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# THE PLA ROCKET FORCES: TAKING CHINA'S MILITARY MODERNISATION ANOTHER NOTCH HIGHER IN THE QUEST FOR AEROSPACE CONTROL

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## **The Role of Good Planning and a Sound Economy in China's Military Modernisation**

Military modernisation is a continuous process, best demonstrated in China's military reorganisation for a dedicated 'Rocket force' at par with their army, navy and air force. The Chinese armed forces began their military modernisation drive after the 1991 Gulf War in which they were shocked by the enormous fire power brought by US Air and Space forces onto targets half way across the globe with hitherto unknown levels of precision. There was but little choice; one could prepare or perish. China thus went on a military modernisation spree, dismantling its vast Soviet style war machinery and replacing it with more modern western concepts and equipment. While doing so, it blended modernity with ancient Chinese wisdom. A combination evidenced in a variety of

areas ranging from doctrine to actual acquisition and display of military capability. The less visible manifestation is the progressively rising investments and efforts in their Five Year Plans (FYPs) and the more visible manifestation is in their periodic display of modern military capabilities. Lesser visibility is a virtue in China's specific case, particularly so since very little is known in open sources about its budgetary allocations for military modernisations. Hence it makes sense to look at the investments in the FYPs to arrive at an estimation of the effort involved in China's military modernisation. After all, good planning and a sound economy are the basis for gainful execution of tasks. Modern air and space capabilities are the bedrock of any military modernisation and China pursues the same in right earnest. China's comprehensive pursuit of air and space power is evidenced by the fact that as in case of space, China laid the



foundations for building modern airpower capabilities during the 9th Five-Year Plan (1996-2000), made significant progress on both the civil and military elements during the 10th Five-Year Plan (2001-2005) as also 11<sup>th</sup> Five Year Plan (2006-2010) and going by trends will continue to build on all aspects of this foundation during the 11th Five-Year Plan (2011-2016) and later FYP's also.

### China's Military Modernisation Trends

All of this translates into military hardware that is progressively displayed to indicate greater strength and assertiveness. Consequently, the first display of modern Chinese machinery came in precisely a decade after the Gulf-War in 2001 that saw a significant reduction of troops and instead an increased display of modern air and space capabilities ranging from aircrafts to ballistic missiles to satellites. The only thing that keeps falling progressively in China's modernisation drive is the number of troops. Regular rounds of downsizing and restructuring have characterised the modernisation with troops being cut in 1985, 1997, 2002 and the latest in 2015 with a 300,000 troop reduction announced by Xi Jinping<sup>1</sup>. As traditional elements of the military fall and modern elements rise, there would be integration issues and attendant chaos and accordingly China periodically reorganises its military structures to keep them modern, current and relevant to the changing context.

Following a decades-long pattern, China's space and ballistic and cruise missile sector remains firmly in the lead. There are many concrete manifestations of its rising assertiveness in the world order. The numbers speak for themselves; China has deployed 1,200+ short-range ballistic missiles (SRBMs) opposite Taiwan. The CSS-5 Mod 5 (DF-21D) anti-ship ballistic missile (ASBM) it has "fielded" in small numbers "gives the PLA the capability to attack ships in the western Pacific Ocean" "within 900 nm of the Chinese coastline." Its ICBM units are benefitting from improved communications links. The DF-5 ICBM is equipped with multiple independently targetable re-entry vehicles (MIRVs), and the new-generation DF-41 under development is "possibly capable of carrying" them as well. It boasts the JF12 Mach 5-9 hypersonic wind tunnel, reportedly the world's largest. To support what has been "extraordinarily rapid" development of conventionally armed missiles and other long-range precision strike (LRPS) capabilities, as part of the "world's most rapidly maturing space program" China is lofting surveillance satellites in rapid succession. *Gaofen-2*, launched in August 2014, became "China's first satellite capable of sub-meter resolution imaging." It plans to launch successively improved variants of this satellite in coming years. China gained the ability to send even greater payloads to even higher orbits with the completion of a fourth satellite launch facility, Wenchang on Hainan Island, in 2014.

Launches of the Long March-5 and -7 heavy lift boosters are scheduled to commence there by 2016. Even as it increases its own use of space assets for military purposes, China is strengthening its ability to hold those of potential opponents such as the United States at risk. It is developing a range of counter-space weapons. A range of counter space weapons have also been developed and displayed periodically with the first Anti-Satellite test in 2007, followed by regular tests that sought to display even further refinement in ASAT technology. All of the above activities, though extremely modern and technologically and economically challenging are conventional and a variety of nations across the world have them.

### **The Drastic Change in Military Modernisation**

As the 11<sup>th</sup> FYP draws to an end, China takes its level of military modernisation a notch higher. In the first decade the emphasis was on air and space capabilities, the following decade emphasised on acquisition of credible air, space and ballistic missile capabilities that in the Chinese scheme of things amounts to “Aerospace Capabilities”. Once the Chinese “*informationalisation*” and “*operationalisation*” aspects were dealt with, it was essential to take the doctrine higher to the next level of obtaining control and the HGV quest is part of the same doctrine. With air and space capabilities in place, what is markedly different is China’s development of Hypersonic Glide Vehicles (HGV)

and its test in 2014. Apart from China, only the US and Russia have HGV capabilities. The X-51A, Yu-71, and DF-ZF are the current HGV prototypes for the U.S., Russia and China, respectively. The purpose, simply put is that the United States hopes to improve the speed of its Prompt Global Strike capability (which would enable to hit a target anywhere in the world with a conventional warhead in less than an hour), while both Russia and the PRC want the ability to pierce U.S. missile defences.

A clear indication of how serious China is about HGV capabilities is found in its present reorganisation and restructuring. On January 1, 2016, the Second Artillery Force (responsible for China’s nuclear and conventional ballistic missile arsenals) was reorganized into the People’s Liberation Army Rocket Force (PLARF) elevating it to a service fully on-par with the Navy, Army and Air Force<sup>2</sup>. A significant amount of resources go into reorganisation and the seamless manner of reorganisation indicates no paucity of planning or resources; it actually points to the contrary. China’s HGV, the DF-ZF would now be developed, tested and deployed by a dedicated service thereby narrowing its focus and potential to penetrate the strongest, layered missile defence systems. China’s primary goal for the HGV is to have it travel fast enough while making use of the HGV’s unique flight characteristics to evade BMD systems. The capability viewed in isolation does not appear extremely formidable; it is as yet immature and would take time to

operationalise and actual accrual of capabilities would take some time. The overwhelming theme in most literature on the subject is that it is qualitatively inferior and far from operationalisation. And that is where one misses the wood for the trees. China's HGV stands not in isolation but as an essential component of the overall architecture of military modernisation. It fits snugly into the larger picture of aerospace modernisation as China sees it and eminently satisfies their unique need. Consequently, one only needs to look at the indicators in the 12<sup>th</sup> FYP to figure out the next notch to which China's military modernisation would rise to. Perceiving the threat in Chinese characters makes the eminent wisdom in the move so much clearer.

*(Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the position of the Centre for Air Power Studies [CAPS])*

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#### Notes

<sup>1</sup> Chris Buckley, " In Surprise: Xi Jin ping to cut troops by 300,000" , *The New York Times*, 02 Sep 2015 at <http://www.nytimes.com/live/china-military-parade/in-surprise-xi-jinping-announces-cut-of-300000-troops/>, accessed on May 12, 2016.

<sup>2</sup> Chinese Ministry of Defence at <http://eng.mod.gov.cn/ArmedForces/second.htm>, accessed on 10 May 2016.