

IAA/IAF SPACE LIFE SCIENCES SYMPOSIUM (A1)
Radiation Fields, Effects and Risks in Human Space Missions (4)

Author: Ms. Somya Shalvi
University of Petroleum and Energy Studies, India, somyashalvi28@gmail.com

Dr. Ugur Guven
United States, drguven@live.com

Mr. Shreyash Patel
University of Petroleum and Energy Studies, India, 15shreyash@gmail.com

Mr. Shashank Pathak
University of Petroleum and Energy Studies, India, shashank.hades21@gmail.com

Mr. Vinayak Nair
University of Petroleum and Energy Studies, India, vinayaksreenath@gmail.com

Mr. Lakshya Dutt
India, lakshya.dutt01@gmail.com

EFFECT OF SOLAR RADIATION AND COSMIC RAYS ON SUBORBITAL FLIGHTS FOR SPACE
TOURISM**Abstract**

Now a day, space tourism in sub-orbital flights has confronted us. In the next few years, the suborbital space-crafts will transport payloads and passengers to space. People who may be flying into suborbital space will have a world class adventure that will bring a lifetime's memory. People will experience the weightlessness of few minutes but will expose to solar radiation and bombarded with cosmic rays by supernovae and other galactic explosion. Cosmic rays are inescapable in space, ripping right through an astronaut damaging the DNA and causing cancer. Galactic cosmic rays are one of the most important barriers standing in the way of plans for sub-orbital flights by crewed spacecraft. Cosmic rays also pose a threat to electronics with the next level microelectronics which are extremely sensitive placed aboard outgoing probes. While the space is full of radiation, the earth's magnetic fields protect the planet and people in low earth orbit from the particles. But once the astronaut are expose to high amount of radiation with the constant shower of various radioactive particles. This radiation exists in low levels, the longer an astronaut is in deep space, the greater the exposure. We can't precisely trace the cosmic rays as it is bent by magnetic fields and it is impossible to control the level of radiations, astronauts are exposed to.