**MSC’16 PRESENTATION PROPOSAL**

**Title: "Paraterraforming: Achieving an Earth-like Environment Much Earlier"**

**Abstract:**

Proposals for terraforming Mars typically envision a process taking centuries to millennia. During most of this process the outdoor environment wouldn't have the pressure or oxygen concentration that people can tolerate. This presentation proposes that the interim phase instead follow the process of paraterraforming in which greenhouses are ever extended from settlements with the air inside being Martian air processed to pressure and component ratios similar to that on Earth.

The advantages of paraterraforming include the rapidity at which Earth-like environments could be made available to the growing population where they need it most. It may also help to delay biological contamination of sensitive areas if that were deemed necessary. Strategies for paraterraforming include the initial delivery of very large, thin inflatable greenhouses with latter ones derived from local resources, the processing of Martian atmosphere, compartmentalization, a self-healing ceiling, the initial use of algae, the processing and use of Martian regolith, and the transition to a more wooded environment. Challenges for paraterraforming are addressed including shielding from meteorites and radiation, safety issues, and maintenance.

**Presenter:**

Doug Plata is a physician in Redlands, CA. As an active space advocate he has served on the AIAA - Space Colonization TC, the NSS Advisory Committee on Space Infrastructure, and the NSS Roadmap Committee. He founded the LunarCOTS.com petition and also is a member of the Moon Society and Mars Society. He has presented as numerous space conferences on a variety of topics and has been track chair on two occasions. His primary space interests include the establishment of a low-cost, cis-lunar transportation infrastructure based upon the harvesting of lunar polar ice for propellant, inflatable habitats, and the early sustainable settlement of both the Moon and Mars.

[MSC15 Presentation: Strategy for Simultaneous Initial Settlement of the Moon & Mars](https://www.youtube.com/watch?v=aO5cWWkirCk)

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