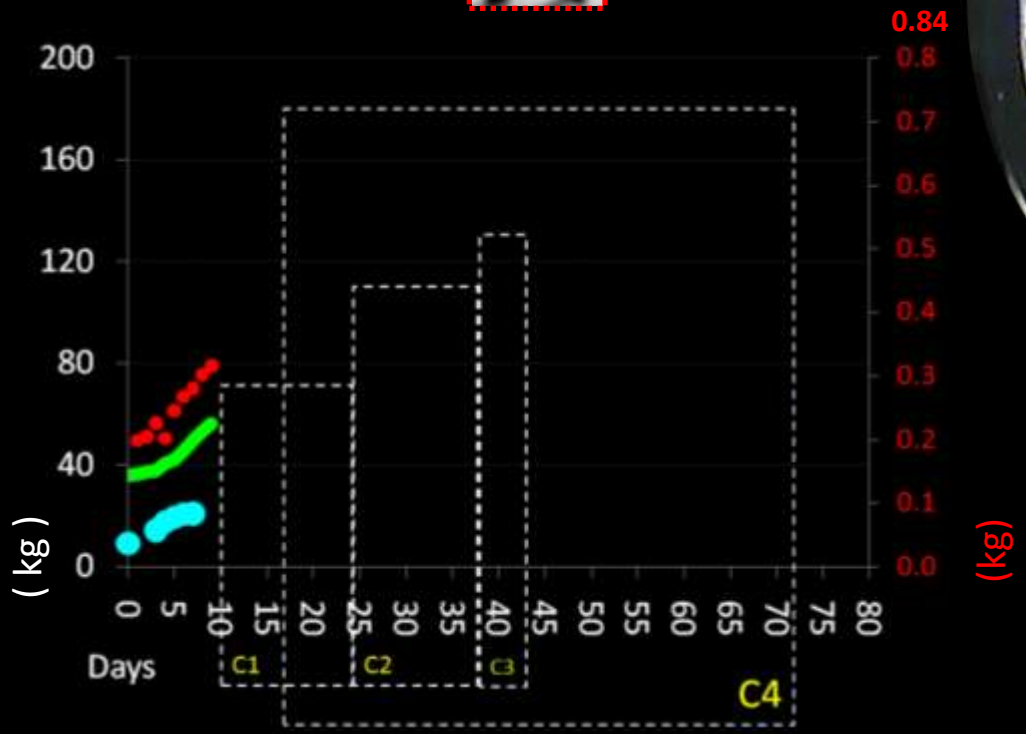
Steckler **Phase I** LGH Life Support **Old Data**

Daily Oxygen Target Production
for 1 Person

Oxygen (kg)
Biomass (kg)
Water (kg)

