

Complete Citation: Parisi, Alfio (2000). Measuring solar UV exposures. In Proceedings of the Prevention of Skin Cancer and Melanoma Conference 2000, Queensland Institute of Medical Research.

(Prevention of Skin Cancer and Melanoma Conference 2000, 4-5 Dec 2000, Brisbane, Australia.)

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MEASURING SOLAR UV EXPOSURES

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In order to understand the complex nature of the UV environment on the earth's surface, long term monitoring programs along with research to quantify the ambient and personal UV exposures in different environments must be employed. The Centre for Astronomy and Atmospheric Research (CfAAR) at the University of Southern Queensland's has been undertaking this research for the past seven years in South East Queensland. The spectral biologically damaging UV is measured in different environments with a transportable spectroradiometer. Research on personal UV exposures to humans in different environments utilizes polysulphone dosimeters that are fabricated in CfAAR at USQ. Currently, CfAAR operates a Brewer spectrophotometer to compliment the UV measurement research program. The Brewer spectrophotometer, the first in Australia, automatically measures spectral solar UV irradiances and atmospheric ozone and sulphur dioxide throughout the day. As this instrument measures spectral irradiances, biological action spectra may be used to weight the collected UV data to calculate the biologically damaging UV. Continuation of the current monitoring program with the Brewer spectrophotometer is essential to detect improvement or deterioration in the stratospheric ozone and the consequent changes in UV irradiances and personal UV exposures.