

NASA's Ralph Steckler Space Grant Prototype BLSS Lunar Greenhouse

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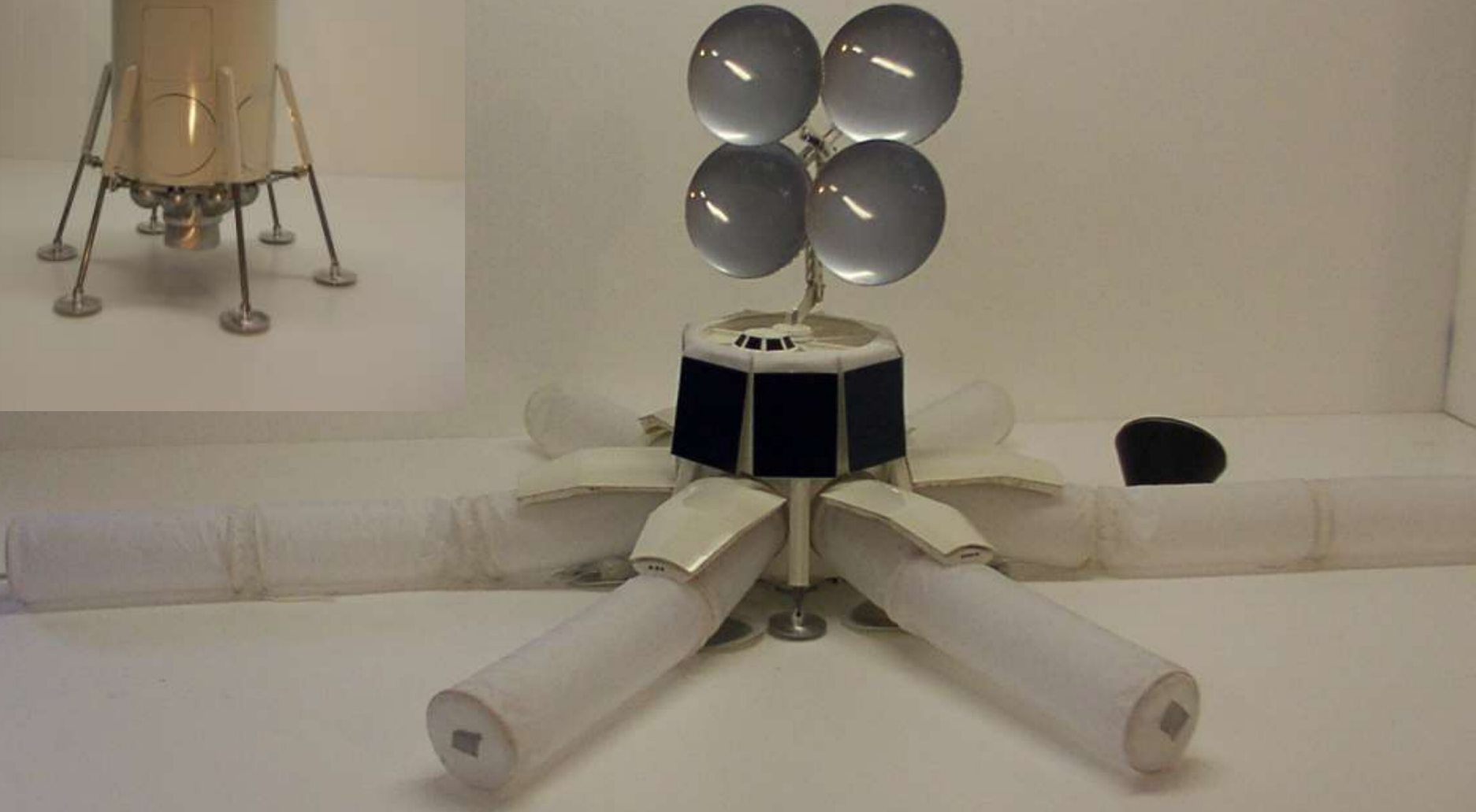
THE UNIVERSITY OF
ARIZONA
Controlled Environment
Agriculture Center