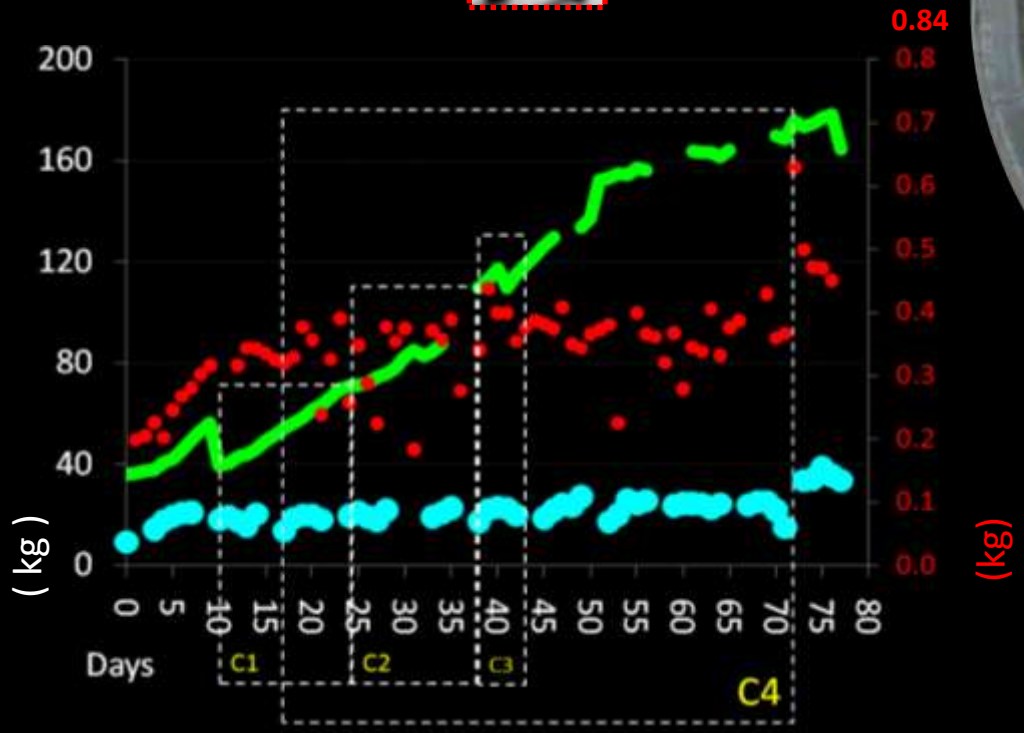


10 Days

Steckler Phase I LGH Life Support **Old Data**

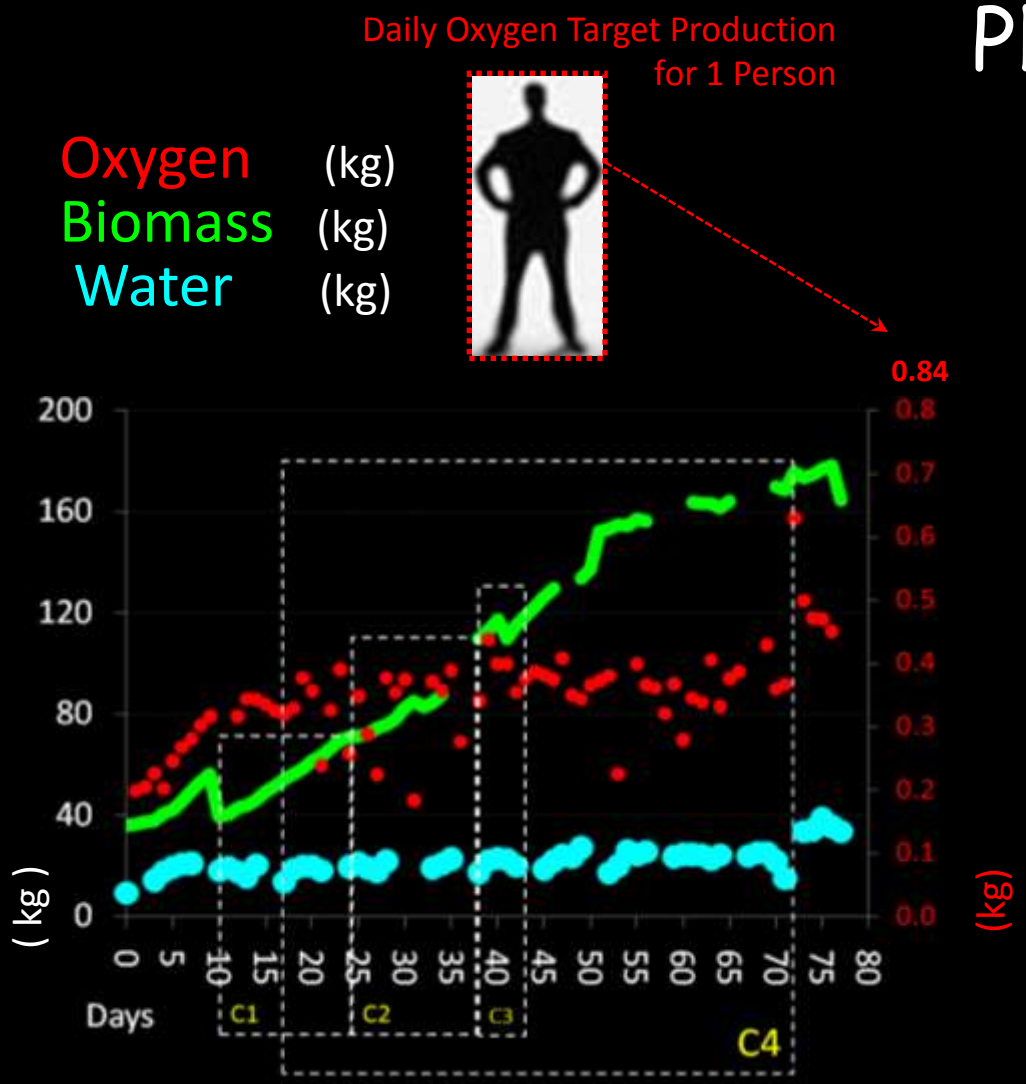
Daily Oxygen Target Production
for 1 Person

