TO SPACE LAW

I.H.Ph. Diederiks-Verschoor V. Kopal

THIRD REVISED EDITION



KLUWER LAW INTERNATIONAL

AN INTRODUCTION TO SPACE LAW

Prof. Dr. I. H. Ph. Diederiks-Verschoor
Prof. Dr. V. Kopal

THIRD REVISED EDITION



AUSTIN BOSTON CHICAGO NEW YORK THE NETHERLANDS

Published by:

Kluwer Law International P.O. Box 316 2400 AH Alphen aan den Rijn

The Netherlands

E-mail: sales@kluwerlaw.com Website: http://www.kluwerlaw.com

Sold and distributed in North, Central and South America by:
Aspen Publishers, Inc.
7201 Mc Kinney Circle
Frederick, MD 21704
United States of America

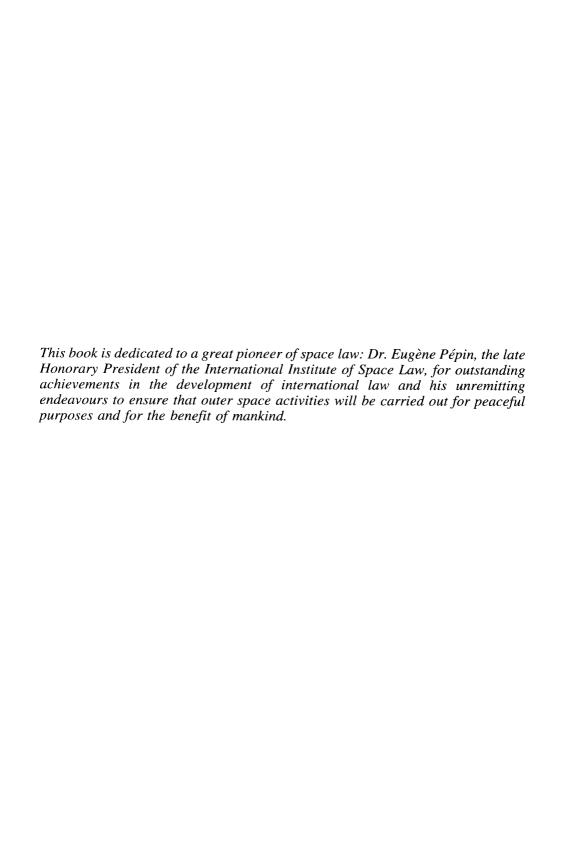
Sold and distributed in all other countries by: Turpin Distribution Services Ltd. Stratton Business Park Pegasus Drive, Biggleswade Bedfordshire SG18 8TQ United Kingdom

ISBN 978-90-411-2647-4

© 2008 Kluwer Law International BV, The Netherlands

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, mechanical, photocopying, recording or otherwise, without prior written permission of the publishers.

Permission to use this content must be obtained from the copyright owner. Please apply to: Permissions Department, Wolters Kluwer Legal, 76 Ninth Avenue, 7th floor, New York, NY 10011, United States of America. E-mail: permissions@kluwerlaw.com.



Preface

The favourable reception enjoyed by my *Introduction to Air Law* since it was first published in 1982 has been a great encouragement for me to start work on a similar edition dedicated to space law, for which there seemed to be an equally pressing need. Its aim, like its predecessor's, is to give students as well as the general reader some orientation and practical guidance, in this case in the evolution, legal framework and organizational structures of this younger branch of international law.

Another stimulus was my being able to rely once again on the inspiring collaboration of Mr. W.A. Frowein for translating and editing the text in English, and Mr. G.C. van Straaten, who took care of the extensive bibliography and the footnotes with perfect devotion and accuracy.

A special word of appreciation I owe to Mrs. F. Klaver for her kindness in making available some valuable advice and documentation in the field of telecommunication and copyright. I also wish to express my sincere thanks to Mrs. Charlotte van den Hoek, whose enthusiasm during the long hours of typing and word processing has been such a help in preparing the typescript.

