

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

Author: Dr. Guo Jing  
China, liudsnudt@126.com

Dr. Liu Desheng  
China, liudsnudt@126.com

RESEARCH ON ASSESSMENT MODEL OF INFLUENCE OF ELECTROMAGNETIC  
ENVIRONMENT TO AEROCRAFT IN SPACE

**Abstract**

Recently, a great deal aerocrafts have been launched into use, such as rocketsatellitemissile and plane. In the all influence factors on aerocraft safety, it is not allow ignoring the jamming and threat of electromagnetic environment in space. The factors of civil establishmententironment and weather are all likely to launch electromagnetic signal of different intensity and frequency. These constitute complicated electromagnetic environment in near earth space. To the risk assessment of electromagnetic radiation, the usually used method was that the key influence factors were picked up and these factors were considered as independence each other. Then the synthesis influence coefficient was computed. In fact, the influence connection existed among the above factors. Aimed at the relation of these factors having an analogy to network in evaluation system of electromagnetic environment, we studied it by Analytic Network Process(ANP). Through having analyzed three relations in some key influence factors of electromagnetic radiation on aerocraft, we constructed super matrix including the connection of factor and factor group and evaluated index system of influence factor of electromagnetic radiation using the above built model.