Oxygen (kg)
Biomass (kg)
Water (kg)



80 Days

Steckler Phase I LGH Life Support **Labor**



Phase I Labor

(More than 40 hr/week)

Many key Phase I measurements had to made by hand and on a daily basis if possible

Steckler **Phase II** LGH Life Support Labor

Simulated Astronaut
(i.e. 3 Students Workers)

Phase II Labor

(Students split 30 hr/week)

Michael Downing

Thomas Hillebrand

Tyler Jensen

Steckler **Phase II** LGH Life Support Labor

Simulated Astronaut
(i.e. 3 Students Workers)

Phase II Labor
(Students split 30 hr/week)

Michael Downing

Planting, Harvesting, Mixing Nutrients and Checking the environmental set points etc…

Lab Inventory

Maintenance

Data Analysis

Steckler **Phase II** LGH Life Support Labor

Simulated Astronaut
(i.e. 3 Students Workers)

Phase II Labor
(Students split 30 hr/week)

Thomas Hillebrand

Drying and Measuring LGH Harvest Mass

Data Processing

Steckler **Phase II** LGH Life Support Labor

Simulated Astronaut
(i.e. 3 Students Workers)

Phase II Labor
(Students split 30 hr/week)

Tyler Jensen

Tissue and Nutrient Sampling

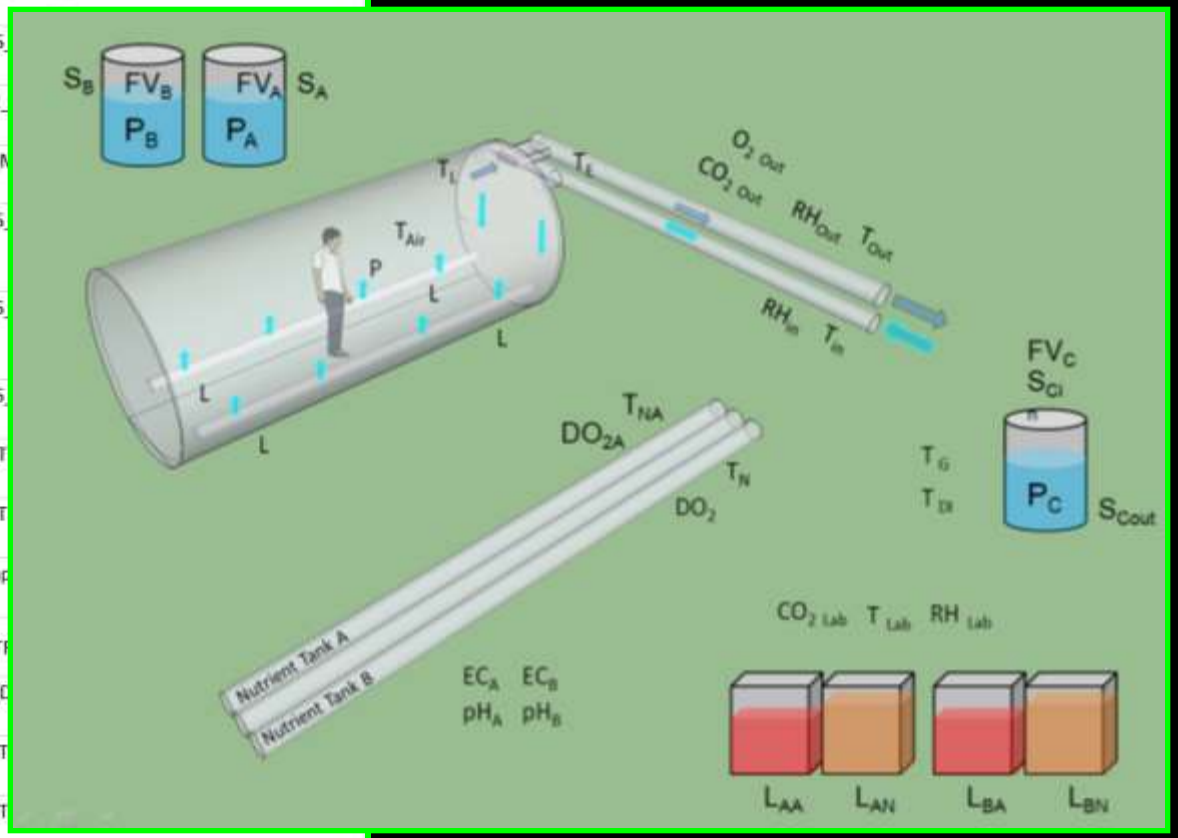
Data Processing

Measuring LGH Leak Rates

Steckler **Phase II** LGH Life Support New Sensors

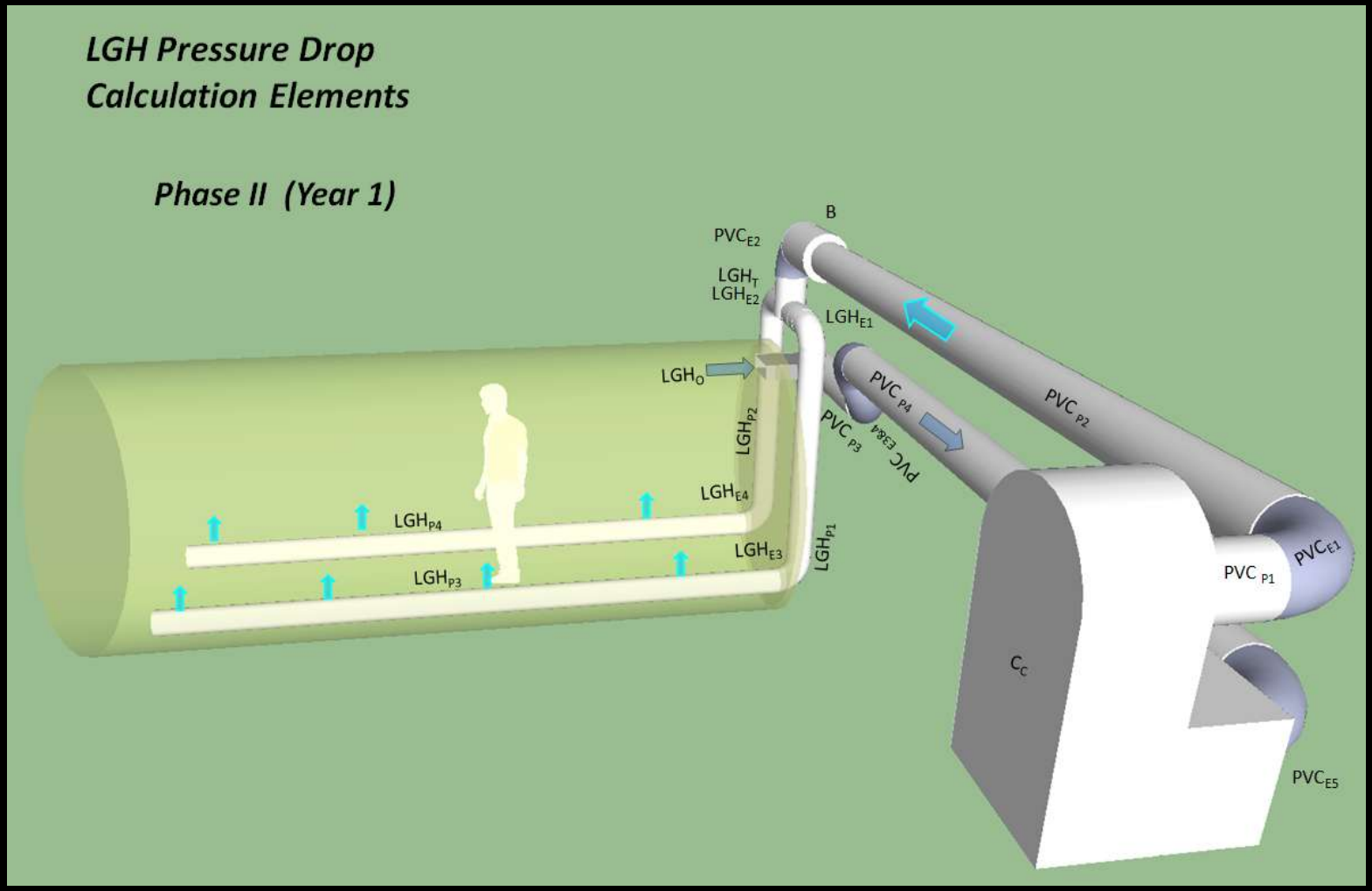
Improving resolution of measurements over Phase I and increasing automation