I.H.Ph. Diederiks-Verschoor Baarn, March 1993

Preface to the Second Edition

This second edition of *An Introduction to Space Law*, like the first, is meant to give both students and the general public an idea of the rules and the latest developments in space law.

In the process of updating and editing the book the excellent collaboration of Mr. W.A. Frowein and Mr. G.C. van Straaten has, once again, been a source of encouragement and assistance to me, for which I am duly grateful. A special word of thanks I also owe to the International Institute of Air and Space Law of the University of Leyden, The Netherlands, which has always been ready to inform me about recent developments, while the availability of the library has greatly facilitated the work.

I.H.Ph. Diederiks-Verschoor Baarn, August 1999

Preface to the Third Edition

This third edition of An Introduction to Space Law, like the first and second, is meant to give both students and the general public an idea of the rules and the latest developments in space law.

In the process of updating and editing the book I am duly grateful for the cooperation with Prof. Dr. V. Kopal and Mr. G.C. van Straaten. Since 1999 great developments have taken place in space law which are incorporated in this new edition.

I.H.Ph. Diederiks-Verschoor Baarn, June 2007

List of Principal Abbreviations and Acronyms

AJIL American Journal of International Law
(C)ADIZ (Canadian) Air Defence Identification Zone
CNS/ATM Communication Navigation and Surveillance/Air

Traffic Management system (ICAO)

COPUOS Committee on the Peaceful Use of Outer Space

COSPAR Committee for Space Research
CSLA Commercial Space Launch Act

D(T)BS Direct (Television) Broadcasting by Satellite

(E)EC European Economic Community

ESA European Space Agency
FANS Future Air Navigation System

GSO Geostationary Orbit

GPS Global Positioning System

Hudson International Legislation (Hudson)

ICAO International Civil Aviation Organization

ICJ International Court of Justice

ICSU International Council of Scientific Unions

IGA Intergovernmental Space Station Agreement (1988)
IISL International Institute of Space Law of the IAF

(International Astronautical Federation)

ILA International Law Association
ILM International Legal Materials

IMOInternational Meteorological OrganizationISMAInternational Satellite Monitoring AgencyITUInternational Telecommunication UnionJALCJournal of Air Law and CommerceLNTSLeague of Nations Treaty Series

NASA National Aeronautics and Space Administration

NPS Nuclear Power Source

RFDA Revue Française de Droit Aérien et Spatiale RGA(E) Revue Générale de l'Air (et de l'Espace)

SALT	Strategic Arms Limitation Talks
SPS	Solar Power Satellite
SRS	Satellite Remote Sensing
TIAS	Treaties and other International Agreements of the United
	States
(UN)COPUOS	(United Nations) Committee on the Peaceful Use of
	Outer Space
UN(GA)	United Nations (General Assembly)
UNTS	United Nations Treaty Series
UST	United States Treaties
WARC	World Administrative Radio Conference
WMO	World Meteorological Organization
YUN	Yearbook United Nations
ZLW	Zeitschrift für Luftrecht (und Weltraumrecht(sfragen))

Table of Contents

Prefa	ace	xvii
Prefa	ace to the Second Edition	xix
Prefa	Preface to the Third Edition	
List	List of Principal Abbreviations and Acronyms	
CHAPTER I Introduction		
A.	HISTORICAL OUTLINE	1
B.	PRINCIPLES AND DEFINITIONS	3
C.	CUSTOMARY LAW	9
D.	INTERNATIONAL ORGANIZATIONS	12

