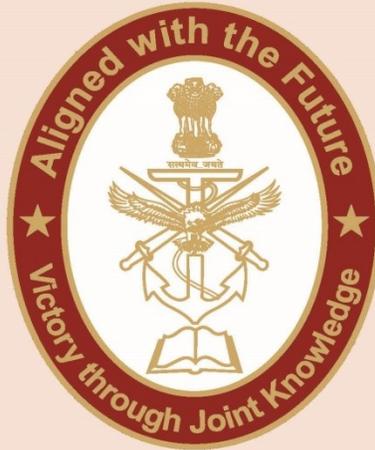


# CENTRE FOR JOINT WARFARE STUDIES



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### CROSSING SPACE BARRIERS: A NEW MILITARY THRESHOLD

BY

LT GEN RAMESHWAR YADAV, PVSM, AVSM, VSM (RETD)

An 18 ton BDM interceptor missile striking a satellite moving at a speed of almost 20 Mach at a height of approximately 300 km from the earth has changed the strategic paradigms of Indian military capabilities. With that, the military deterrence has gone up yet another notch when it is hyphenated with belligerent tendencies of two of our neighbours, at times in tandem. Pakistan does not have a match to this new military threshold that India has achieved, and a fair amount of capability deficit has been covered up as regards to the China.

**India, now, stands amongst the league of technological elite group with this achievement of strategic significance.**

Looking at the larger picture, India already has a triad in her nuclear calculus alongside adequate conventional capabilities over land, air and sea to take care of her security needs within and around our territorial boundaries. India is also capable of power projection across our immediate periphery and areas impacting on our national security in IOR and adjoining areas. Indian military assistance to Sri Lanka, Maldives and Bhutan are testimony to Indian political

will to reach out to her neighbours in the time of crisis. India is also playing a meaningful role in ensuring world peace through her participation in the UN missions in conflict zones, besides extending humanitarian assistance in Afro-Asian landscape.

The Indian military geography with dominance over Indian Ocean and impregnable land barriers of Himalayan ranges bestow politico-military advantages of very high order to India. It makes any military intrusion by the external forces restrictive in time and space plus conditional in its execution. **The newly acquired capabilities of the recent Indian forays into space with military imprints alongside ever increasing cyber war capabilities have further added to the potency and reach of the Indian military power to deter the inimical forces.**

How does it make a difference by creating a space based military capability for India? It is a defensive concept in its design in Indian context, albeit with offensive import in tactical terms. The employment of anti satellite system (ASAT) falls in the realms of an offensive defence doctrine with self imposed restrictions of no first use as indicated by the prime minister. It provides a capability to destroy surveillance, communication, navigation, cyber/digital oriented, or any other satellite with hostile intentions. BY doing so, it would facilitate denial of own information and protect own war waging structures and at the same time have capability to disrupt the enemy C3I and OODA loop as also movements, manoeuvres and logistics of the enemy forces in the tactical battle field.

Besides this, enemy satellites controlling the civil logistics infrastructure like railways, civil aviation, road transport, IWT, communication & IT network etc may also be considered for destruction, if required. Such utility services, if denied to the enemy during hostilities would create chaos leading to administrative and political breakdown forcing the enemy to give in. Therefore, the anti satellite capability would be a game changer and a much needed force multiplier to fight the hybrid war.

India, as a responsible nation, has been restraining herself by not crossing the self imposed redlines for the sake of giving peace a chance, though ASAT capability existed for quite some time. **Whereas, the persistent overbearing attitude of inimical forces around, forced India to shed her tag of a soft state and showcase her political will to adopt harder options in the national interests.** With the new strategic stature, India would surely be

consulted in the matters of regulating mechanism for utilization of the space for civil as well as military purposes. Accordingly, it would be possible for India to take care of her national interests in a better manner instead of being pushed into accepting the regulatory mechanism as a fait accompli. This in turn would also create leverages as well as positive political synergies in our international conduct.

