

THE ABILITY TO PREDICT YIELD FROM THE STABILIZED HEIGHT OF A NUCLEAR CLOUD[#]

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The primary focus of this work was to examine a new capability of predicting yield from the observed stabilized cloud top. Due to the physics-based modeling and flexibility of the Defense Land Fallout Interpretive Code's (DELFI^C's) Cloud Rise Module (CRM), we created the capability of running the code with varying yields until a predicted cloud top height was obtained that corresponded to the measured cloud top height. To test the ability of DELFI^C, 121 shots from the U.S. atmospheric nuclear tests from 1945 to 1962 were used for validation. At the same time, four historical empirical models were used for comparison.

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