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**CHINA'S ACTIVE DEFENSE STRATEGY AND ITS REGIONAL IMPACT**  
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Mr. Chairman, Mr. Vice-Chairman, other Members of the Commission.

I'd like to express my appreciation for being invited to appear before you today to address the question of "China's Active Defense Strategy and Its Regional Impact."

In considering the Chinese approach to what the West has termed anti-access/area denial strategies, it is important to recognize that the Chinese People's Liberation Army (PLA) has been a careful observer of Western, and especially American, approaches to what they first termed Local Wars Under Modern, High-Tech Conditions, and is now termed Local Wars Under Informationalized Conditions. These include the Falklands conflict, Operation Desert Shield/Desert Storm, NATO's campaigns in the Balkans, the toppling of the Taliban, and the March 2003 march to Baghdad. Consequently, PLA defense planning is being shaped, in no small part, by the lessons that they have derived from observing how potential opponents, but especially the United States, have been waging their wars.

Under Mao Zedong, the PLA expected to fight "early wars, major wars, nuclear wars," which would entail protracted war fought on Chinese soil, with a heavy reliance on guerrilla warfare. Since the rise of Deng Xiaoping, however, the expectation is for more localized, limited conflicts. PLA analyses of Local Wars Under High-Tech Conditions, and subsequently of Local Wars Under Informationalized Conditions posit that future wars:

- Will be shorter, perhaps lasting only one campaign.

- Will almost certainly not entail the occupation of China, although Chinese political, economic, and military centers are likely to be attacked.
- And will involve joint military operations across land, sea, air, cyber-space and outer space, and the application of advanced technology, especially information technology.

Chinese analyses of these wars have sought to derive actionable lessons for the PLA from these conflicts. The evolution of the so-called new “three attacks, three defends,” for example, posits that the PLA should pay special attention to attacking stealth aircraft, long-range cruise missiles, and attack helicopters, while defending against precision strike, electronic warfare, and reconnaissance and surveillance. The two I’d like to address in my testimony are:

- The ability of the United States to dictate the operational and tactical terms of the conflict, by conducting closely coordinated precision strike operations with joint forces through the use of space assets.
- The ability of the United States to dictate the strategic terms of the conflict, by influencing domestic opinion, opposition will, and third-party support; and

The theme underlying these aspects is the creation of a defense-in-depth against the United States, not only at the tactical and operational level through the creation of layered defenses, but also strategically, by denying the US the ability to set the strategic context of the conflict.

## **CHINESE CONCEPTS OF SPACE OPERATIONS AND ANTI-ACCESS/AREA DENIAL OPERATIONS**

In the tactical and operational realm, PLA observation of Western conflicts has led them to conclude that, in order to conduct the high-tempo, dispersed operations typical of recent Local Wars, it is essential to have access to space. Chinese analyses of the first Gulf War, the conflicts in the Balkans, and the march to Baghdad are rife with statistics on the number of satellites employed, whether maintaining surveillance over opponents, providing essential weather information, or guiding munitions and forces.

Thus, as one PLA analysis notes, in places like Afghanistan, when US military forces have identified the enemy, they have promptly exploited GPS to determine the enemy's location and satellite communications to transmit the target's location to weapons operators, in order to attack targets promptly. Similarly, in Iraq, the use of space was essential for the US military's intelligence gathering and battlefield command and control.<sup>1</sup>

From their perspective, the ability to exploit space is essential for the ability to wage non-contact, non-linear, non-symmetric warfare. This reliance is so extensive that another Chinese analysis posits that the US could not conduct the kind of warfare it prefers, but only high-level mechanized warfare, if it could not access space.

The implication is that an essential part of any Chinese anti-access/area denial effort will probably entail operations against the US space infrastructure, both in order to secure space dominance, *zhitian quan*, for the PLA, as well as to deny it to the United States. Space dominance, in this case, is defined as the ability to control the use of space, at times and places of one's own choosing, while denying an opponent the same ability.

It should be noted here, first, that there is still no indication of whether the PLA has developed a formal space doctrine governing military operations in space. The available PLA literature does have, however consistent themes that emerge.

