ICRU/ICRP Task Group No 50:
Reference Doses From Cosmic Radiation Exposure
of Aircraft Crew

Terms of Reference

Compile and evaluate results from measurements and calculations of effective dose and ambient dose equivalent rates for exposure to cosmic rays in aircraft at aviation altitudes, for the range of geomagnetic latitudes of relevance and as function of time within the solar cycle. Provide judgements facilitating international harmonisation taking account of the considerable existing body of data.

The evaluated data set will be used to establish a set of dose data in terms of both ICRP effective dose and ICRU quantities. In analogy to recommended data for dose conversion coefficients (ICRP Report 74, 51), tables of recommended data will be published for E and H*(10) as function of altitude and geomagnetic latitude; the dependence on the time in the solar cycle will also be given.

Such recommended data will provide a basis for assessing procedures for determining individual doses, for example by calculating "route doses" (however, no methods for route dose evaluation/calculation will be recommended), and be of fundamental importance for regulatory applications and in legal contexts. The feasibility of the proposed approach is based on the fact that the existing large data base of experimental and calculated data (obtained over the last 8 years) is remarkably consistent.

The Report Committee will investigate all other activities currently ongoing or planned elsewhere (e.g. EURADOS, ISO) in order to avoid doubling work and inconsistencies. Most proposed members are well informed on these activities.