

Variations in UV exposure due to reflected UV radiation in the urban environment

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Excessive UV radiation exposure to outdoor workers is a serious issue, particularly when many outdoors workers generally exceed nominal safety UV exposure levels. In Australia, construction workers regularly use (UV reflective) metal surfaces in building construction, due to practicality and financial viability issues. Previous work has shown that reflection from vertical metallic surfaces can increase total exposure by approximately 20% and facial exposure by 50%. This work has been extended by considering the same situation in another season (spring) in comparison to the original study (autumn and winter). The results from spring measurements do not match those from the original study, and theories why will be presented. In addition, different orientations and combinations of vertical surfaces have been investigated, including comparing UV exposures from horizontal, vertical and inclined surfaces and exposures incurred from corners compared to exposures single vertical surfaces. The results of these investigations were varied, and through this presentation will be presented and discussed.