Sadler Machine Co.
Tempe, AZ

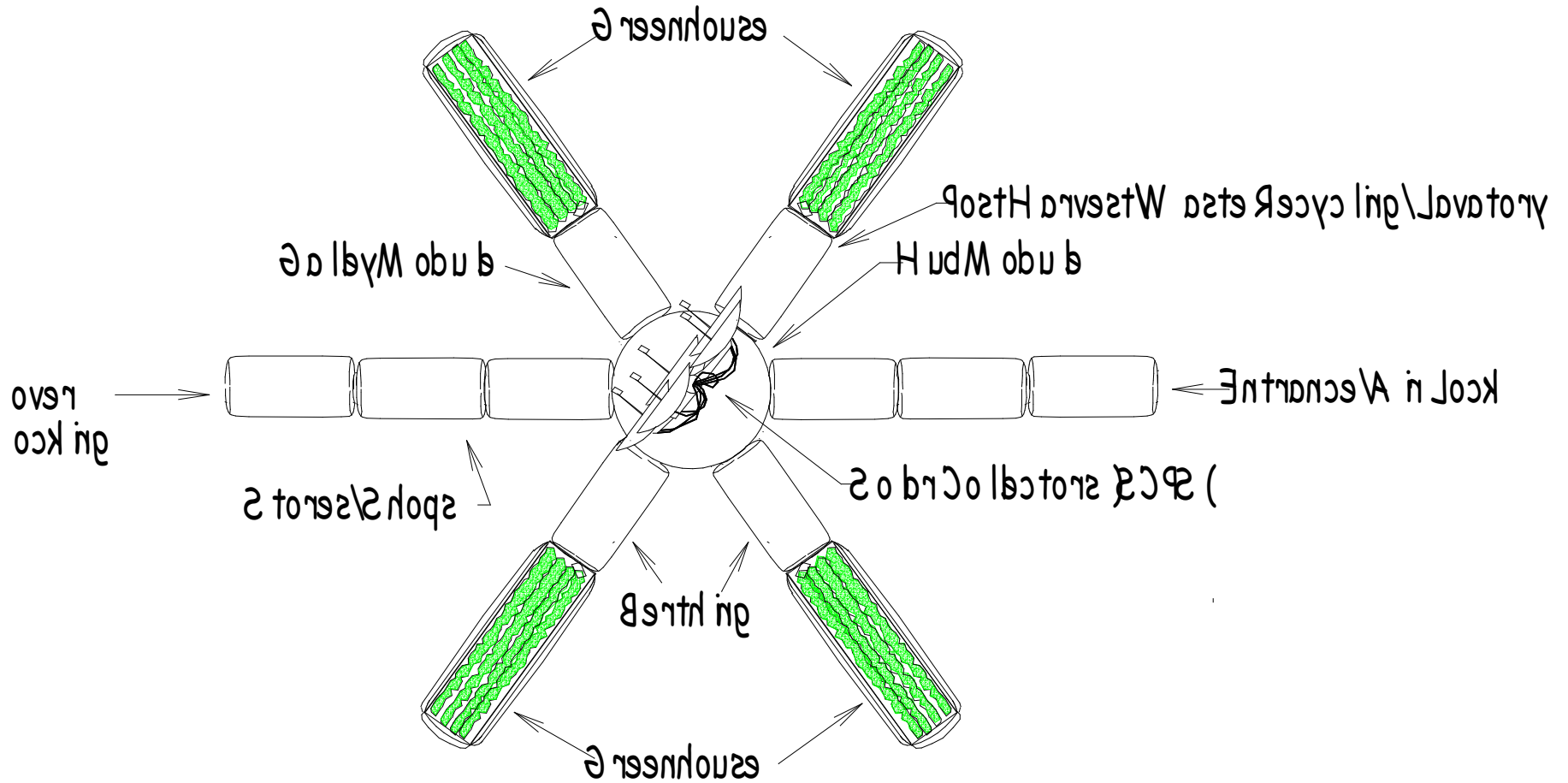
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Lunar Habitat

