

IAF SPACE EXPLORATION SYMPOSIUM (A3)
Interactive Presentations - IAF SPACE EXPLORATION SYMPOSIUM (IP)

Author: Prof. Melchiorre Masali
Università degli Studi di Torino, Italy, Melchiorre.Masali@gmail.com

Dr. Irene Lia Schlacht
Freelance, Italy, irene.schlacht@mail.polimi.it
Prof. Bernard Foing
ILEWG "EuroMoonMars", The Netherlands, foing@strw.leidenuniv.nl

FLYING ON THE MOON WITH EGYPTIAN WINGS

Abstract

In Skylab we experience that the astronauts in microgravity were not able to move if they were in the middle of the room without connection to anything.

Considering the experience of Skylab and in general on large microgravity environments, it is very important to be able to grab anything to be able to move. But how could you move effectively in microgravity if you are not able to grab anything?

To reply to this question, we decide to start to study the design of flying system starting from the art works of the ancient Egyptian culture.

Carefully observing Ancient Egyptian artworks such as paintings and sculptures concerning winged human and mythical creatures it appears clear that real devices to fly are represented. The "flapping wings" appear to be a kind of prosthesis fastened with straps to the arms of mythical figures such as Goddess Isis, but also as protective beings on Tutankhamen sarcophagus and, maybe, the "cherubs" on Alliance Arch reconstructions.

Avoiding any kind of science fiction or extraterrestrial hypothesis, but observing the air model by Frank Zaic (1946), we find exactly the concept of the flapping wings of Isis powered with rubber, today used in all common airplanes.

If the flapping wings of Isis are visible in all aerodynamical system of our airplanes on earth we may consider it also to develop the design of a practical system to fly inside Moon settlements or inside wide body spacecraft. Is here proposed the project of flapping wings inspired from Egyptian mythology to be used to interact with microgravity and low gravity pressurized environments as in future Moon and Mars settlements.

Getting back to our question: How could you move effectively in microgravity if you are not able to grab anything? If you could wear Egyptian wing this could allow you still to move in any direction without stress.

Moreover specifically on the Moon we can consider how to benefit from such system to quickly move in this environment with the benefit of the reduced gravity.

This project covers aspects of safety design as well as cultural Anthropology and of Art for Space.

References

- Connors, et al. (1985). LIVING ALOFT
Ono, Schlacht, Masali (2007). "Lunar zen garden". 58th IAC2007 Hyderabad.
Schlacht, Rittweger, Mouzzam, Feuillard, Daumere, Masali, Kuehnegger, Foing, Del Mastro (1917). MOON GAIT: investigating walk patterns in reduced gravity. 68th IAC2017, Adelaide
Zaic, F.(1946) Model Aeronautics Year Book 1946.