

This issue highlights the diversity of APL's contributions to national and global challenges. The issue begins by discussing APL's role as the independent test and evaluation agent for an unmanned underwater vehicle family of systems, components of which have been fielded by the U.S. Navy. The second article provides an introduction to the physics of fission chains and their detection, of vital importance should a nuclear response team locate a potential nuclear object. The next article describes a process for balancing conflicts among missile system performance goals, engagement support capabilities, and technology constraints. The fourth article details a semiempirical model for leaves as a step toward improving Earth's land characterization and removing radiative effects. The final article highlights a technique for determining the atmosphere's trace gas composition, which has broad applications for measuring gases globally. The issue concludes with a list of the winners of APL's Technical Achievement Awards and Prizes.

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