Preface

The great French statesman Georges Clemenceau is once said to have remarked "I don't know whether war is an interlude during peace, or peace is an interlude during war". Paradoxically, the only way for nations to prevent wars is to have the adequate military strength to further their political goals and deter aggression. Strong nations thus require strong militaries equipped and trained not to fight yesterdays but tomorrow's war. This requires political vision and synergetic evolution and application of policy by all organs of the state.

Since the dawn of history, rules of conflict and paradigms of warfare have kept changing. For most of human history, warfare was prosecuted on land. With the invention of sailing ships, sea power became the currency of power; when Britain and other European nations dominated the seas, they ruled the world. At the turn of the Twentieth Century, the invention of the aircraft changed the paradigm of warfare once again. The Americans started dominating the world ever since they gained overwhelming superiority in the air. With the onset of space age, the paradigm of warfare seems to be set to change once again with space assets playing an increasingly crucial role in modern conflict.

Outer space is vast and limitless. The only known limits of space are the capability of the human race to reach outward. It offers infinite scientific and economic opportunities (and possible threats) some of which cannot even be imagined today. Thus space is increasingly becoming an important constituent of contemporary political and strategic discourse. With outer space becoming increasingly accessible, there has been a sharp rise in the number

of space actors. This has raised fears that after land, sea and air, it may be the turn of space to become the next playground of geopolitics and global power projection. Space exploitation and domination is thus fast becoming an important ingredient of emerging military strategy.

The last major global conflict, World War II, ended with the Atomic holocaust at Nagasaki and Hiroshima. The Post-war period did not see 'peace breaking out', but the onset of the Atomic age, quickly followed by the Missile age and the Space age. Militarisation and weaponisation of outer space thus commenced soon after World War II and peaked during the Cold War era. The two protagonists, the United States and the Soviet Union, made extensive use of satellites to spy on each other and support military operations. Systems which relied on nuclear explosions in outer space and upper atmosphere to destroy incoming ballistic missile warheads were tested. Extensive research was carried out on Anti-satellite (ASAT) systems and Anti-ballistic Missile (ABM) systems. Eventually, the American Strategic Defence Initiative, popularly called 'Star Wars', tilted the apple-cart in favour of the Americans bringing the Cold War to an end. But end of the Cold War did not put a stop to military activities in outer space. As a matter of fact, with the increase in space-enabled powers, there has been a spurt in use of outer space to support military operations.

Militarisation of space is thus of immense interest to those entrusted in ensuring the security of India and its rightful place in the comity of nations. This includes both military and civilian leaders/bureaucrats. In this scenario it is crucial that responsible space power like India formulate a pragmatic space policy which can meet its present and future aspirations, both from the military

and civilian angles. This dissertation attempts to examine the issue of militarisation of space from an Indian perspective and explore various policy options available to India to improve its space security. It has been laid out in following parts:-

(a) Chapter 1 - Introduction. The chapter lays down the basic issues intended to be covered in the study.

(b) Chapter 2 - A Brief History of Space Militarisation. The historical context of militarisation and weaponisation of space is outlined.

(c) Chapter 3 – Militarisation Versus Weaponisation: Space Doctrines. The chapter examines various space theories and doctrines and the distinction between militarisation and weaponisation.

(d) Chapter 4 –Space Security: The Geopolitical Environment. The chapter examines some key issues related to space security in the overall geopolitical environment.

(e) Chapter 5 - Space Policies: An Overview. The global space policy environment is examined to draw relevant lessons for India.

(f) Chapter 6 - Space Security and Policy Options for India. This chapter examines the impact of space militarisation on the Indian policy environment and various options for a suitable policy framework.

(g) Chapter 7- Leveraging Space Assets For National Defence This chapter covers issues related to leveraging space assets for enhancing India's national defence and military preparedness in a more integrated manner.

Being a nascent field of research, the study has been based on secondary sources like books and articles published in print-form and the Internet. The information and data included in the study has been collected from open sources and no classified information has been used. *The author would like to acknowledge the guidance provided by Prof Dolly Arora in looking at the issue in a more 'civilian' and hopefully more moderate manner.*