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Underwater Bomb Trajectory Prediction for JABS from Very Shallow Water to Deep Water

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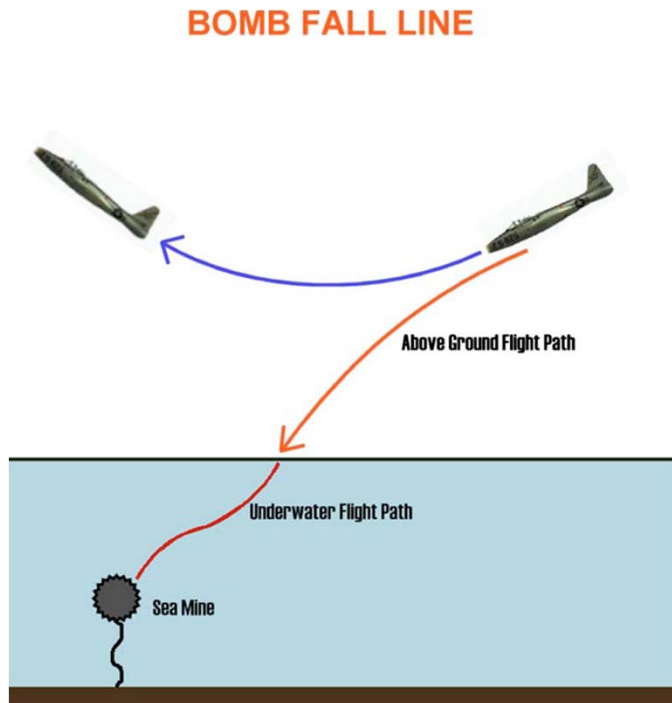
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Underwater Bomb Trajectory Prediction for JABS

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2009-2011, Funding Level: \$203,518



Brief Description

Development of Navy's operational model (STRIKE35) for predicting bomb trajectory in air, water, and sediment columns.

NPS Thesis

Greg Ray, "[Bomb strike experiments for mine countermeasure](#)", MS in METOC, March 2006

Bushnell, J., "[Prediction of Bomb Trajectory for Mine Breaching](#)", MS in METOC, December 2009

Selected Publications

- (1) Chu, P.C., J.M. Bushnell, C.W. Fan, and K.P. Watson, 2011: Modeling of underwater bomb trajectory for mine clearance. *Journal of Defense Modeling and Simulation*, The Society for Modeling and Simulation International, **8** (1), 25-36 ([paper download](#)).
- (2) Chu, P.C., and C.W. Fan, 2011: Probability density function of underwater bomb trajectory deviation due to stochastic ocean surface slope. *Journal of Dynamic Systems, Measurement and Control*, American Society of Mechanical Engineers, **133**, 031002 (13 pages) ([paper download](#)).
- (3) Chu, P.C., C.W. Fan, and P. R. Gefken, 2010: Diagnostic-photographic determination of drag/lift/torque coefficients of high speed rigid body in water column. *Journal of Applied Mechanics*, American Society of Mechanical Engineers, **77**, 011015-1 ([paper download](#)).