One of these themes derived from the available Chinese writings that discuss the establishment of space dominance is that it does not necessarily require the destruction of satellites, such as in the 2007 anti-satellite test or last year's exo-atmospheric test. Rather, it involves a full range of measures, involving both hard- and soft-kill, aimed at the satellites, the terrestrial infrastructure of launch sites; tracking, telemetry, and control (TT&C) facilities; and the data links that bind the system together.

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<sup>1</sup> Fan Xuejun, "Militarily Strong Nations Are Steadily Developing 'Space Information Warfare,'" *Liberation Army Daily* (April 13, 2005)

Indeed, PLA writings emphasize that the establishment of space dominance requires integrated operations, involving the use of all available strength, all techniques, and all operational methods.

By *integration of all available strength*, this refers to two aspects. One is civil-military integration. The PLA, it is worth recalling, manages China's terrestrial space infrastructure, and plays a role in satellite design and manufacturing. It also is presumed to have access to information derived from space-based systems, consistent with the larger, long-standing Chinese theme of civil-military integration.

The other is integration of space capabilities with those of land, sea, and air forces, with the goal of generating synergies that will lead to space dominance. Ground, naval, air, and missiles forces, for example, can suppress enemy terrestrial space facilities, such as TT&C centers, and interfere with datalinks. This can prevent an opponent's space forces from properly operating, as well as help defend one's own space capabilities. Meanwhile, space forces can enhance the operation of ground, air, and naval forces by providing information support that will make them more effective.<sup>2</sup>

By *integrated application of techniques*, this refers to the combination of destructive and disruptive techniques. In some cases, disrupting an opponent's systems may be as effective, and more desirable, than destroying them. Destruction of systems in orbit may generate diplomatic problems, especially among third parties whose systems may be affected by debris. Attacking terrestrial targets in third countries may result in horizontal escalation. Thus, in some cases, one may choose to rely on jamming, cyber warfare, and other less physically destructive means to attack enemy space infrastructure.<sup>3</sup>

On the other hand, soft-kill systems often cannot permanently destroy physical facilities, and it may be difficult to assess whether it has succeeded in disrupting normal space

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<sup>2</sup> Zhang Jiali, Min Zengfu, "On Extending Regional War into the Air and Space," *China Military Science* (#1, 2005), and Chang Xianqi, *Military Astronautics*, 2<sup>nd</sup> ed. (Beijing, PRC: National Defense Industries Press, 2005), p. 276.

<sup>3</sup> Chang Xianqi, *Military Astronautics*, 2<sup>nd</sup> ed., pp. 290-291.

operations.<sup>4</sup> In order to inflict long-lasting impact on enemy space capabilities, or to be assured of disruption of high-value targets, one may prefer more kinetic, hard-kill options.

By *integrated coordination of all activities*, PLA analysts are discussing the importance of defensive as well as offensive roles. It should be noted that “offensive” and “defensive” are not synonymous with “hard kill” and “soft kill.” Rather, the objective is to reduce an opponent’s advantage in space.

The general tenor of PLA writings regarding space offensive measures suggests an interest in attacking the full space infrastructure of an opponent, suggesting attacks against both terrestrial and orbital assets, as well as the attendant data and communications systems that link them together. In particular, striking at mission control facilities and launch sites has the advantage of not only disrupting ongoing space operations, but retarding reconstitution efforts, and is compared with attacking command nodes in more traditional warfare.<sup>5</sup>

At the same time, the PLA fully expects its own space capabilities to be targeted. In this regard, PLA writings suggest that there is a role to play in both active and passive defensive measures. Active measures include the provision of defenses around key terrestrial facilities, including launch sites and mission control centers. Passive measures include efforts to limit the effectiveness of enemy efforts to detect and track one’s own space systems and infrastructure. They include efforts at camouflage, concealment, and deception of both terrestrial and orbital systems, as well as redundancy and mobility.<sup>6</sup> There is also reference to hardening of both satellites and ground facilities.

All of these efforts suggest that, in the event of a Sino-American confrontation, the PLA would seek to engage American space systems early in the crisis. This would deny

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<sup>4</sup> Chang Xianqi, *Military Astronautics*, 2<sup>nd</sup> ed., p. 275.