CHAPTER II The Boundaries of Outer Space			15
A.	BOUNDARIES AND DELIMITATION		15
B.	EARTH ORBITS		20
_	APTER III e Space Law Treaties		23
I IIIC ,	s space have recured		
A.	THE OUTER SPACE TREATY OF 1967		24
	1. Article I in Conjunction with Article	III	25
	2. Article II		26
	3. Article IV		26
	4. Article V		28
	5. Article VI		28
	6. Articles VII, VIII		29
	7. Article IX		29
	8. Article X		30
	9. Article XI		30
	10. Article XII		31
	11. Articles XIII-XVII		31
B.	THE RESCUE AGREEMENT OF 1968		31
C.	THE LIABILITY CONVENTION OF 1972	2	34
	1. The Preliminaries		34
	2. Definitions (Article I)		35
	3. Grounds for Liability		37
	4. Joint Liability (Articles IV, V and V	I)	38
	5. Exoneration from Liability		38
	6. Compensation for Damage		38
	7. Exception to the Principle of Total C	Compensation	39
	8. Claims		40
	9. International Organizations		43
D.	THE REGISTRATION CONVENTION OF	F 1975	44
E.	THE MOON AGREEMENT OF 1979		48

Table of Contents CHAPTER IV Exploration and Uses of Outer Space		i <u>x</u>
		53
A.	METEOROLOGY	53
В.	COMMUNICATIONS SATELLITES 1. Direct Broadcasting by Satellite (DBS) 2. International Organizations a. International Telecommunication Union (ITU) b. Intelsat, Intersputnik and Inmarsat c. Other Organizations 3. Rules and Regulations 4. Using Satellites for Air Navigation Control	55 56 59 59 60 63 63 67
C.	REMOTE SENSING 1. Past and Present Legal Implications 2. The Bilateral Approach 3. Multilateral Moves – UNCOPUOS 4. The Second UNISPACE Conference 5. Verification	70 70 74 76 77 81
D.	MANNED SPACE FLIGHTS, SPACE TRANSPORT SYSTEMS 1. Introductory Notes 2. Aerospace Planes 3. Liability	83 83 84 85
E.	LARGE SPACE STRUCTURES 1. Introductory Notes 2. Characteristics of Space Stations 3. Functions of Space Stations 4. Legal Aspects a. Definitions b. Registration c. Liability d. Co-operation e. Free Access and Private Use f. Jurisdiction and Settlement of Disputes 5. Mir and ISS	87 87 88 88 88 90 90 91 92 92

x		7	Table of Contents
 F.	SOLAR POWER SATELLITES		97
	1. De	finition of Solar Energy	97
	2. Us	ing SPS, and Its Legal Implications	98
	a.	The Outer Space Treaty of 1967	99
	b.	The UN Charter	99
	c.	The Geostationary Orbit	99
	d.	The Liability Convention	100
	e.	The Registration Convention	100
	f.	The ITU Rules	100
	g.	Contamination and Pollution	101
G.	NUCLE	AR POWER SOURCES (NPS)	101
H.	COMME	ERCIAL USE OF OUTER SPACE	106
	1. Int	roductory Notes	106
	2. Th	e Present Legal Position	107
	3. Int	ellectual Property	110
	4. Ins	surance	113
	5. Pro	oduct Liability Insurance	117
	6. Sp	ecial Needs of Developing Countries	118
	7. Fo	rms of Co-operation	120
	8. Le	gal Implications for the Future	121
	PTER V		122
Envi	ronmental I	ssues	123
A.	INTROL	DUCTORY NOTES	123
B.	DAMAC	BE .	127
	1. Da	mage Caused by Debris Circulating in Space	127
	2. Da	mage Caused by Harmful Contamination and	l
	На	armful Interference	130
	3. Da	mage Caused by Nuclear and Radioactive Sp	oace
	Ac	ctivities	131
		amage to the Ozone Layer	131
		amage Caused by Space Stations	132
	6. Da	mage Caused by Solar Satellites	132

Table	e of Contents	xi
CHAPTER VI Preserving Outer Space for Peaceful Purposes		135
A.	INTRODUCTORY NOTES	135
B.	VERIFICATION	138
C.	SETTLEMENT OF DISPUTES	142
D.	CONCLUDING NOTE	144
	APTER VII lds in Case Law	147
A.	CASE LAW	147
	1. Appalachian Insurance Co. v. McDonnell Douglas	149
	2. Hughes Galaxy Inc. v. US Government	149
	3. American Satellite Co. v. US Government	151
	4. Martin Marietta Corporation v. International	
	Telecommunication Satellite Organization (Intelsat)	151
	5. Transpace Carriers v. US Government	152
	6. Regina Döring-Kuschel and Benno Carus v.	132
	Schellenberg, Ogilvy and Mather GmbH	153
	7. The Netherlands Antilles v. Antilles	100
	Communications N.V.	153
	8. Florida Coalition for Peace and Justice v.	
	George Herbert Walker Bush	154
	9. AT&T v. Martin Marietta	154
	10. Nemitz v. United States	155

B.

