

Q: How militarization of space by India is revolutionizing the military affairs of Pakistan? Explain in detail.

Militarization of Space by India and Military Affairs of Pakistan

India's attempts to militarize space, especially in recent years, has encouraged country's leadership to articulate hawkish and aggressive posture against Pakistan. India is on a mad course to militarize space frontier; such attempts are threatening the peace in Pakistan. Because through militarization of space, India can easily weaponize the space against Pakistani military.

Indian Defence Minister has already hinted that space warfare is a priority area till 2025, and even in past by adopting dubious doctrinal policy of peaceful space defense for a long time Indian military was engaged in exploitation of outer space. This exploitation of space led to upper hand of India in hybrid warfare against Pakistani military.

Militarization of Space by India - an Imminent threat for Pakistani Military

Pakistan and Indian military forces have been horns to horns since independence due to hegemonic policies of India against Pakistani army. Indian advancements in space are strengthening New Delhi's political belief that it can take advantage of its conventional power to carry out conventional operations against Pakistan such as the infamous 'Cold start' doctrine (The Nation, Cold start doctrine of India, March 2022). India has always portrayed itself to be not in favor of militarization of space against Pakistan like PNE (Peaceful Nuclear Explosions) in 1974, but cat came out of the bag when Indian PM Narendra Modi on 27 March 2019 confirmed that India had completed ASAT project successfully. As he made this statement one month after Balakot airstrike (26 Feb 2019), so militarization of space by India in ^{recent} times when both countries are bound by tough knots with one another is an imminent

threat for Pakistani military.

a- Threat to External Security of Pakistan

Since 1947, India is aimed at disturbing the border security of Pakistan. Even in modern times, several Indian sources have confirmed that **offensive military utilization** is the primary goal of space projects like Indian Regional Navigation Satellite System (IRNSS).

India had purchased Israeli technology RISAT-2 that is radar-imaging satellite that has boosted India's military capabilities against Pakistan

(The Diplomat, India Israel collaboration on space, Sept 2022). New Delhi has signed a \$5.4 billion

with Moscow to purchase what experts believe are the most modern ballistic missile (BMS) system available, claiming that Islamabad can counter it. According to

the report of ^{the} Guardian of 2018: The Russian

weapon system can engage and destroy

36 targets including aircraft, UAVs (Unarmed Aerial Vehicles) and ballistic missiles of

Pakistan within 400km at an altitude of 30 km. Through all these tactics,

India's Defense Space Research Organization (DSRO) is trying to deceive space potential of Pakistan through military means which is a great security threat for Pak forces.

b. Threat to Sovereignty of Pakistan

It is a big threat and hindrance for Pakistan military forces to protect the sovereignty of their homeland when the archrival state i.e. India had gone so far in militarizing the space. By militarizing the space, it has become easy for India to counter Pakistan in aerial war. India is posing a threat to fighting capabilities of Pak air forces since it can develop its own aerial vehicles because of its space-faring powers. The space launch vehicles of India like Polar Satellite Launch Vehicles (PSLV) and Geosynchronous Satellite Launch Vehicle (GSLV) has boosted the military abilities of their air force. This is an impending threat over the heads of Pakistan air forces since the "sovereignty breach" of Feb 2019 conducted in Balakot was done in the form of

an aerial strike on Pakistani borders. So, the strengthening of Indian airforce due to militarization of space is increasing the threat of sovereignty breach of Pakistan.

C- Threat of Cyber Warfare against Pakistan

Militarization of space by India through the support of west, portrays an emerging threat for Pakistan's security in the form of cyber-warfare. India is also collaborating with UAE to exploit space for successfully operating hybrid war against Pakistan. According to reports of "The Diplomat" in August 2023: India's PSV has launched UAE's first nano-satellite Nayif-I in order to collect space data. This is an unavoidable threat for Pakistani military since due to this space data, it would become very easy for India to contaminate the minds of youth against army and other national institutions by controlling media platforms. It is a threat for military since India was engaged in spreading institutional acquisition syndrome in the

nation by using fake media accounts.