<sup>5</sup> Hong Bin and Liang Xiaoqiu, “The Basics of Space Strategic Theory,” *China Military Science* (#1, 2002).

<sup>6</sup> Fan Xuejun, “Militarily Strong Nations Are Steadily Developing ‘Space Information Warfare,’” *Liberation Army Daily* (April 13, 2005).

American forces the ability to establish information dominance (*zhi xinxi quan*), that all-aspect understanding of an opponent's forces, deployments, and capabilities. As important, it would also disrupt the coordination of American forces, including not only widely dispersed combat forces, but also the essential combat support elements that would sustain US operations. PLA writings also suggest that there may be demonstrations of anti-space capabilities, the conduct of space exercises, redeployment and reinforcement of space assets, and most worrisome, actual use of space weapons, in order to deter and dissuade the United States from intervening. The very possession of an effective space warfare capability, PLA writings note, allows China to effect space deterrence.

Two aspects of space deterrence should be especially noted. In the first place, such measures almost certainly would not occur in isolation, but would be part of a larger pattern of activities, involving not only the full range of the PLA but all the assets, economic, diplomatic, political, cyber, available to the Chinese Communist Party (CCP). And many of these measures, especially ASAT tests and the conduct of space war games, may be occurring months or even years in advance, so as to influence US decision-making far in advance of any actual outbreak of hostilities.

#### **CHINESE CONCEPTS OF THE “THREE WARFARES” AND ANTI-ACCESS/AREA DENIAL OPERATIONS**

The issue of space deterrence links space to “psychological warfare,” one of the “three warfares” that was highlighted in this year's DOD report. The “three warfares” were publicly set forth in the “Chinese People's Liberation Army Political Work Regulations (*zhongguo renmin jiefangjun zhengzhi gongzuo tiaoli*),” which were promulgated in 2003. Among the tasks of political work, according to Chapter 2, Section 18 of the Regulations, is conduct of the “three warfares” of psychological warfare, public opinion warfare, and legal warfare.

The “three warfares” would seem to serve three purposes:

- To sap US will and raise doubts about the justification of intervention, hopefully retarding US responses;
- To attenuate US alliances, thereby affecting access to vital ports and resupply facilities, as well as limiting foreign support for US efforts
- To reinforce domestic will and sustain the conflict, compelling the US to confront the prospect of a longer war

*Psychological warfare (xinli zhan)*, can occur at the tactical, operational, or strategic level. But, according to some PLA analyses, it is at the strategic level that psychological warfare may have the greatest impact, since it may undermine the enemy's entire will to resist. Psychological warfare at that level is aimed not only at an opponent's political and military leaders, but also at their broader population. It is also aimed at one's own population and leadership cohort, in order to strengthen the will to fight. Finally, it also targets third-party leaders and populations, in order to encourage support for one's own side, and discourage or dissuade them from supporting an opponent.

PLA descriptions of how space deterrence can be effected are consistent with this definition of psychological warfare. For example, Chinese analysts note that space systems are very expensive. It is possible, then, to hold an opponent's space infrastructure hostage, by posing a question of cost-benefit analysis: is the focus of deterrence (e.g., Taiwan) worth the likely cost of repairing or replacing a badly damaged or even destroyed space infrastructure? Moreover, because space systems affect not only military but economic, political, and diplomatic spheres, damage to space systems will have wide-ranging repercussions and second-order effects.<sup>7</sup> Will those impacts also be worth it? Through such psychological pressures as space deterrence, as opposed to actual attacks, it may be possible to persuade an opponent that they cannot attain victory at an acceptable price.

In order to generate such effects, Chinese writings suggest that psychological warfare, including its subordinate areas of public opinion and legal warfare, will often begin before the formal commencement of open hostilities. Chinese analysts suggest that the

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<sup>7</sup> Li Jingjun and Dan Yuquan, "The Strategy of Space Deterrence," *China Military Science* (#1, 2002).

record of recent wars shows that even before the war had sounded, psychological warfare was already heated. This is based in part on the assessment that the purpose of psychological warfare measures is to influence the audience's emotions and assessment capacity, which will eventually influence their actions. In order to do so, it needs to operate not only in the military and diplomatic realms, but also the political, economic, cultural, and even religious arenas, which cannot easily be done on short notice. The very fact that you are holding these hearings suggests that there has been some measure of success, from the Chinese perspective.

