

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

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NURBS-BASED CHINESE FEMALE ASTRONAUT COMPUTATIONAL PHANTOM FOR SPACE
RADIATION DOSIMETRY APPLICATION

Abstract

Astronauts during their occupational activities in space are exposed to ionizing radiation and inevitable from natural radiation sources. In radiological protection, the mean absorbed dose, equivalent dose in an organ or tissue is the basic quantity for a specification of doses in humans. But organs doses in the human body cannot be measured directly, the NURBS(non-uniform rational B-splines)-based Chinese female astronaut computational phantom was been built which can be used to analysis of particle transport carefully inside the body for the estimation of organs doses and effective doses in astronauts and risks of both stochastic and deterministic effects due to cosmic radiation exposures.