European Union Disinformation Task Force

released report in early October 2019, according to this report, around 265 coordinated fake local media outlets are serving Indian interests in nearly 65 countries. Their IP address traces back to Srivasta Group which is home to New Delhi Times and IINS.

d- Threat to Reputation of Pakistan's military at International level

The rapid militarization of space by India has become a threat to reputation of Pakistan's military at international level. Indian media along with its allied groups operating in other countries are damaging the reputation of Pakistan military forces by portraying their image as dictators and totalitarians of Pakistan. Indian media and western media has humiliated the democratic system of Pakistan when Pakistan was suffering from political polarization in **July 2023** and India was conducting their successful space mission **Chandrayaan-3** in same days.

Their media was blaming Pak Army for this political instability that led the country towards record breaking inflation. Pakistan military was again criticized when the whole Middle East was collaborating with India^{after Chandhrayan-3} to boost up their space programs while during the same time Chief of Army Staff^{of Pakistan} was negotiating with foreign investors and MBS of KSA for their investments in Pakistan (The Economic Times, Pakistan COAS negotiating with investors, Sept 2023)

e- Threat of Pakistan-India Nuclear Stand off

Pakistan's nuclear deterrence against India is strong enough to counter any war abged by India but the militarization of space by India has enabled it in selective function of nuclear command and control systems to counter Pakistan's nuclear deterrence. Indian tactical nuclear weapons may increase the likelihood that the future conflict on Pakistani territory will go nuclear. (Toby Dalton, Risk of Pakistan-India nuclear stand off, May 2016)

The Islamabad Policy Institution on the occasion of 23rd anniversary of 1998 nuclear tests, reiterated their concerns about "tenuous" strategic stability of region and India's aggressive posture including its plans for disarming pre-emptive strikes against Pakistan's nuclear arsenal. India is working on 4th generation GSAT that will help the Indian forces in developing nuclear submarines. In order to speed up their space projects, India has collaborated with Israel that is a big threat of Pakistan India nuclear stand-off since in past Pakistan received a number of intelligence reports during 1983 to 85 that India was preparing to plan an attack on Kahuta with help of Israel. Among files, reported by **Hindustan Times**, missing from Indra Gandhi's office was entitled as "Attack on Kahuta 1984." (Abdul Sattar, Pakistan's foreign Policy 1947-2005, 2007) So, in this way India is making efforts to make itself strong against Pakistan's nuclear deterrence ~~so that~~ ^{for which} it is strengthening its nuclear weapons by militarizing the space and is thus increasing threat of Pakistan India nuclear stand off.

Impact of Militarization of Space by India on Revolutionizing the Military affairs of Pakistan

This is alarming threat for Pakistan military forces that the archrival state i.e. India is exploiting space against Pakistani military, with the help of western countries as well as Israel. The close alliance of India with Israel on space projects, against Pakistani military, is posing imminent threat to Pakistan army due to which they are trying to revolutionize the military affairs of Pakistan. According to Amna Rafiq's research article **Militarization of space by India and Israel** in 2019: Israel aerospace Industries (IAI) signed a memorandum of understanding (MOU) with Hindustan Aeronautics Limited (HAL) in 2019. The main objective of this strategic partnership is the transfer of local technologies and the provision of 100 Heron TP UAVs to India. Unfortunately, Pakistan lacks far behind in space projects but due to threat of militarization of space by India, Pakistan military forces are trying to revolutionize their fighter jets and combat aerial vehicles. Pakistan military are consistently

revolutionizing the aerial vehicles in order to compete India's modern aerial vehicles which India has gained due to exploitation of space. Pakistan navy has recently inducted state-of-the-art tactical unmanned aerial vehicle (UAVs) along with maritime patrol aircraft with the aim of enhancing its capabilities.