**The flip side of this success story may lead to denial of certain cutting edge technologies by those who have it as it would impact on their own niche areas of expertise.** It is not a new phenomenon as technology denial is part of accepted political conduct in order to retain and sustain superiority. There have been incidences, when the Indian scientists have been denied visa to attend international conferences apparently due to perceived concerns of compromise of intellectual property plus politics of technology power game.

India was denied transfer of technology for cryogenic engines in 90s, a necessity for our missiles and space programmes under pressure of the US. The ISRO, subsequently succeeded in developing the technology on their own after hard work of three decades in 2014 for GSLV III launch. Similar denials cannot be ruled out in the future also, hence need of according priority to create a robust and effective R&D mechanism and manufacturing structures. Taking a cue from the past experiences, we should work on a presumption that no one would provide us any technology easily; hence it remains our own battle. Therefore, "Make in India" is the best way out.

Economically, it is going to be a costly exercise to fabricate and maintain requisite numbers of ASAT missiles and launch vehicles. The entire project is government controlled as of now with participation of the private sector restricted to procurement of few parts and services of common nature. **However, there is a scope of involving the private sector on PPP model to cut the costs and achieve better economies of scale.** The NASA, the most advanced space establishment of the world procures large percentage of their equipment from the private companies. Space X, based at Hawthorne in California, is a private company capable of manufacturing and operating space ships and satellites.

There are number of countries who have been using Indian launch facilities (PSLV) for placement of their satellites in space. It has a big commercial potential as Indian launch facilities turn out to be comparatively

cheaper, hence there is a reasonably good demand. This is an ever increasing market as most of the countries would prefer using their own satellites in times to come for various satellite based services. In that, India with her proven space technology structures has a tremendous commercial scope which needs to be exploited.

**The Indian diplomacy with addition of coercive content in space would also gain substantial political buoyancy in the conduct of international affairs.** The military diplomacy is also likely to be taken more seriously by the the cooperating nations as well as the adversaries with demonstrated Indian military power. It is a long cherished ambition of India to be a meaningful constituent of the UN to ensure peace and harmony in the world. India, now, as a nuclear and space power would have better credentials to be a member of the extended UN security council. It may also prompt smaller nations on the periphery to rally around India for their politico-military buoyancy, improving the security paradigms in the region.

**Pakistan, knowing their pattern to seek parity with India, is likely to acquire ASAT capability in all likelihood with the help of their iron friend China as was the case with the nuclear and missile technology.** China already has this capability since 2007, and with Pakistan also joining the band wagon, there would be a high probability of start of a regional space arms race. This warrants exerting international pressure to introduce strict regulations for non proliferation of weapons in the space, lest it becomes a threat to the world peace.

The anti satellite missiles so far have been in the realms of technological development and now that its capabilities as a weapon have been validated , it warrants formation of a national level organization as it exists for the nuclear weapons. It would be a multiservice organization with scientific community as the primary constituents at the production and executive end alongside command and control at national level under political leadership. **A national doctrine to spell out the likely contingencies and parameters to utilize this military capability needs to be formulated as a precursor to working out the organizational structures, procedures and processes.**

The military and civil administration interface to work out intelligence needs, target designation, weapon production, storage, maintenance, security, logistics, procedures and protocols, chain of command etc would need to be included in the organization matrix. There is already a space cell functional in

the HQs Integrated Defence Staff which may have to be upgraded to an appropriate higher level for bring about synergy amongst all the constituents involved in the anti satellite missile project. It may graduate to a space division, or may be a separate space command later, if so required.

**The India stands sanitized from inimical influences at the best ever levels in her history of existence from all the possible flanks, the space being the last barrier which has been harnessed now.** While acquisition of anti satellite capabilities has positive dividends for national security, it also imposes higher responsibilities on India as part of league of global conscience keepers. It has sent out a subtle message to the inimical forces to de escalate the anti India rhetoric and restrain their indulgence in destabilizing India. Hopefully, the military ante against India would reduce gradually leading to a better peace and prosperity in the region. It is a challenging time for Indian leadership and diplomacy to capitalize on the newly acquired strategic strengths to create positive political synergies to take care of her economic development and national security.

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