

The Aeronautical Journal RAeS January 1971

GILRUTH, R. R.

To the Moon and Beyond

The paper gives milestones of flight from the Montgolfier Balloon and the Wright Brothers first heavier-than-air flight, to the first man on the Moon. Starting with the formation of NASA in October 1958, the whole USA space programme is covered—Project Mercury, Project Gemini, the Apollo Programme and, the project of the future, the space shuttle.

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LANGLEY, M.

The History of Metal Aircraft Construction

This paper is in some ways an obituary of metal aircraft construction. We will still have metal aircraft for many years to come, but quite new kinds of materials are beginning to appear and they have as many advantages over metal as metal had over wood. We have seen how metal construction took many different forms in its early days and how throughout the world it has settled down into some kind of uniformity, most of the earlier approaches having been discarded.

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STRATTON, A.

The Aims and Methods of Operational Research on Weapons

The objective of the paper is to show how operational research on weapons is applied to aid decisions on equipment procurement and deployment. Guided and unguided weapons have very different characteristics in the operational properties of the weapon system and the total cost of procurement and operation. The paper discusses the wide range of studies involved which include the prediction of the operating characteristics of the weapon, the effects of operational environment and target characteristics, logistics, movement and training, weapon deployment and tactics, total cost of procurement and support.

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WOOLLATT, G. M.

Mathematical Modelling Techniques in Guided Weapons

The intention of this paper is to indicate the way in which analogue and digital machines have complemented one another and how with the increased speed of both they have joined together very usefully in the hybrid. At BAC, Filton, the use of computers in missile work began early in the 1950's, by the company manufacturing its own analogue machines.

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Applications or requests for further information should be sent to: Professor G. M. Lilley, Department of Aeronautics and Astronautics, University of Southampton, SO9 5NH, quoting ref: JRAS.

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