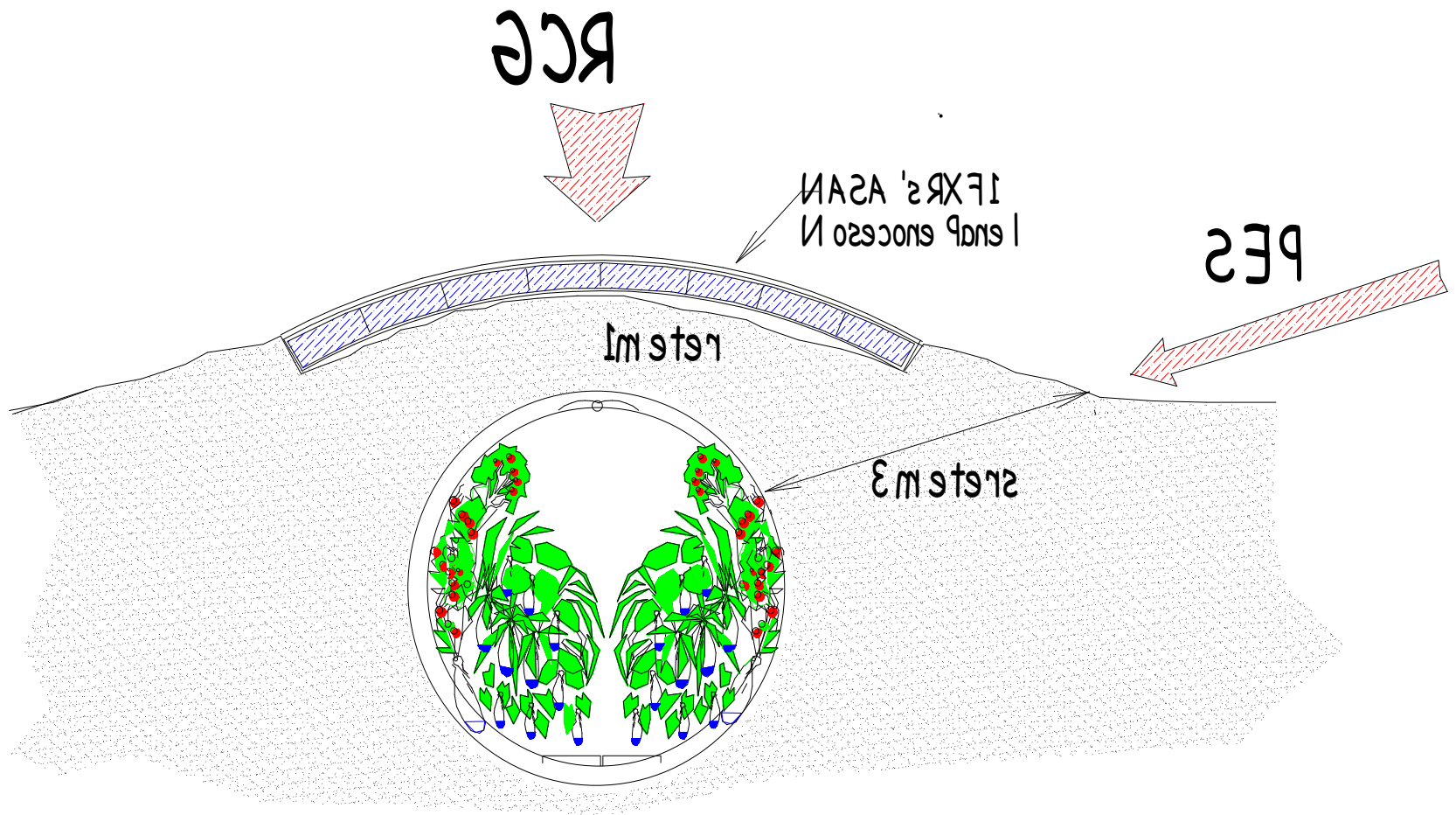


Overhead view Lunar Habitat





The Lunar Greenhouse is made to be buried with lunar regolith and natural light piped in via fiber-optic cables



Initial Demonstration Deployment of an Inflatable Prototype Lunar Greenhouse

University of Arizona
Controlled Environment Agriculture Center
Sadler Machine Co Tempe, Az

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Phil Sadler Small Business Collaborator
Lane Patterson grad student

