

IAF/IAA SPACE LIFE SCIENCES SYMPOSIUM (A1)
Interactive Presentations - IAF/IAA SPACE LIFE SCIENCES SYMPOSIUM (IPB)

Author: Mr. Axel Núñez Arzola
Facultad de Ingeniería-UNAM, Mexico, axelolcat11@gmail.com

Mr. Itzcoatl Nunez San Miguel
Facultad de Ingeniería-UNAM, Mexico, itzcoatlf@yahoo.com

WEARABLE FOR HEALTH CONTROL IN ASTRONAUTS AND ALSO TO DETECT AND
MONITOR COVID-19 IN PATIENTS.

Abstract

Longer space missions pose significant health concerns for astronauts, such as the adverse effects of microgravity and exposure to cosmic energy rays. Long-term maintenance of crew health and performance relies heavily on early diagnosis. It is very important to study the effects of humans in space by monitoring the biometric data of astronauts. There are currently very few portable devices for measuring biometric data for regular use on the International Space Station. In addition, with the pandemic caused by Covid-19, which now with the new variants of the virus, have infected many people on the planet, for example, according to a study by Johns Hopkins University, in one day in the United States, 900,832 new covid-19 infections and 2,615 deaths were registered in the country in a single day. The proposal focuses on technologies related to life and physical sciences and environmental control life support (ECLS). It is proposed to make a comfortable and small wearable; which will measure biometric data such as heart rate, blood oxygenation, body temperature and even sleep duration. The purpose of this device is to be used by astronauts on the ISS for long stays to carry out studies; which can monitor and control your health. This device can also be used by anyone, in which with Artificial Intelligence it will be possible to analyze this information and determine what factors can aggravate the disease. In addition, if the patient has COVID-19, this will help to control their health. If these factors increase, the patient's health may worsen, this will help us take preventive actions. With this we are putting the wearable to use in the people who inhabit the Earth, helping millions of people around the world.