

TABLE OF CONTENTS

CONDENSÉ	i
EXECUTIVE SUMMARY	v
I CANADA'S GEOSTRATEGIC SITUATION	1
II CANADIAN SPACE PROGRAMMES	3
III FUTURE CANADIAN INTERNATIONAL ALIGNMENTS	7
IV SPACE-BASED SURVEILLANCE AND CANADIAN TECHNOLOGY	13
V GROUND-BASED, SEA-BASED, AIRBORNE, AND SPACE-BASED SURVEILLANCE	17
Telecommunications	18
Optical Imagery	18
Radar Imagery of the Ground and Sea Surface	19
Radar Detection and Tracking of Aircraft	20
Movement of the Sensors and Targets	23
Revisit Times	23
Other Differences	25
VI THE MILITARY SIGNIFICANCE OF SPACE	27
VII SPACE AND BALLISTIC MISSILE DEFENCE	31
Defence Against Intercontinental Attack by Ballistic Missiles	31
Defence Against Tactical Ballistic Missiles	34
VIII SPACE AND AIR DEFENCE	37
Active Air Defence of North America	37
Detection of Aircraft at Low Altitude	39
Space-Based Radar for the Detection of Aircraft	40
IX ARMS CONTROL, DISARMAMENT, PEACEKEEPING, AND SPACE	43
X PEACETIME REQUIREMENTS FOR CONTROL OVER NON-COOPERATING PARTIES	47
XI MONITORING OF THE ENVIRONMENT AND OF NATURAL DISASTERS	51
XII THE MANY OTHER POTENTIAL BENEFITS OF SPACE SURVEILLANCE	53
XIII CONCLUSIONS AND RECOMMENDATIONS	55
Recommendations	56