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Aviation dosimetry science in South Africa

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Radiation exposure during commercial flights remains one of the dominating and inevitable factors relevant to flight personnel and passengers' health and safety. At aviation altitudes, the radiation environment that the flight personnel are exposed to, during their day-to-day occupational activities, differs significantly from terrestrial radiation received by the general population on the ground. Currently, there are no dosimetric services in South Africa that collect data of the flight personnel's exposure during their occupational activities. The North-West University, in conjunction with scientists from the *Christian-Albrechts-Universität zu Kiel*, have assembled an active (battery powered) dosimeter (known as the RPiRENA) to measure the flight personnel and passengers' exposure during commercial flight cruises. Here we introduce this device, discuss its calibration, and show initial results during long-haul flights.

keyword(s): Radiation dosimetry, Active dosimeters, Cosmic-rays

Apply to be considered for a student ; award (Yes / No)?

No

Level for award;(Hons, MSc, PhD, N/A)?

N/A

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