

SUMMARY (Wilbur and Orville
Wright Memorial Lecture to be
given by Dr. Robert R. Gilruth
December 3, 1970)

Dr. R. R. Gilruth's abstract
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TO THE MOON AND BEYOND

The lecture ^{will} ~~analyze and~~ discuss the evolution of manned flight ^{from Kitty Hawk to Tranquility Base, and a} as it progressed from the first steps into the atmosphere, through the development of the airplane, and on into the era of space flight and exploration. The emphasis is, of course, on the ^{moment} later years of aeronautics and the development of space flight.

Factors are described which made manned orbital flight possible and which resulted soon thereafter in a decision to send an American manned expedition to the moon. The important part played by past programs in creating technical capability and the more recent developments that were key in satisfying the complete design and operational requirements are discussed. A description is also given of the chain of events, personalities, and the political environment under which this most difficult mission was born and accomplished.

Scientific results from the landings made to date on the lunar surface are discussed along with the incentives for further exploration of the moon.

The final part of the lecture discusses the space shuttle vehicle which is now under intensive study by NASA for the post-Apollo program. The shuttle, which combines the advantages as well as

many of the problems of both aeroplane and space vehicle, shows great promise for expanding the potential of space. Important factors in the design and development of the shuttle are presented. They include aerodynamic and structural configuration studies as well as operational features and requirements.

The lecture will be illustrated by slides and motion pictures.

→ Milestones leading to space flight

→ How it progressed 1958 to present

→ Results from the moon flights -

→ When we go back to the should
establish a base -

→ Shuttle - Key -