

## UV Dosimetry for Aircraft and Spacecraft Vehicles

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It is well known that high doses of ultraviolet (UV) radiation can induce severe biological damages. Some effects associated to human exposure are e.g. eye cataract, skin aging and various skin cancers. Biological effects are usually described by spectral action curves, which represent the effectiveness of UV radiation at a specific wavelength in producing a particular biological response. In free space or in other planetary environments, in the absence of an absorbing atmosphere, high doses of UV radiation are present. Moreover, some level of UV radiation can be also expected to be present inside aircraft and spacecraft vehicles. New evidences have been shown about skin damages to civilian aviation flight personnel cockpit crew members specific due to UV exposure. We present an innovative radiometer which spectral response is equivalent to the erythral action curve. Its small size and low weight make it suitable for monitoring UV irradiance in different air and space environments. The design concept can be easily adapted to radiometers with spectral response matching different biological action spectra.