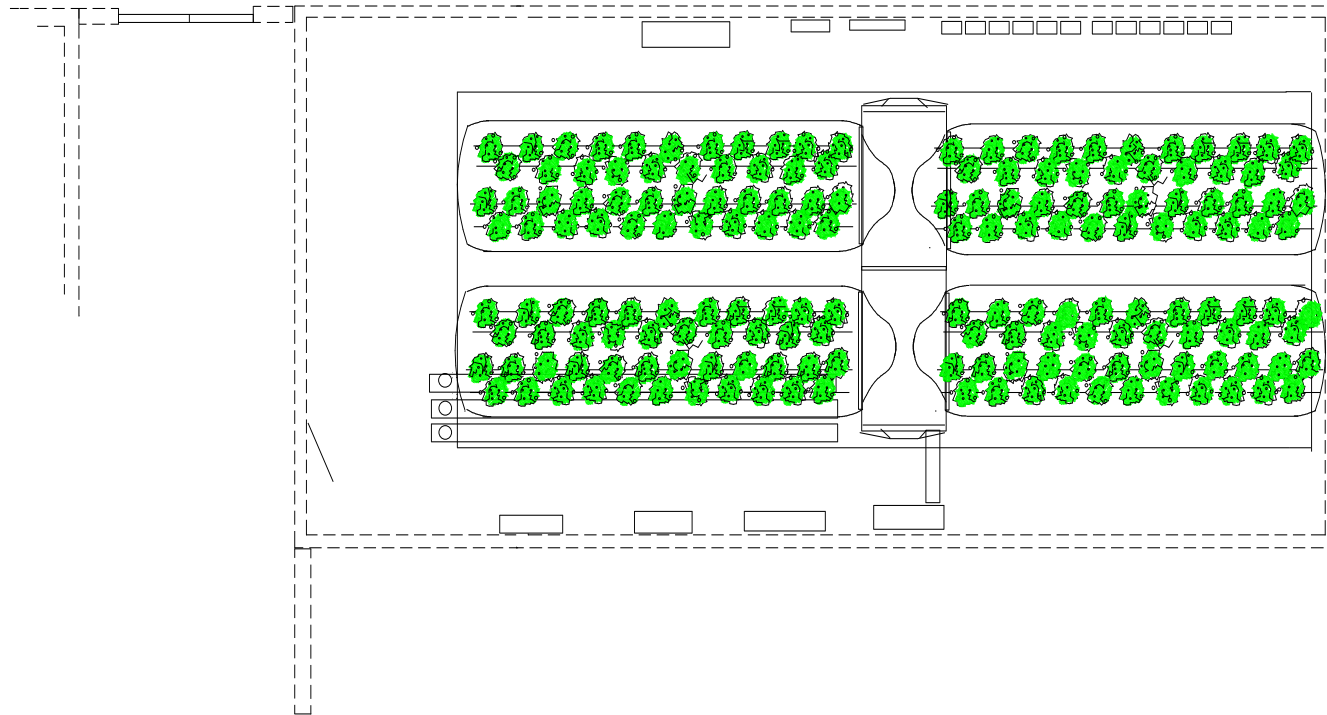
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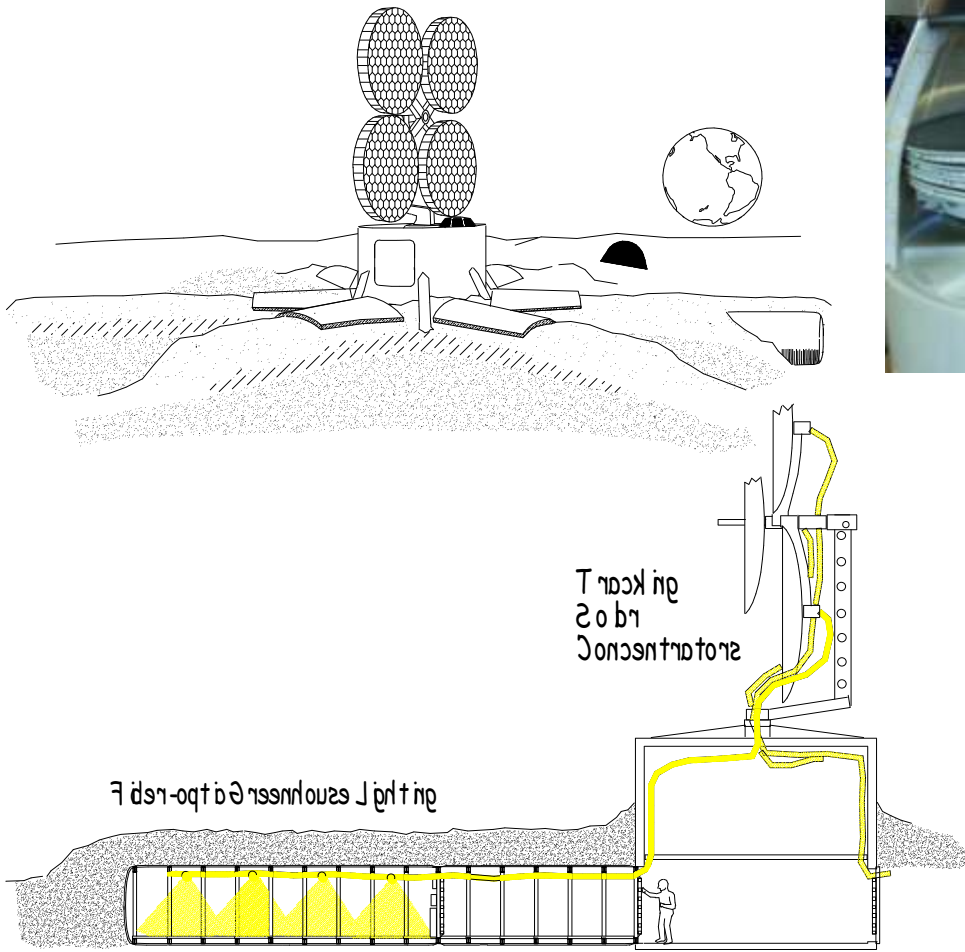
Ultimately we want 4 Lunar Greenhouses and 1 Post Harvest Module in the closed system

