50th IAA HISTORY OF ASTRONAUTICS SYMPOSIUM (E4)
Scientific & technical histories (2)

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SUD AVIATION X 407 CASSEUR - THE UNKNOWN STEPPING STONE TO DIAMANT

Abstract

As France commemorated last year the 50th anniversary of its ushering into space, many have forgotten the vital link represented by the Casseur. It even is the subject of wrong information, among others being attributed to another company, or its name to another missile! With France embarked on a secret nuclear program since December 1954, the premier rocket company in Europe, SNCASE, had been quickly working on a bomb-carrying ramjet X 405 of 100 km range, contracted by Service Technique Aéronautique in the end of 1955 as the SE 4500. From June 1956, the latter even was supported by a NATO contract. Arrived in Cannes towards the end of 1956, when the first SE 4500 were being launched, Roger Béteille correctly estimated the latter to be too small and too short in range. He thought that ballistic flight and inertial guidance were the way to go. The pace quickened in 1958, as Groupe Technique de Cannes (GTC) started working in April on an inertially-guided SE 4500, the X 406. In June a NATO mission came to Cannes: no doubt the Missile B (future Lance) was then proposed, at a time Béteille was pushing for a SSBT (Sol Sol Balistique Tactique) of up to 300 km range. In August, the Minister of Defense gave the strategic SSBS program the priority, while confirming its interest in the SSBT. To be powered by the biggest European solid propellant motor, the 800 mm diameter Mammouth, with a modern plastolite grain, and using the first French inertial platform, the SSBT was then put in competition, which Sud Aviation (as renamed from SNCASE) easily won against Nord Aviation, having been the originator of the proposal. Although LRBA was developing an inertial unit, Béteille took a cautious route by signing an agreement with Kearfott. The program, called Casseur, had reached the mock-up stage when France, not able to pursue all rocketry avenues, decided to concentrate on the deterrent force, ie strategic missiles. Casseur thus had to go in August - but its technology directly transferred to Topaze, the first French inertially-guided missile, thence to Diamant as its second stage and finally SSBS and MSBS. This paper thus continues with our long tradition of revealing the secret history of the French rockets of the 50's and early 60's.