Following are some more efforts that Pakistan military forces are making with aeronautical engineers of Pakistan Aeronautical Complex KAMRA to revolutionize the fighter jets :-

a- Pakistani Drone Evidently Similar to Rutan Long-EZ :

Turkey and Middle East like KSA released statements applauding aeronautical engineers of KAMRA for developing "indigenous" drone that's strikingly reminiscent of popular Long-EZ design by Burt Rutan in 1970s. This shows the efforts of Pakistan military in revolutionizing their combating aerial vehicles.

b- Indigenous MFI-17 Super Mushshak training aircraft :

Pakistan is in the process of retrofitting its fleet of Super Mushshak training aircraft with new intelligence, surveillance and reconnaissance

capabilities and light weight laser guided munition. PAC is upgrading the training aircraft for use in counterinsurgency (COIN) operations. Pakistan military is forming alliance with **Turkey** to counter alliance of India and Israel for defence purposes. Pakistan has delivered indigenously developed MFI-17 to key ally Turkey (Al-Jazeera, Pak-Turk alliance, November 2022).

shaheen-II

c- Ballistic Missile 'capable of carrying both nuclear and conventional warheads:

In 2019, Pakistan conducted training launch of ballistic missile capable of carrying both nuclear and conventional warheads, upto 1500 kilometers (Al-Jazeera, shaheen-II of Pakistan, May 2019). This was a strict response to Indian forces that had conducted so-called Balakot airstrike in Feb 2019, and after training launch of this ballistic missile the Pakistan military ^{head} responded sovereignty breach of Feb 2019 in his statement as : "The training launch was aimed at ensuring operational readiness of Army Strategic Forces Command."

d- JF-17 Fighter Jets - Backbone of Pakistan Air force

The design and development of fighter aircraft is a cutting-edge niche capability exclusive to a few nations. The philosophy behind JF-17 was to develop light-weight, single-engine, multi-role combat aircraft. The successful execution of PAF's 'QPQ+' response against India on Feb 27, 2019, in post-Pulwama skirmish, has earned JF-17 accolades for a proven battle-tested machine (Dawn, success of JF-17, March 2019). JF-17 Block 3, evolved into an advanced fighter jet, has ability to compete US' Falcon F16 Viper.

e- J-10C Fighter Jets that can counter Indian Dassault Rafale

J-10C fighter jets are made on principle of Reverse Engineering ^{of F16} due to which it has capability to counter Indian Dassault Rafale that is more expensive (\$100million) and less efficient than J-10C. So, in this way Pakistan military forces are working on more efficient and less expensive defence projects to counter India's more expensive and less efficient weapons. Even these fighter jets are

so efficient that they can even counter F16 Viper of Lockheed ^{one of} Martin ^{most} that are the advanced fighter jets of the world.

f. Pakistan's Falcon F-16 - More advanced than JF-17

The Pakistani F-16 A/B are all Block 15 aircrafts and are powered by Pratt and Whitney F100-PW-200 turbofan. These fighter jets are more advanced aircrafts than J-F 17, with a longer range and greater payload capacity than JF-17. Since JF17 was capable enough to counter fighter jets manufactured by Lockheed Martin, thus F-16 fighter jets have upgraded the military capabilities of PAF upto next level.

g. Pakistan Army's Surface to Air Missile (SAM) Systems that can Counter Militarization of space by India

Although the militarization of space by India has threatened the Pakistan military forces regarding external security, but Pakistan army's SAM systems are strong enough to protect

their homeland.

• HIMADS

The High-to-Medium Air Defence System is the HQ-9/P long-range SAM that has a range of 100 km within which it can intercept any aircraft and cruise missiles.

• LOMADS

The Low-to-Medium Air Defence System consists of two SAM i.e. the LY-80 and the LY-80EV.

The LY-80 uses a semi-active RADAR homing guidance system that has enhanced LOMADS capability of defence against India.

CONCLUDING THOUGHTS

The militarization of space by India is dangerous threat to Pakistan's military but Pakistan army is focussed on revolutionizing their weapons and defence system to counter any hegemony of Indian military. Through all these efforts, military forces have secured the land of Pakistan against India uptill now and will constandy revolutionize their arms against hypocrite measures of Indian military to (veio) weaponize the space under the guise of peace and development.