4 Units of Lunar Greenhouses

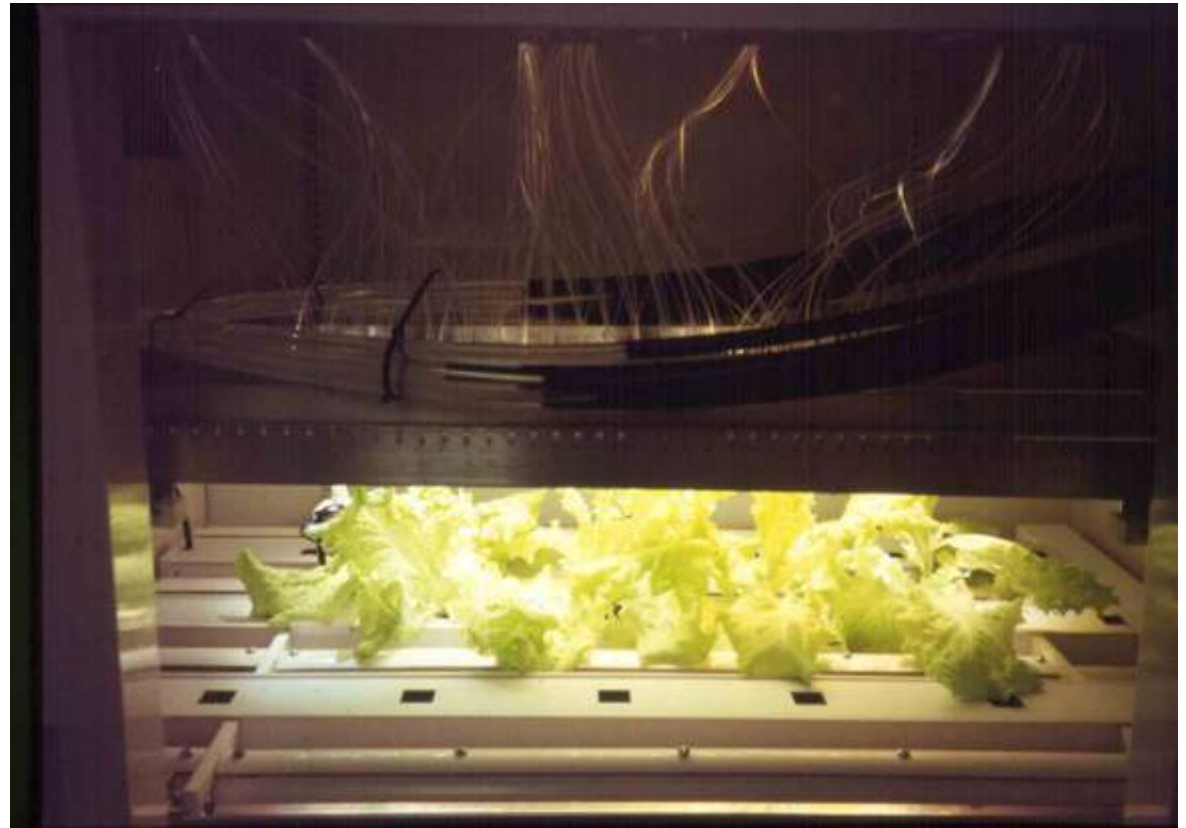




The Solar Concentrating Power System will supply PAR to the Lunar Greenhouse while using the remainder of the spectrum to generate electrical energy and heat



The Fresnel lens based solar concentrator device captures natural light by focusing it on one end of a fiber optic wave guide and emitting the light at the opposite end.





