



MEDIA RELEASE

Joint Non-Lethal Weapons Program



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Air Force Conference Features Active Denial System

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Active Denial System 2 on display at ACS 2009.

JNLWD photo by Nancy Koreen

ATLANTA, GA – As the U.S. military continues to modernize its capabilities, non-lethal weapons are becoming increasingly important as an additional option to enable warfighters to accomplish their missions while minimizing unnecessary casualties and collateral damage. As part of this effort, the Air Force Agile Combat Support Modernization Planning Conference 2009 (ACS 2009) featured the Active Denial System (ADS) on display February 2-4 in Atlanta, Ga.

The ADS is a developmental non-lethal, directed-energy, counter-personnel weapon that can provide troops with an additional escalation-of-force option. The ADS projects a focused beam of millimeter waves to induce an intolerable heating sensation on an adversary's skin, repelling the individual with minimal risk of injury. ADS technology has the potential to provide a tremendous new capability for U.S. forces in support of today's complex missions.

"ADS can provide commanders with the ability to operationally engage targets with non-lethal effects at stand-off ranges with accuracy," said Rodney Apgar, the Non-Lethal Weapons Acquisition Program Support Officer for the Air Force and a subject matter expert at the ADS display at ACS 2009. "ADS can be employed alone or in combination with other non-lethal weapons but always integrated with lethal firepower as an overwatch. ADS can enhance the force and provide commanders with more options."

ACS 2009 drew a diverse audience of Air Force and government personnel for a week of seminars and vendor displays. "Agile Combat Support" is the Air Force term for all the equipment and logistical support required to transport and sustain troops in deployment areas. This includes everything from electricity to force protection equipment. With this year's conference focusing on modernization, the inclusion of non-lethal weapons and the ADS was particularly applicable.

The Department of Defense's Joint Non-Lethal Weapons Directorate (JNLWD), based in Quantico, Va., sponsored the display at ACS 2009, which included ADS System 2, the militarized, transportable version of the ADS. Subject matter experts from the JNLWD and the Air Force explained to conference attendees the importance of non-lethal weapons, as well as the specifics of how the ADS works and its potential applications.

"There's a big capability gap between shouting and shooting," Lieutenant Commander Glenn Galman, the U.S. Coast Guard Liaison assigned to the JNLWD, told those who stopped by to visit the display. "How do you win the hearts and minds of the people if you can't fill that gap?"

2nd Lieutenant Josh Hardin, ADS Lead Engineer for the Air Force Air Armament Center ADS Program Office, described how

the ADS works. "ADS projects 95Ghz millimeter waves to heat the water molecules in your skin—only to a depth of about three sheets of paper," he said. "Your immediate reaction is to pull away from the heat. As soon as you move away from the path of the beam, there are no lasting effects."

Lt. Cmdr. Galman explained, "That creates the repel effect we're trying to achieve. The intent is to deny access to an area without having to use lethal force. ADS has applications for perimeter defense, humanitarian relief missions and a variety of other operations."

The display also included the joystick-controlled operator's console, as well as a finger demonstrator, a small box that simulates the sensation of experiencing the ADS, but only to the tip of one finger. Many conference attendees stepped up to give it a try. Most had a positive reaction to learning about non-lethal weapons and the ADS.



*The ADS joystick-controlled operator's console.
JNLWD photo by Nancy Koreen*

"Non-lethal weapons are very important," commented conference attendee Colonel Max Mendoza, Chief of Expeditionary Combat Support at Air Force Reserve Command Headquarters. "You want to use the appropriate level of force. We go through training on the use-of-force spectrum and when non-lethal force should be used."

Col. Mendoza remarked on how much non-lethal technology has developed. "I didn't know that non-lethal weapons had

evolved so much. They've evolved immensely. I can see using ADS for humanitarian and peacekeeping missions, crowd control and riot control," he said.

With the variety of potential applications for ADS technology, the Services are working to define their requirements for procuring the ADS. Meanwhile, research continues to develop this state-of-the-art technology, including efforts to make the system smaller and lighter. As U.S. forces continue to modernize, non-lethal capabilities will provide warfighters with more options to handle the challenging situations they face on today's complex battlefields, helping them achieve mission objectives while minimizing fatalities and unnecessary damage to property.

For more information on non-lethal weapons and the Active Denial System, visit <https://www.jnlwp.com>.