46th IAA HISTORY OF ASTRONAUTICS SYMPOSIUM (E4)
Scientific and Technical Histories (2)

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LOUIS DAMBLANC - MULTISTAGE ROCKET PIONEER

Abstract

Space pioneer Louis Damblanc (29.6.1889-2.12.1969) presented himself a short 6-page paper, summarizing some of his rocket activities, on the very first IAA History of Astronautics Symposium in 1967 in Belgrade.

However, much additional, and more precise, information has since been found.

Damblanc graduated from the Grenoble engineering school. He started in 1913 with pioneering work on high-altitude aviation motors and twin-rotor helicopters, including the Alerion in 1920, and a rocket powered one. The SPAD 32 biplane used his engine to try beating the world altitude record in 1920. In 1932 he started working on more powerful solid rocket motors. He combined both theoretical and experimental approaches, statically testing his motors from 6 March 1932 in St Cyr with automatic and cine recording, and checking rocket performances against his computations. He was the first to use magnesium for rocket structures.

On 23 September 1937 he launched from Bourges three 2-stage rockets, and three 3-stage ones. They were the world's first modern stage rockets, and the very first 3-stage rockets ever launched. His separation system had been patented on 7 March 1936, and was used much later on the Terrier SAM. He launched a total of 360 solid propellant rockets, of up to 133 mm diameter, up to 2.2 km altitudes, between 1935 and 1939.

This paper will detail for the first time these momentous pioneering activities. It also will show his many other, not well-known, fascinating and varied innovating activities, aeronautical, social and political: founding the La Vie Aérienne journal and other political journals in Paris, being a mayor of Fleurance 1927-40, proposing social improvements, international arms control and forbidding chemical war, inventing the epidiascope optical projection apparatus in the 50's, giving radio talks,...

He won the Prix d'Astronautique REP-Hirsch in 1935, as well as many other awards. He was an advisor to SNECMA and St Gobain.