Since its inception in the 1940s, APL has designed, developed, and launched 63 spacecraft and more than 150 instruments in partnership with NASA and DoD. During that time, space has increasingly become a critical part of the nation’s strategic posture; thus, APL continues to develop effective space-based solutions for the nation’s challenges, including weather, reconnaissance, surveillance, space control, missile defense, and homeland security, while also providing enhanced space support for combat forces in navigation, communications, and targeting. This issue of the Technical Digest highlights some of APL’s space-related accomplishments as well as new mission and technology concepts under development at APL for national security space programs.