



**NRL BAA Announcement
81-09-01**

UNATTENDED SENSOR COMMUNICATIONS TECHNOLOGY

The Advanced Systems Technology Branch of the Naval Center for Space Technology, Naval Research Laboratory, seeks white paper proposals for technical approaches supporting unattended sensor control and data exfiltration.

The Advanced Systems Technology Branch is developing technology to enable reliable, persistent, space-based, airborne and terrestrial control and data exfiltration from unattended, distributed ground and maritime sensors. In many instances the sensors are networked to a gateway terminal which provides communications links to a satellite communications payload.

Focus areas in the development of sensor control and data exfiltration technology include: innovative modem technology for receiving RF control signals from satellite communications payloads, and transmitting telemetry and data from ground or maritime sensors to satellites or aircraft; waveforms designed for low probability of detection or interception; innovative signaling protocols and data exchange formats; high dynamic range, wide bandwidth receivers, and pre-distortion and other amplifier efficiency improvement techniques.

Interest is in two-way communications links in RF spectrum from 100MHz up to 4GHz: ground-ground, ground-space, ground-aircraft, aircraft-space. Respondents are asked to expressly state in their white papers the specific link(s) they are addressing.

Address White Papers (WP) to Code 8100, [email](#), telephone (202) 279-4365. Allow one month before requesting confirmation of receipt of WP, if confirmation is desired. Substantive contact should not take place prior to evaluation of a WP by NRL. If necessary, NRL will initiate substantive contact.