Sperlonga
former Santa Maria church
20th, 21st May 2010

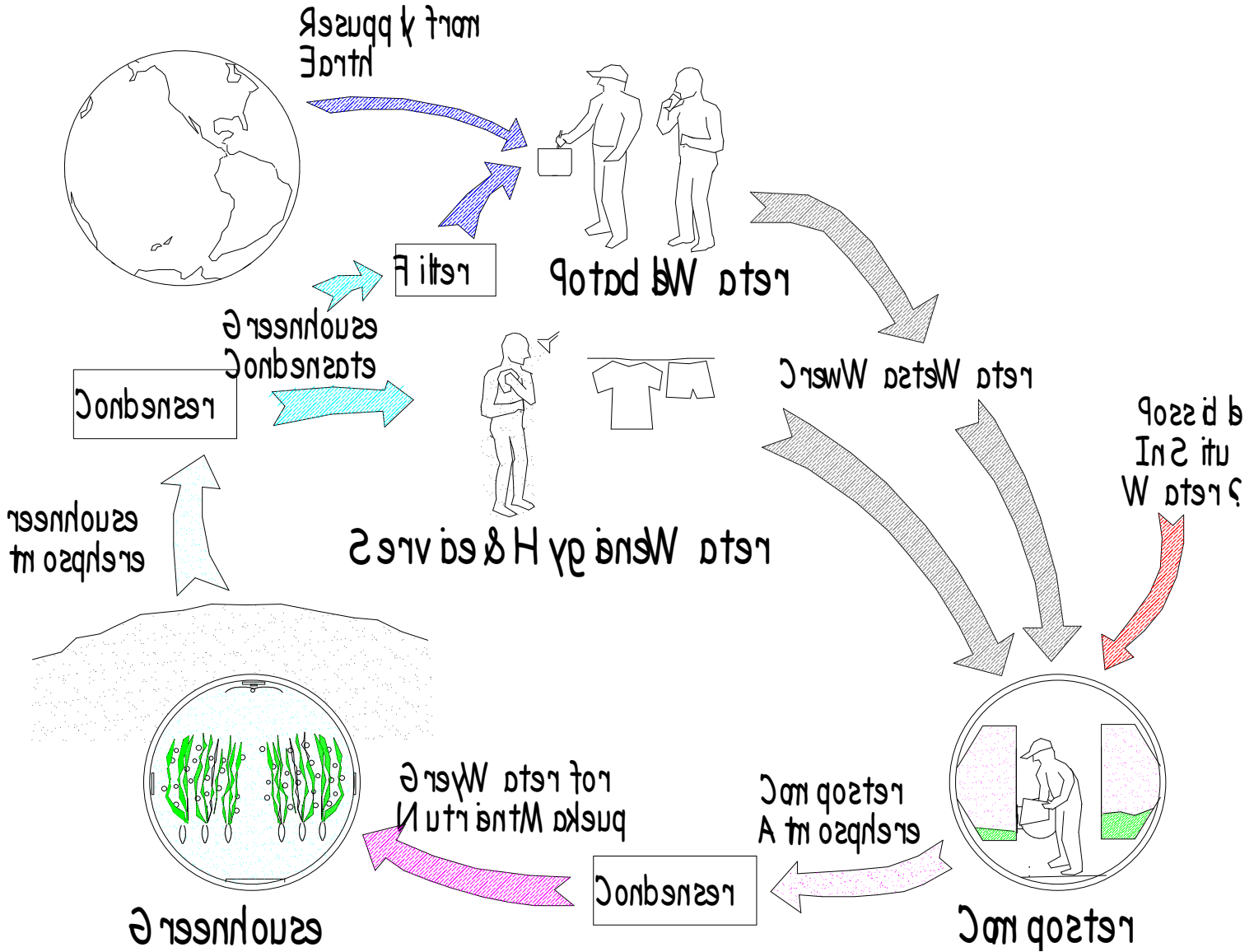
4th international workshop
AGROSPACE 2010
Controlled Environment Agriculture
from Earth to Space and back

FEDERLAZIO

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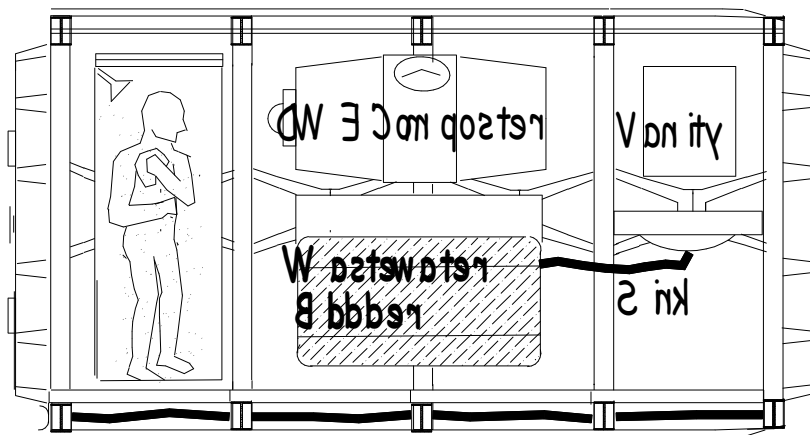
Water Recycling Pathway



Side views of the Bio-Recycle Module showing the layout of shower, toilet, composter, water storage bladders, and sink

Right side view

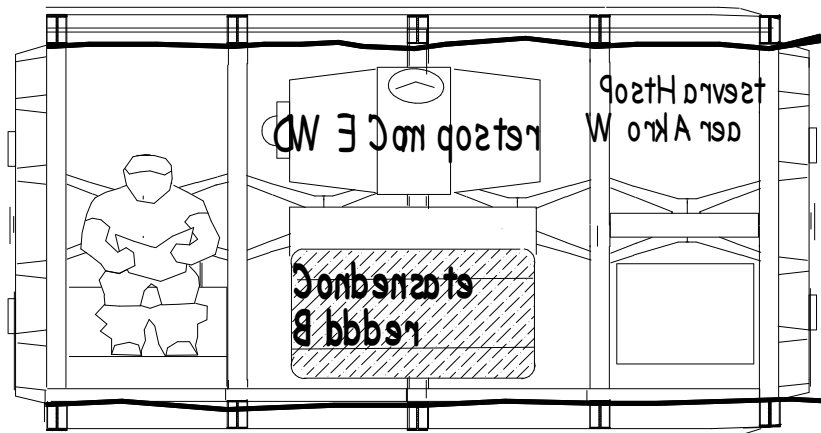
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Shower



