

VOLUME III, PART 2

Chapter 14	Form of the Integrals of Planetary Theory	505
	ASYMPTOTIC REPRESENTATION	505
14.1	Problem of the Form of the Integrals	505
14.2	Irregular Integrals	507
14.3	Semi-Convergent Series	519
	THEORIES OF NEWCOMB AND LINDSTEDT	523
14.4	Newcomb's Theory	523
14.5	Lindstedt's Theory	530
14.6	Von Zeipel's Theory	538
	POINCARÉ'S THEORY	551
14.7	Poincaré's Transformation	551
14.8	Vessiot's Transformation	563
	BOHLIN'S THEORY	567
14.9	Poincaré's Formulation of Lindstedt's Theory	567
14.10	Charlier's Remark	578
14.11	Poincaré's Formulation of Bohlin's Theory	583
14.12	Bohlin's Series	594
14.13	Extension of Bohlin's Theory	602
	WHITTAKER'S THEORY	616
14.14	Whittaker's Transformation	616
14.15	Adelphic Integral	624
14.16	The Third Integral	638
14.17	Integrals Developable about a Singular Point	674
14.18	Cherry's Theory on the Form of Solution	683
	ALMOST PERIODIC DIFFERENTIAL EQUATIONS	697
14.19	Integral of a Quasi-Periodic Function	697
14.20	Homogeneous Equation with Quasi-Periodic Coefficients	705
14.21	Nonhomogeneous Equation with Quasi-Periodic Coefficients	711
14.22	Secular Constant	714
14.23	Linear Differential Equation with Quasi-Periodic Right-Hand Member	715
14.24	Linear Differential Equation with Almost	

	Periodic Right-Hand Member	716
14.25	Normal Functions	723
14.26	Linear Differential Equation with Almost Periodic Coefficients	728
14.27	Functional Equation with Almost Periodic Solution	738
14.28	Solutions of the Almost Periodic Type	747
Chapter 15	Problem of Uniform Convergence	763
	BOREL SERIES AND LIOUVILLE NUMBERS	763
15.1	Borel Series	763
15.2	Class of Baire	769
15.3	Liouville's Numbers	773
	BRUNS'S PROOF OF NONUNIFORM CONVERGENCE	779
15.4	Bruns's Proof	779
15.5	The question of Gylden's Probability Theorem	781
15.6	Charlier's Comment	791
	REFINEMENT BY PETERSSON AND WINTNER	796
15.7	Petersson's Refinement	796
15.8	Wintner's Discussion based on the Theory of Almost Periodic Functions	804
	TRIGONOMETRIC SERIES	810
15.9	Trigonometric Series	810
15.10	Nonuniform Convergence	816
15.11	Solution by Trigonometric Series	825
15.12	Elevation of the Degree of Formal Convergence	827
15.13	Grouping of Terms	841
15.14	Passage to Periodic and Asymptotic Solutions	848
15.15	Hill's Argument	852
	DIVERGENCE OF BOHLIN'S SERIES	856
15.16	Divergence of Lindstedt's Series	856
15.17	Divergence of Bohlin's Series	861
15.18	Mechanism of Divergence of Bohlin's Series	864
15.19	Relation to Asymptotic Solutions	875
	ASYMPTOTIC INTEGRALS OF LITTLEWOOD	878
15.20	Littlewood's Theorems	878
15.21	Proof of the Fundamental Theorem	883

Chapter 16	Stability Problem	905
	LIAPOUNOV STABILITY	905
16.1	Definition of Stability	905
16.2	Characteristic Numbers	910
16.3	Liapounov's Direct Method	921
16.4	Converse of Liapounov's Theorems	933
16.5	Dynamical Systems	942
16.6	Liapounov's Functions	954
16.7	Differential Equations for a Disturbed Motion	973
	MOTION NEAR AN EQUILIBRIUM POINT	978
16.8	Bohl's Theorems	978
16.9	Solutions representable by Quasi-Periodic Functions	1000
16.10	Stable and Unstable Coordinates	1013
16.11	Asymptotic Solutions	1025
16.12	Motions that remain in the Neighborhood of an Equilibrium Position	1030
16.13	Cotton's Integral Equations	1037
	PERRON'S STABILITY CRITERION	1046
16.14	Perron's Stability Criterion	1046
16.15	Perron's Order Number of Differential Equations	1060
16.16	Perron's Generalization	1066
16.17	Kinematic Similarity	1083
	TOPOLOGY OF THE STABILITY DOMAIN	1097
16.18	Linear Operators	1097
16.19	Strong Stability	1105
16.20	Stability in Abstract Space	1122
16.21	Application to Controls	1126
16.22	Stability of Rigid-Body Rotation	1135
	Retrospect of Volume III	1153

Index to Volume III, Part 1. and Volume III, Part 2.

following p. 1154