

Abstract Submitted
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Directionality of Skyshine Radiation¹ WARNICK KERNAN, KENNETH CONLIN, RICHARD KOUZES, EMILY MACE, EDWARD SICILIANO, MITCHELL WOODRING, Pacific Northwest National Laboratory, PACIFIC NORTHWEST NATIONAL LABORATORY TEAM — Skyshine reflection, or the scattering off of the air above a source, is frequently observed in situations where large sources are incompletely shielded, such as radiography sources in shielding pits that are open to the sky. Originally, concern about skyshine regarded limiting the dose from the source. However, even in situations where dose is minimal, the contribution of skyshine may interfere with sensitive measurement instruments operating near background limits, such as with border security applications. To help determine effective methods for shielding sensitive detection systems from skyshine interference, a series of measurements and model simulations have been conducted using a specially configured, portable collimated detector and an iridium-192 source. This paper will report these results, and also show their similarity when compared to other measurements using different sources.

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