Paper ID: 66742
student

IAF MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM (A2)
Fluid and Materials Sciences (2)

Author: Mr. Miguel Ángel Serrano
Universidad Panamericana de Ciudad de México, Mexico, someone_arse@hotmail.com

Mr. Axel Núñez Arzola
Facultad de Ingeniería-UNAM, Mexico, axelolcat11@gmail.com
Ms. Daniela Fernanda González Chávez
Universidad Nacional Autónoma de México (UNAM), Mexico, astronautdani12@gmail.com
Mr. Itzcoatl Nunez San Miguel
Facultad de Ingeniería-UNAM, Mexico, itzcoatlf@yahoo.com
Mr. Héctor Delgado
High Technology Unit (UAT) Faculty of Engineering - UNAM, Mexico,
delgadohectorsantiago@comunidad.unam.mx
Ms. Cecilia Guadalupe Torres Perea
Universidad Nacional Autónoma de México (UNAM), Mexico, ceciliatorresperea@ciencias.unam.mx
Mr. Alvaro Regules
National Technology of Mexico (TecNM), Mexico, l171070300@milpaalta.tecnm.mx
Ms. Arantza Méndez Rodríguez
Universidad Panamericana de Ciudad de México, Mexico, arantza.mendez.r@gmail.com

WATER IN THE SPACE

Abstract

The decisive moment in which we are on other planets, the transport of water from our planet earth to other planets will generate too much waste, the water stored in the rockets requires more fuel to take off and surpass the karman line, for what will be of vital importance that in other planets we can produce our own water.

Atum is a prototype for the production of water based on the temperature difference, it has been developed based on research from the Massachusetts Institute and California Universities which has a basic principle of thermodynamics in which we know that if we change a temperature we can abruptly condense the result and with it we will obtain water.

Antum has the possibility of producing 110 liters in a month, which are significant quantities for a mission thousands of kilometers away from our planet.

Being able to produce water on other planets would mean significant savings and a massive production of it, thus being able to extend the life of astronauts on these planets without having any risk of running out of water, becoming dehydrated and gradually dying.