Toilet

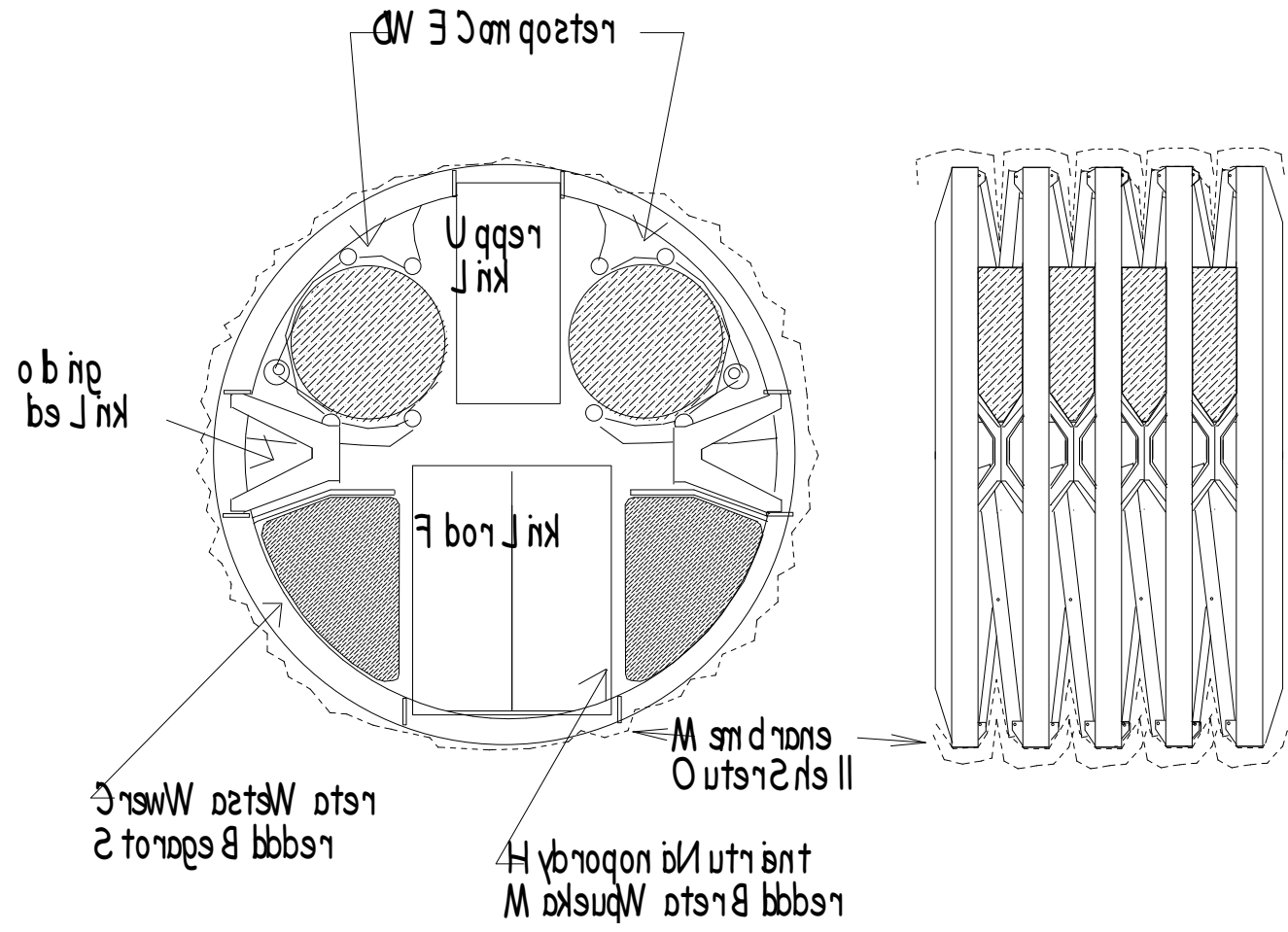
Left side view

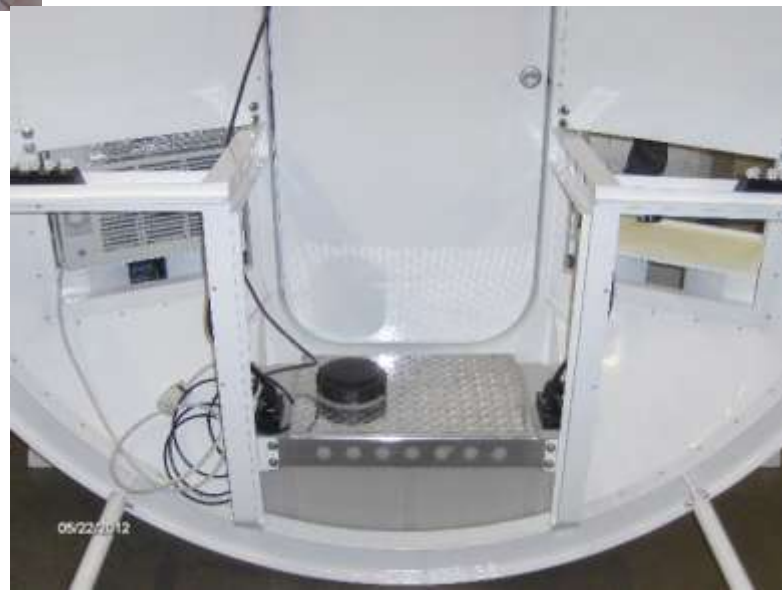
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Shower



