low-cost, low-energy, frequent and short duration trips between these bodies.




This proposed effort provides a vision of a far off future which establishes a context for near-term technology advance, systems studies, robotic Mars missions and human spaceflight.

The new innovative Mars transportation system architecture concept being developed by Global Aerospace Corporation uses small, highly autonomous, solar-electric-propelled space ships, we dub Astrotels for astronaut hotels, for transporting humans to and from Earth and Mars on cyclic orbits between these planets. Human transfer between planetary Spaceports and Astrotels is by means of hyperbolic rendezvous trajectories using new, even smaller, fast-transfer, aero-assist vehicles called Taxis. The picture (*) illustrates one concept for an Astrotel along with a Taxi docked at one end.

These basic systems combined



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In this fashion, Global Aerospace



Corporation assists the NASA Enterprise for Human Exploration and Development of Space (HEDS) in all four of its goals, namely (1) preparing to conduct human missions of exploration to planetary and other bodies in the solar system, (2) expanding scientific knowledge (3) providing safe and affordable access to space, and (4) establishing a human presence in space.

[▲ Top](#)

with other elements of the Mars transportation infrastructure and a new analysis of the celestial mechanics and aero-assist options will enable low life cycle costs, low-energy, frequent and short duration trips between these bodies. Figure 2 (*) shows a schematic of the overall concept for regular human visits to Mars via an Astrotel concept that uses cyclic interplanetary orbits.■

Notes:

(*) For pictures and more details cf. [gaerospace](#)