LGH SENSOR LOCATION (see Figure)	CS 3000 Sensor Label
T_{Out}	BLSS_WET_C
RH_{Out}	BLSS_
CO_2 Out	CO2_
O_2 Out	O2_M
T_{in}	BLSS_
RH_{In}	BLSS_
T_E	BLSS_
EC_A	EC_T
EC_B	EC_T
T_L	Lamp
T_N	NUTR
DO_2	O2_D
pH_A	PH_T
pH_B	PH_T
CO_2 Lab	CO2_Room_ppm



Steckler **Phase II** LGH Life Support New Air Ducting Design

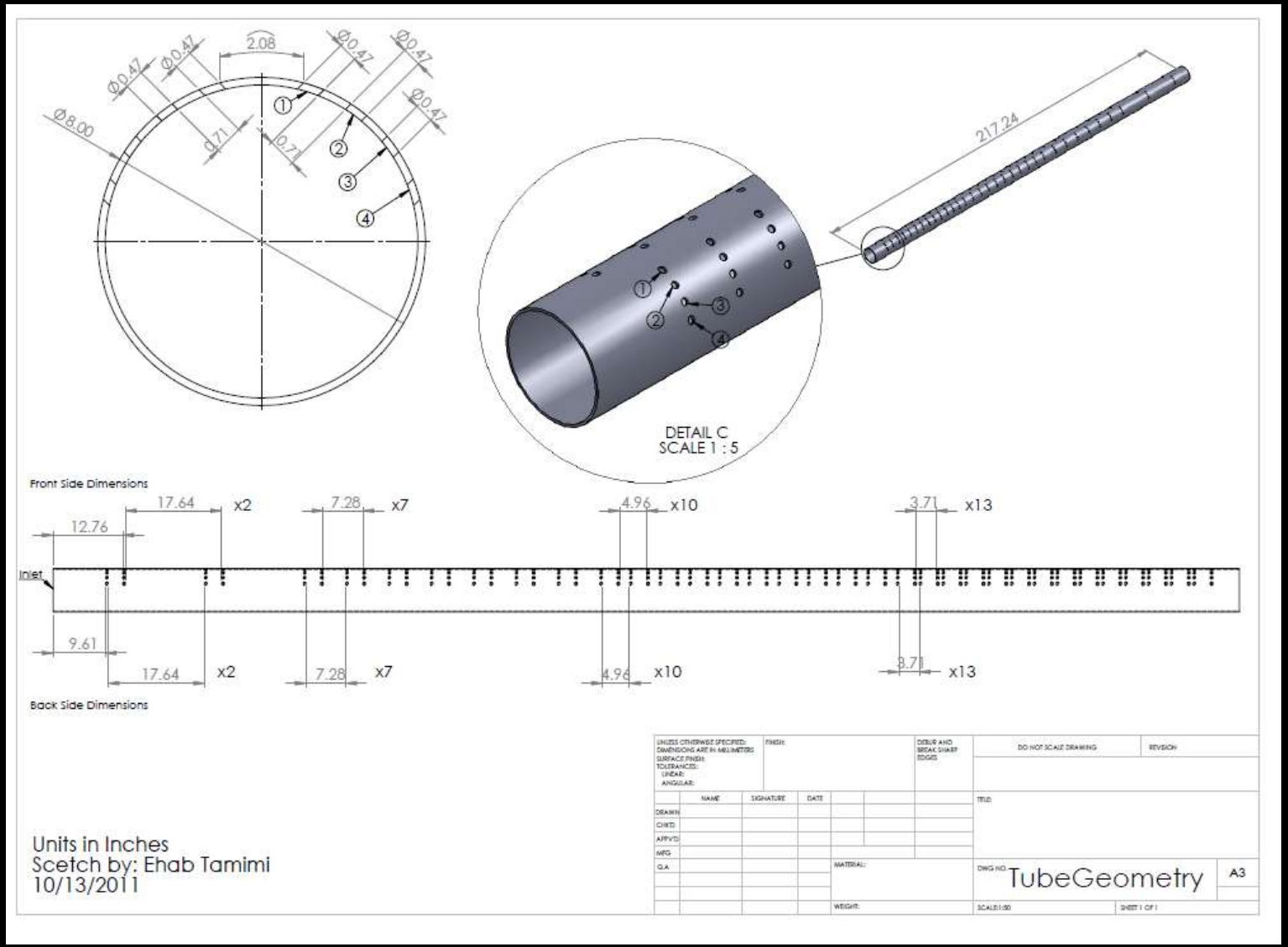
Improved Seal



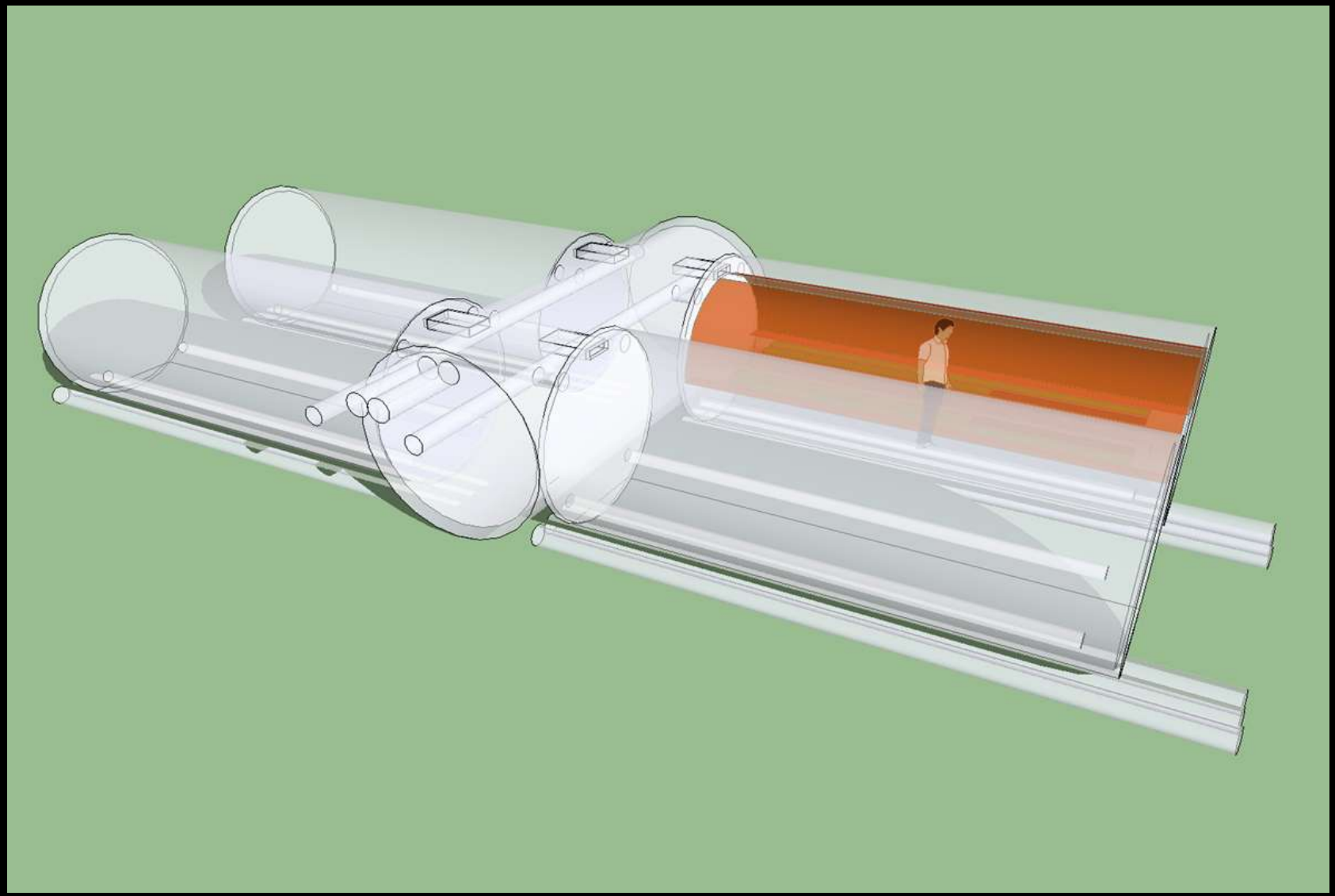
Steckler **Phase II** LGH Life Support New Air Heating Coil

Improved Humidity Control

Steckler **Phase II** LGH Life Support **Air** Distribution Improvement



Steckler **Phase II** LGH Life Support 3 More Pods



Steckler **Phase II** LGH Life Support BLSS Processes

Earth	LGH
Photosynthesis	Photosynthesis
Respiration	Respiration
Transpiration	Transpiration
Condensation	Condensation
Evaporation	Evaporation