*Public opinion warfare (yulun zhan)* refers to the use of various mass information channels, including the Internet, television, radio, newspapers, movies, and other forms of media, to transmit selected news and other materials to the intended audience. It seeks to guide public perceptions and opinion to a previously established conclusion, so as to effect shifts in the overall balance of strength between oneself and one's opponent.<sup>8</sup> The goal is to generate public support both at home and abroad for one's own position and create opposition to one's enemy.

According to PLA analyses, while there has long been interest in public opinion warfare, it could assume strategic proportions only because of the advent of the Information Age. The media, including not only traditional news organizations but the Internet, news services, social media, etc., has gained unprecedented access to all sides, and has greatly advanced the ability to influence public opinion. Consequently, the media's role has advanced from being a strategic supplement, focusing on battlefield reports, to a type of "combat multiplier" which can help affect and decide the outcomes of conflicts.<sup>9</sup> In this view, public opinion is now a distinct, second battlefield, almost independent of the physical one.<sup>10</sup>

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<sup>8</sup> Liu Gaoping, *Study Volume on Public Opinion Warfare* (Beijing, PRC: NDU Press, 2005), pp. 16-17.

<sup>9</sup> Liu Gaoping, *Study Volume on Public Opinion Warfare* (Beijing, PRC: NDU Press, 2005), p. 68.

<sup>10</sup> Nanjing Political Academy Military News Department Study Group, "Study of the Journalistic Media Warfare in the Iraq War," *China Military Science* (#4, 2003), p. 28.

As with psychological warfare, public opinion warfare is expected to commence prior to the outbreak of actual hostilities. The ability to shape the narrative, so to speak, including establishing moral ascendancy and justification, requires long-term efforts. Notes one Chinese assessment, “Before the troops and horses move, public opinion is already underway (*bingma weidong, yulun xianxin*).”<sup>11</sup> The longstanding global presence of American news organizations such as CNN and Fox News are seen by Chinese analysts in this light. It is in this context that we should consider the impact both of the creation of the Chinese 24-hour English language news service, as well as the expansion of Chinese news bureaus around the world.

Legal warfare (*falü zhan*) is the use of domestic law, the laws of armed conflict, and international law in arguing that one’s own side is obeying the law, the other side is violating the law, and making arguments for one’s own side in cases where there are also violations of the law.<sup>12</sup> The essence of legal warfare, like psychological and public opinion warfare, is to help one side to secure the initiative in wartime, and also to gain greater support, both at home and abroad.

The Chinese have taken concrete steps towards implementing legal warfare. As one Chinese volume observed, the Anti-Secession Law, passed on March 14, 2005, serves as a form of military deterrent/coercion (*junshi weishe*), through the use of legal warfare. As the law’s preamble sets forth, the goal is to prevent secessionist behavior and maintain national sovereignty and territorial integrity. Efforts by Taiwan to secede would therefore violate this law, and would lead to punishing consequences.

Ultimately, the combination of the “three warfares” constitutes a form of defense-in-depth, but one that is executed temporally (in order to delay an opponent) and politically (by fomenting public disagreement and doubt), rather than physically. It is aimed not

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<sup>11</sup> Nanjing Political Academy Military News Department Study Group, “Study of the Journalistic Media Warfare in the Iraq War,” *Chinese Military Science* (#4, 2003), p. 28.

<sup>12</sup> Han Yanrong, “Legal Warfare: Military Legal Work’s High Ground: an Interview with Chinese Politics and Law University Military Legal Research Center Special Researcher Xun Dandong,” *Legal Daily* (PRC), (February 12, 2006), and Cheng Hui, “China’s Military Begins Research and Training in Public Opinion Warfare, Psychological Warfare, and Legal Warfare,” Xinhuanet (June 22, 2004)

only at an opponent's leadership and public support, but also that of third parties; given the American reliance on foreign bases and facilities, obtaining allied support is essential for sustaining US operations. Similarly, given the heavy reliance on third-party space systems, vitiating their support can be as effective as destroying American systems. The goal remains anti-access/area denial; it is simply the means and the battlefields that have shifted.