

Capstone Electronic Warfare Exercise Held for Students at Chinese Defense Tech Powerhouse

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OE Watch Commentary

The Chinese government publication *China Military News Online* recently reported that the School of Electronic Warfare at the National University of Defense Technology (NUDT) held a capstone exercise for graduating students that highlighted China's growing emphasis on electronic warfare. While few specifics were provided, coverage of this year's exercise and previous iterations depicted students using a wide range of systems to carry out electronic surveillance, jamming and counter-jamming, as well as tests of basic skills, such as establishing command posts and setting up systems, dispersal, and concealment. This includes camouflage as well as multi-spectral smoke launchers and mobile high-power jammers and tactical field systems to protect command posts. This year introduced new elements, including "datalink countermeasures" and emphasized disrupting the web of an enemy's datalinks and sensors that form the basis of modern warfare.

Conflicts in Syria, Ukraine and Nagorno-Karabakh have recently highlighted the growing threat of UAVs against modern surface-to-air systems and ground forces, making developing countermeasures a priority for the People's Liberation Army (PLA). As mentioned in the excerpt below, the exercise, therefore, placed heavy emphasis on countering UAVs. State TV coverage of the exercise showed use of

UAVs ranging from small quadcopters to jet-assisted take-off, medium-altitude UAVs to test signal source detection and jamming skills.

The PLA has begun incorporating larger-scale and more realistic electronic warfare exercises or making it a more regular component of exercises in recent years. In 2019 for example, the PLA Air Force announced a new annual training exercise focused on electronic warfare called Qingdian (See: "New PLA Air Force Training Exercise Focuses on Electronic Warfare," *OE Watch*, December 2019).

The fact that NUDT is hosting the exercise is also significant. NUDT is at the center of the PLA's development of advanced technologies and concepts of operations. Top military scientists associated with its robotics and hypersonic cruise missile programs are based there and graduates of the school have gone on to major positions, including General Li Shangfu, Director of the Central Military Commission's Equipment Development Department, China's top body for directing military tech programs. The graduates of this program are likely to go on to significant roles in the PLA, bringing away lessons from this series of capstone exercises.

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Source: “初试锋芒！国防科大学员在无形战场书写‘毕业答卷’ (The First Real Test! NUDT students fill out their ‘diplomas’ on the formless battlefield)” *China Military News Online* (Chinese government publication), 14 July 2021.
http://www.81.cn/jx/2021-07/14/content_10061687.htm

Recently, the School of Electronic Warfare at the National University of Defense Technology held a tactical exercise called “Countermeasures-2021” (DK-2021; DK here stands for Duikang [对抗], or countermeasures in Chinese) with two components begun simultaneously in central and eastern areas of Anhui province in eastern China. More than 600 graduating students organized into mixed units for the week-long exercise, which featured the full spectrum of realistic combat electronic warfare exercises...

Elements simulated in this a ‘Red vs Blue’ opposing force exercise included countermeasures targeted at communications, radar and optical sensors and jamming against UAVs and datalinks deployed in different places and implemented simultaneously.

Various electronic countermeasures such as communication countermeasures, radar countermeasures, and photoelectric countermeasures were used throughout the exercise. Anti-UAV electronic countermeasures and datalink countermeasures [数据链对抗] were also integrated into the operational system acted as a major combat force for the first time.

This exercise also featured an indigenously-developed “anti-UAV electronic countermeasures combat research platform” as the basis of an anti-UAV electronic countermeasure unit to help students understand the utility of unmanned warfare and electronic countermeasures in actual combat.

Much of the equipment used in this exercise for realistic training was new and had only recently been delivered to NUDT. Faced with new equipment types that they had never used or even seen before, and in discussion with their instructors and squad leaders, the students were forced to rely on the knowledge gained during their coursework, and draw on both the foundational theories they had learned and their hands-on experience to deploy the equipment and begin detection operations. The exercises helped emphasize that only by flexibly using what they have learned in class can they better adapt to the realities of the battlefield.