

1. Record Nr.	UNINA9911006709003321
Autore	Goddard Robert
Titolo	Rockets : Two Classic Papers
Pubbl/distr/stampa	Newburyport, : Dover Publications, 2012
ISBN	9781523125012 1523125012 9780486174341 0486174344
Edizione	[1st ed.]
Descrizione fisica	1 online resource (162 p.)
Collana	Dover Books on Aeronautical Engineering
Altri autori (Persone)	GoddardRobert Hutchings <1882-1945.>
Disciplina	621
Soggetti	Rocketry Rockets (Aeronautics) Upper atmosphere Liquid propellant rockets
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Title Page; Copyright Page; PREFACE; Table of Contents; FOREWORD; A METHOD OF REACHING EXTREME ALTITUDES; PREFACE; A METHOD OF REACHING EXTREME ALTITUDES; A METHOD OF REACHING EXTREME ALTITUDES; PART I. THEORY; METHOD TO BE EMPLOYED; STATEMENT OF THE PROBLEM; REDUCTION OF EQUATION TO THE SIMPLEST FORM; RIGOROUS SOLUTION FOR MINIMUM M AT PRESENT IMPOSSIBLE; SOLUTION OF THE MINIMUM PROBLEM BY AN APPROXIMATE METHOD; PART II. EXPERIMENTS; EFFICIENCY OF ORDINARY ROCKET; EXPERIMENTS IN AIR WITH SMALL STEEL CHAMBERS; EXPERIMENTS WITH LARGE CHAMBER; EXPERIMENTS IN VACUO; DISCUSSION OF RESULTS DISCUSSION OF POSSIBLE EXPLANATIONS CONCLUSIONS FROM EXPERIMENTS; SIGNIFICANCE OF THE ABOVE EXPERIMENTS AS REGARDS CONSTRUCTING A PRACTICAL APPARATUS; PART III. CALCULATIONS BASED ON THEORY AND EXPERIMENT; APPLICATION OF APPROXIMATE METHOD; VALUES OF THE QUANTITIES OCCURRING IN THE EQUATIONS; DIVISION OF THE ALTITUDE INTO INTERVALS; CALCULATION OF MINIMUM MASS FOR EACH INTERVAL; EXPLANATION OF TABLES V AND VI; CALCULATION OF MINIMUM MASS TO RAISE ONE POUND TO

VARIOUS ALTITUDES IN THE ATMOSPHERE; CHECK ON APPROXIMATE METHOD OF CALCULATION; RECOVERY OF APPARATUS ON RETURN APPLICATIONS TO DAILY OBSERVATIONS CALCULATION OF MINIMUM MASS REQUIRED TO RAISE ONE POUND TO AN "INFINITE" ALTITUDE; SUMMARY; CONCLUSION; APPENDIX A - THEORY OF THE MOTION WITH DIRECT LIFT; APPENDIX B - THEORY OF THE DISPLACEMENTS FOR SIMPLE HARMONIC MOTION; APPENDIX C - THEORY OF DIRECT-LIFT IMPULSE-METER; APPENDIX D - THEORY OF SPRING IMPULSE-METER; APPENDIX E - CHECK ON APPROXIMATE METHOD OF CALCULATION, FOR SMALL CHARGES FIRED IN RAPID SUCCESSION; APPENDIX F - PROOF THAT THE RETARDATION BETWEEN 500,000 FT. AND 1,000,000 FT. IS NEGLIGIBLE; APPENDIX G - PROBABILITY OF COLLISION WITH METEORS NOTES LIQUID-PROPELLANT ROCKET DEVELOPMENT; LIQUID-PROPELLANT ROCKET DEVELOPMENT; INTRODUCTION; THE ESTABLISHMENT IN NEW MEXICO; STATIC TESTS OF 1930-32; FLIGHTS DURING THE PERIOD 1930-32; RESUMPTION OF FLIGHTS IN NEW MEXICO; DEVELOPMENT OF STABILIZED FLIGHT; PENDULUM STABILIZER; GYROSCOPE STABILIZER; FURTHER DEVELOPMENT; CONCLUSION; A Biographical Note and Appreciation

Sommario/riassunto

Rockets, in the primitive form of fireworks, have existed since the Chinese invented them around the thirteenth century. But it was the work of American Robert Hutchings Goddard (1882-1945) and his development of liquid-fueled rockets that first produced a controlled rocket flight. Fascinated by rocketry since boyhood, Goddard designed, built, and launched the world's first liquid-fueled rocket in 1926. Ridiculed by the press for suggesting that rockets could be flown to the moon, he continued his experiments, supported partly by the Smithsonian Institution and defended by Charles Lindbergh. T
