

Cosmic Radiation in Aviation: The Radiological Protection of Air France Aircraft Crews

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Cosmic radiation in aviation has been a concern since the 1960s. Measurements have been performed for several decades by Air France. Results show that aircraft crew members receive 3 to 4 mSv per year for 750 boarding hours. Compliance with the trigger level of 6 mSv per year is achieved by route selection. Working schedules for pregnant pilots allow them to keep dose to the fetus under 1 mSv. Each crew member is informed about her/his dose and the potential health impact. The future ICRP report on cosmic radiation in aviation will provide updated guidance. A graded approach proportionate to the level of exposure is recommended to implement the optimisation principle. The objective is to keep the exposure of the most exposed aircraft members to reasonable levels. The Commission also recommends to disseminate information and to raise awareness about cosmic radiation, in order to favour an informed decision among all concerned stakeholders.