



Amendment 0001 – September 4, 2018

**NRL BAA Announcement #N00173-18-S-BA01
Long Range Broad Agency Announcement (BAA) for Basic and Applied Scientific
Research**

The purpose of this amendment is to apply the following changes to this solicitation:

- **(Appendix 1-24) Remove and cancel Research Description – Summary Topic 61-18-05, white papers will no longer be accepted.**

**61-18-05 - DEVELOPMENT OF DISTINGUISHING MARKS ON FLEXIBLE
SUBSTRATES - **CANCELLED****

The Naval Research Laboratory (NRL) is seeking Research and Development of advanced technologies capable of creating distinguishing marks, optical signatures or patterns on flexible substrates. Applicable substrates include plastics, natural and synthetic fibers, and cloth made from fiber combinations.

Technology areas of interest may include but are not limited to:

- 1) Nanomaterials (optical, electromagnetic, nanoparticles, nanofibers, conductive materials)
- 2) Responsive materials where change is initiated by exposure to electromagnetic radiation, thermal change, chemical change or electricity to yield an identifiable response detectable by human sense such as tactile, shape change or visual change
- 3) Materials that produce both linear and non-linear optical effects
- 4) Metamaterials
- 5) Magnetic materials including diamagnetic, paramagnetic and ferromagnetic
- 6) Nanophotonic materials (plasmonic, phononic, excitonic)
- 7) Additive manufacturing technologies
- 8) Micro/nanolithography technologies

Address White Papers (WP) to FlexMarks@nrl.navy.mil. 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.

- **(Appendix 1-54) Add Research Description – Summary Topic 18-18-02, as stated below this topic is open to accepting white paper submissions.**

81-18-02 - OPTICAL CHANNEL TECHNOLOGIES - ADD

The Advanced Systems Technology Branch of the Space Systems Development Department of the Naval Research Laboratory (NRL) conducts research and development in technologies and techniques that leverage the optical channel for communications and positioning, navigation, and timing. The focus is on modular system architectures, payload controllers, processors and signal processing, event timers, pointing/acquisition/tracking techniques, power efficient components and transceivers, compact gimbals and beam directors, compact optical systems, beam stabilization components and methods, novel atmospheric sensors and diagnostics, adaptive modems, and components and subsystems that enable communications and/or time and frequency transfer. Technology applications may include ground, maritime, airborne, and space. NRL's Advanced Systems Technology Branch seeks a broad range of innovative techniques, subsystems, and tools to develop, integrate, and evaluate free space optical communications and optical time transfer systems.

The Advanced Systems Technology Branch is interested in receiving proposals for research related to the above research interests. Address White Papers (WP) to Code 8120, by email to 8120BAA@nrl.navy.mil. 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.

All other terms and conditions remain unchanged.