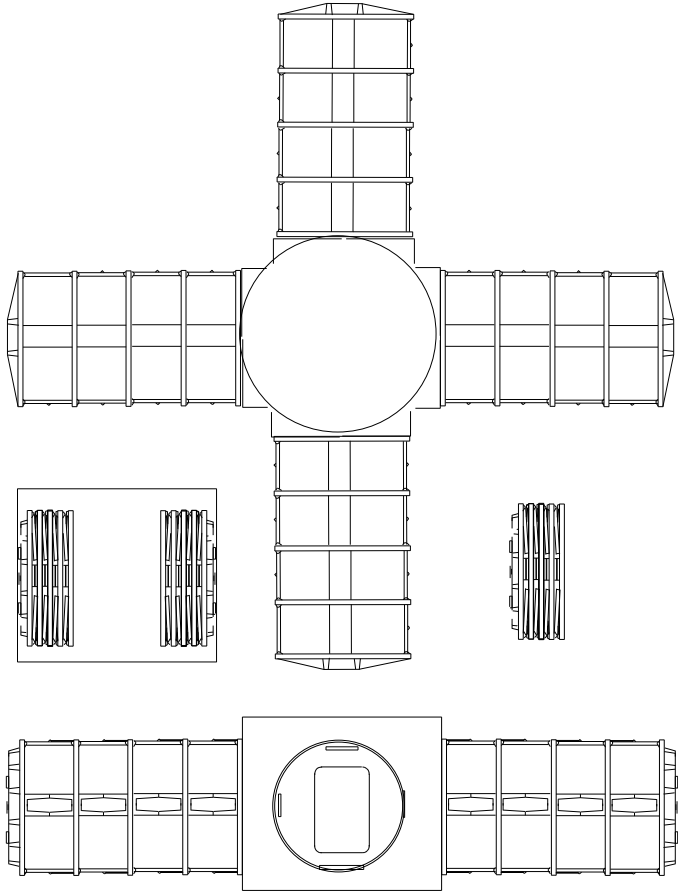
Toilet

End view showing the module collapsed and how the composter stow between the folding links

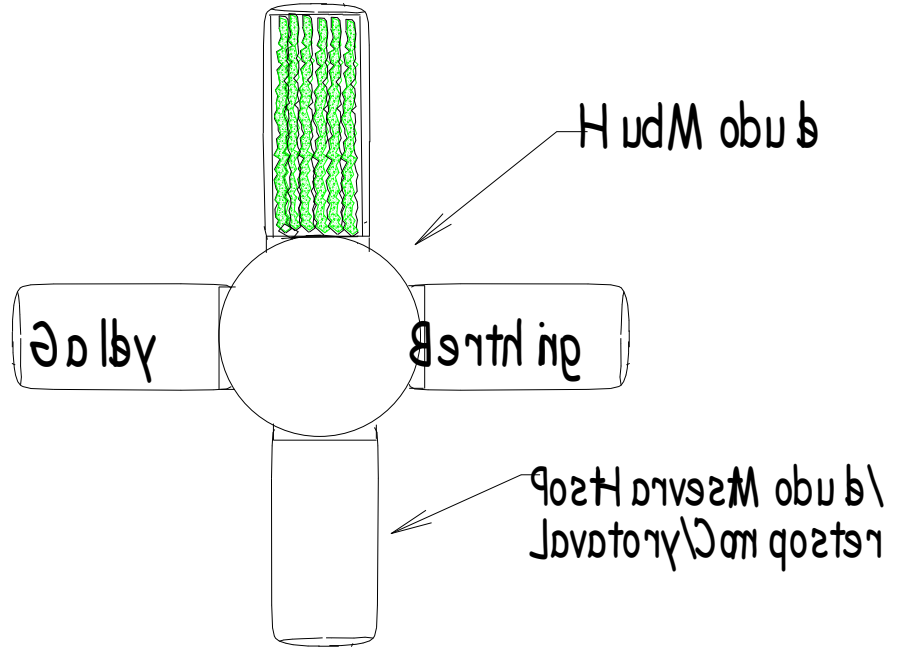









Greenhouse



A white T-junction pipe is shown against a light-colored background. The central vertical pipe has a dark, hollow interior. Four sections of the pipe, extending outwards from the junction, are wrapped in a silver, woven heat wrap. The wrap is applied in a crisscross pattern, creating a textured, metallic appearance. The lighting is soft, casting gentle shadows on the surface.

05/17/2012

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