COMMENTS

156

Aı	Annexes	
1.	Treaty on Principles Governing the Activities of States in the	159
	Exploration and Use of Outer Space, Including the Moon and	
	Other Celestial Bodies (1967)	161
	Article I	162
	Article II	162
	Article III	162
	Article IV	162
	Article V	163
	Article VI	163
	Article VII	163
	Article VIII	164
	Article IX	164
	Article X	165
	Article XI	165
	Article XII	165
	Article XIII	165
	Article XIV	166
	Article XV	166
	Article XVI	166
	Article XVII	167
2.	Agreement on the Rescue of Astronauts, the Return of Astronauts	
	and the Return of Objects Launched into Outer Space (1968)	169
	Article 1	169
	Article 2	170
	Article 3	170
	Article 4	170
	Article 5	170
	Article 6	171
	Article 7	171
	Article 8	172
	Article 9	172
	Article 10	172
3.	Convention on International Liability for Damage Caused by	
	Space Objects (1972)	173
	Article I	173
	Article II	174
	Article III	174
	Article IV	174

Ta	able of Contents	xiii
	Article V	175
	Article VI	175
	Article VII	175
	Article VIII	176
	Article IX	176
	Article X	176
	Article XI	177
	Article XII	177
	Article XIII	177
	Article XIV	177
	Article XV	178
	Article XVI	178
	Article XVII	178
	Article XVIII	178
	Article XIX	179
	Article XX	179
	Article XXI	179
	Article XXII	179
	Article XXIII	180
	Article XXIV	180
	Article XXV	181
	Article XXVI	181
	Article XXVII	181
	Article XXVIII	181
4.	Convention on Registration of Objects Launched into Outer	
	Space (1975)	183
	Article I	184
	Article II	184
	Article III	184
	Article IV	185
	Article V	185
	Article VI	185
	Article VII	186
	Article VIII	186
	Article IX	186
	Article X	187
	Article XI	187
	Article XII	187
5.	Agreement Governing the Activities of States on the Moon and	
	Other Celestial Bodies (1979)	189
	Article 1	189
	Article 2	190

	Arti	cle 3	190	
	Arti	cle 4	190	
	Arti	cle 5	191	
	Arti	cle 6	191	
	Arti	cle 7	192	
	Arti	cle 8	192	
	Arti	cle 9	193	
	Arti	cle 10	193	
	Arti	cle 11	193	
	Arti	cle 12	194	
	Arti	cle 13	195	
	Arti	cle 14	195	
	Arti	cle 15	195	
	Arti	cle 16	196	
	Arti	cle 17	197	
	Arti	cle 18	197	
	Artic	cle 19	197	
	Arti	cle 20	198	
	Artic	cle 21	198	
6.		Principles Governing the Use by States of Artificial Earth		
		llites for International Direct Television Broadcasting		
		December 1982)	199	
	A.	Purposes and Objectives	199	
	В.	Applicability of International Law	199	
	C.	Rights and Benefits	200	
	D.	International Co-operation	200	
	Е.	Peaceful Settlement of Disputes	200	
	F.	State Responsibility	200	
	G.	Duty and Right to Consult	201	
	Н.	Copyright and Neighbouring Rights	201	
	I.	Notification to the United Nations	201	
	J.	Consultations and Agreements between States	201	
7.	Princ	Principles on Remote Sensing (11 December 1986)		
		ciple I	203	
	Princ	ciple II	203	
		ciple III	204	
		ciple IV	204	
		ciple V	204	
	Princ	ciple VI	204	