

ISRP 1999 abstract

| Presenter/author | Title | Abstract |
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| Richardson, Grant <i>Chemical and Biological Defense Sector, DERA Porton Down Protection & Decontamination Salisbury, Wilts SP4 0JQ UK</i> | A System for the Remote Acquisition of Respirator Protection Factors | <p>It has been highlighted in previous studies the discrepancy between respirator protection factors obtained in the laboratory and those observed in the workplace. This has led to the introduction of a respirator Assigned Protection Factor which has a significantly lower value than the Nominal Protection Factor. To further investigate the protection offered by RPE in 'real' environments, i.e. the workplace or the battlefield, a remote sensing system has been developed. The system consists of a PortaCount condensation nuclei counter interfaced with a RF telemetry system. Real-time data from the PortaCount is received by a RF unit connected to a PC, where dedicated software is used to process and display, in real-time, the respective particle concentrations together with the calculated protection factors. In addition, the software controls the internal PortaCount valves, enabling the PortaCount sample to be switched between the ambient challenge and mask concentrations. The entire unit fits into a small rucksack, allowing the volunteer to perform their normal activities. This system will be described in full together with a recent development incorporating a miniature helmet mounted video system that permits the level of protection to be correlated to an activity or movement.</p> |