· 航空机组人员职业照射与健康管理 ·

航空机组人员职业照射管理现状

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【摘要】　随着全球航空运输需求的迅速增长和航线网络的日益复杂，航空机组人员的职业照射管理已成为国际放射防护领域的重要研究课题。本文系统梳理了国际放射防护委员会（ICRP）、国际原子能机构（IAEA）、国际民航组织（ICAO）等国际组织发布的报告、标准及指导原则，分析欧盟、北美、亚太等主要区域的航空机组人员职业照射管理政策与实践模式，通过典型案例探讨其共性与差异；共性是大多数国家均设置专门的管理机构，采纳 ICRP 的推荐值，强调孕妇特殊保护，重视辐射风险教育培训等；差异则体现在剂量监测方式、政策执行力度、估算模型及孕妇保护政策等方面。在职业照射管理实践过程中，不同国家政策执行力度参差不齐和技术成本投入不足等问题日益凸显；出现的典型争议案例也揭示了行业发展与职业照射管理的复杂性。技术进步、政策统一和辐射流行病学研究可能是解决问题的对策，也是促进全球航空机组人员职业照射管理良性发展的重要趋势。

【关键词】　航空机组人员；　宇宙辐射；　职业照射
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Current status of occupational exposure management for aircrew

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【Abstract】　With the growing demand for global air transport and the increasing complexity of route networks, the occupational radiation exposure management for aircrew (OREMA for short) has become internationally an important research topic that needs to be addressed in the field of radiation protection. This paper systematically reviews the reports, standards and guidelines issued by the related international organizations International Commission on Radiological Protection (ICRP), International Atomic Energy Agency (IAEA) and International Civil Aviation Organization (ICAO), analyzes the policies and practices on OREMA in major regions worldwide such as the European Union, North America, and Asia-Pacific, and explores their commonalities and differences through typical cases that haved appeared. The commonality is that most countries have set up special management agencies, adopted the ICRP-recommended values, emphasized special protection of pregnant women, and paid importance to education and training on radiation risk. The differences are manifested in the aspects of dose monitoring methodology, policy implementation intensity, estimation models, and policies on protecting pregnant women. In the process of OREMA the challenges of uneven policy implementation intensity and insufficient

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