

# TABLE OF CONTENTS

	<u>Page</u>
CHAPTER I. PRELIMINARIES ON ADELE-GEOMETRY	
1.1. Adeles	1
1.2. Adele-spaces attached to algebraic varieties	1
1.3. Restriction of the basic field	4
CHAPTER II. TAMAGAWA MEASURES	
2.1. Preliminaries	10
2.2. The case of an algebraic variety : the local measure	13
2.3. The global measure and the convergence factors	21
2.4. Algebraic groups and Tamagawa numbers	22
CHAPTER III. THE LINEAR, PROJECTIVE AND SYMPLECTIC GROUPS	
3.1. The zeta-function of a central division algebra	30
3.2. The projective group of a central division algebra	41
3.3. Isogenies	43
3.4. End of proof of Theorem 3.3.1. : central simple algebras	47
3.5. The symplectic group	52
3.6. Isogenies for products of linear groups	54
3.7. Application to some orthogonal and hermitian groups	61
3.8. The zeta-function of a central simple algebra	65
CHAPTER IV. THE OTHER CLASSICAL GROUPS	
4.1. Classification and general theorems	72
4.2. End of proof of Theorem 4.1.3 (types $O_1$ , $L_2(a)$ , $S_2$ )	84
4.3. The local zeta-functions for a quadratic form	88
4.4. The Tamagawa number (hermitian and quaternionic cases)	91

4.5. The Tamagawa number of the orthogonal group	100
APPENDIX 1. (by M. Demazure)	
The case of the group $G_2$	111
APPENDIX 2. (by T. Ono)	
A short survey of subsequent research on Tamagawa numbers	114